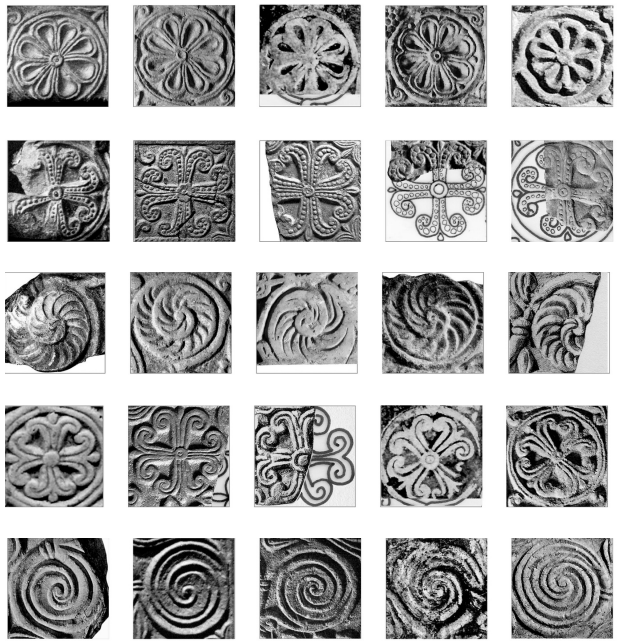
Michelle Beghelli

From the quarry to the church

The economics of Early Medieval stone architectural sculpture: materials, makers and patrons (7th-9th centuries)



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Introduction

When visiting a museum and passing by a Roman sarcophagus or a Byzantine capital, a Gothic statue, or an Early Medieval slab elegantly decorated with interlace ornaments, one might think that the scholars who examined these objects have a fairly clear idea of how, when, and where they have been made, using which type of stone, tools, and labour force, and so forth. In other words: of their production process and production context. This often applies to Roman, Early Byzantine, and High to Late Medieval sculpture, much more rarely to Early Medieval sculpture. The problem depends only in part on the notorious dearth of written and material evidence that early medievalists are well accustomed to struggling with: rather, it is mainly the result of the little attention studies on 7th-9th-century sculpture have paid to manufacturing processes[1].

The difference, in terms of quantity, of publications devoted to the production of stone items in each period is indeed striking. As for the Roman and Early Byzantine empires, one can count on a vast body of literature and every year conferences, papers and books from all over the world provide new information that enriches the scientific debate[2]. As for the Early Middle Ages, some of the most popular theories on production processes of architectural sculpture still derive from those formulated by Karl Ginhart in 1954 and Jean Hubert in 1968[3]. Both scholars tried to explain the presence of very similar (at times nearly identical) sculptures in very distant locations, hundreds or even thousands of kilometres away from each other[4]. Yet it must be stressed that, despite their success, these theories consisted of a few lines within, respectively, an article and a book chapter, and they have never been revised, or their implications analysed. Subsequent studies on Early Medieval sculpture have often limited themselves to quoting these authors or those relying on them

[1] See Parsons 1991, 6, who remarked that the general works on the history of the building industry mainly focus on the Late Middle Ages. The observation was made with reference to the British Isles, but, with a few exceptions, it certainly also applies to the rest of Europe.

[2] Some comprehensive monographs, with histories of studies: Ousterhout 2008. – Hirt 2010. – Pensabene 2013. – Russell 2013. – Marsili 2019. – Ousterhout 2019.

[3] Ginhart 1954, 217. – Hubert 1968, 29.

[4] On this matter see, for instance: Lomartire 2009, 205-206. – Crosetto 2013, 365. – Crosetto 2013a, 191. – Beghelli 2014. – Beghelli 2020. – Beghelli 2020b. All with literature.

– taking their assumptions for granted without a systematic quest for evidence – with the result that the subject of craftsmen and manufacturing process has often been discussed, again, in just a few words. This is not to say that research dealing with these issues does not exist at all. Some valuable publications concern specific regions or individual collections of archaeological finds, and certain countries more than others developed a tradition of studies on these aspects: they are investigated, for instance, in many Croatian works on Early Medieval sculpture[5]. However, books like Ben Russell's *The Economics of the Roman Stone Trade* have shown that, in order to achieve a general understanding of stone objects' production processes, it is vital to take into consideration a wide geographical area over a large time scale[6].

In Early Medieval continental Europe, stone sculpture meant essentially furnishings and architectural decoration for churches and monasteries (altars, chancel screens, ciboria, ambos, baptismal fonts, sarcophagi, or capitals, lintels, doorposts, window jambs, and so forth[7]), as these items were virtually always found in ecclesiastical – not secular – contexts. Within the time-span 7th-9th centuries, the greater part of the materials date to the late 7th - mid 9th centuries, and concentrate in some areas of the former Roman Empire, especially in modern France, Italy, Switzerland, Austria, Southern Germany, Slovenia, and Croatia.

As shall be seen, architectural sculpture is a crucial subject, one that allows us to address global questions related, in general, to monumental building in the Early Middle Ages.

This work aims at reconstructing as many aspects as possible of the sculptures' production process and its economic context, following each stage from the quarry to the church. The aforementioned period and territories roughly represent the chronological and geographical limits of the study, although archaeological and documentary data from outside those areas and time-span will be used when relevant. Also, on some occasions, the sculpted items from ecclesiastical buildings will be put in a broader context, by comparing some aspects of their production with that of other stone artefacts, such as construction blocks, sarcophagi coming from graveyards, quern-stones, or soapstone vessels.

Between the quarry and the church, between the two ends of the process, there were of course the people who made the production process possible. Marc Bloch believed that the basics of studying the past consisted in avoiding «these large abstract terms, in order to try to discover behind

[5] See Part III.

[6] Russell 2013.

[7] See Part I.

them the only concrete realities, which are human beings[8]». Thus besides the fundamental technical and technological aspects related, for instance, to the supply of raw material (freshly quarried or, very frequently, reused from ancient buildings), the distances that stone could travel, or the ways of transporting it[9], this work will include a substantial part devoted to the actual people involved in the production system: the patrons, the financers, the architects, the unskilled labourers and, above all, the skilled craftsmen, trying, where feasible, to look at things from their perspective and to get closer to some facets of their daily and working lives. As shall be seen, the sculptors cannot be considered separately from other artisans operating in the sector of building and the restoration of churches and monasteries[10].

The interaction between all these actors occurred of course in a well-defined economic and political context. In the introduction of his book on the stone trade in the Roman period, quoting Willem Jongman, Ben Russell noted that, in most pre-industrial societies, building was the single most important non-agrarian economic activity: yet stone products and the workforce related to it tend to receive only cursory attention in general economic studies[11]. Arguably, construction activities had a proportionally similar relevance in the Early Middle Ages, even if, in absolute sense, the building industry had obviously shrunk in comparison to the Early Imperial period. However, the capital invested in architectural and sculptural projects – procurement of materials, recruitment of skilled and unskilled labour, etc. – has also been overlooked in the scholarship on Early Medieval economic history, including some of the most exhaustive monographs[12]. These have recognised building as an important economic sector and indicator[13], but have hardly examined the market and production systems underpinning it, or paid the same attention to the stone products[14] that they do to other comparably more abundantly attested finds, such as ceramic containers or coins[15]. As for the archaeological scholarship – even when it considers large time-spans –, it often only summarily addresses the 'under-documented' Dark Ages, and is widely focused on individual

[8] Bloch 1999 [1940], 117.

[9] See Part II.

[10] See Part III. and Part IV.

[11] Russell 2013, 4. – Jongman 2007, 609.

[12] On this point, see: Wood 2007. – Hodges 2012, 13 and 18.

[13] For instance: Hodges 1982. – McCormick 2001. – Verhulst 2002. – Wickham 2005. – Delogu 2010. – Hodges 2012.

[14] Not only the architectural ones, but also others, e.g. sarcophagi, hand-quern-stones, or soapstone vessels.

[15] On this point, see Beghelli 2022, with literature.

sites or regions, while overall studies remain rare[16]. Also, the scope of the research is normally limited to either the West, or the East[17], although a number of relevant phenomena – at least concerning the building industry in the 7th-9th centuries – are in fact global ones, occurring roughly at the same time and depending on similar mechanisms.

The role of the Church as an agent of economic change (spurring the growth of an actual «ritual economy» according to Richard Hodges[18]) has been well described by Ian Wood as «the elephant in the sitting room» in the debate on the subject[19]. Among other things, the Church had become «unquestionably the only major builder» in the Early Middle Ages[20], but some detailed examination of the very persons and goods chiefly involved in construction activities – i.e. artisans, commissioners, and stone, from raw material to the finished product – is lacking even in the works which most challenged the downplaying of this institution in the economic studies[21].

One of the main focuses of this work, thus, will be setting sculptors and stonemasons, patrons, and the stone products, in their economic context, ranging from the extent of the costs related to the procurement and transport of stone, or the craftsmen's recruitment and payment, to the reasons why the financers disbursed money for all of this, and the locations where the artisans preferred to live in relation to the importance in the market for their services.

Another focus will be on the historical background of sculpture production, concerning especially the patterns of continuity (as for certain aspects) and changes (some of which remarkable) over the *longue durée*, from the Roman to the Early Byzantine and the Early Medieval periods. Further aspects related to the historical contextualisation will concern the social sphere of both the skilled craftsmen and the patrons they worked for, not only as regards their status, but also as regards the interaction of these two groups (for instance, how the artisans were selected and summoned) and the organisation of work (for instance, specialisation of labour and hierarchy in a sculpting atelier).

[16] Some exceptions, but works entirely or mainly focused on the Byzantine empire, include, for instance: Sodini 2002. – Ousterhout 2008. – Sodini 2008. – Ousterhout 2019. – Vanderheyde 2020. – As for the West, a thorough work on Early Medieval sculpture largely focused on issues related to production and its socio-economic context, has recently concerned the Iberian Peninsula: Villa del Castillo 2021.

[17] On these points see, for instance, Whittow 2009, 477-478, with literature.

[18] Hodges 2012, 15-18, 67-90 and *passim*.

[19] Wood 2007, 237. – On this point, see especially Part IV., especially Chapter IV.1.

[20] Wood 2007, 237.

[21] This applies to Hodges' book itself, although criticism seems amiss, given the aforesaid deficit of literature on the matter.

All this is no simple task, for the available data are scant and scattered. As for the archaeological sources – i.e. the sculptures themselves – the main issue concerns the lack of entire architectural structures preserved to this day: the churches where Early Medieval stone sculpted furniture is still *in situ* can practically be counted on the fingers of one hand. It really takes «a considerable effort to gather together in our minds the sheer magnificence of early medieval Christianity [in Europe]. [...] Its buildings paid the price of being, indeed, 'directly ancestral'. Unlike the haunting early Christian ruins of the Middle East, they were built on sites where building has been continuous from the early Middle Ages onwards. Many were replaced by Gothic cathedrals. Many have been devoured by the modern cities»[22]. The sculptures, thus, are nearly always found in fragments, having been reused as building material for later churches, which creates major problems in their interpretation and the reconstruction of the original structures they belonged to, let alone their chronological assignment[23]. As for the written sources, the evidence for construction craftspeople is very limited: the mentions of new buildings or renewals in all kinds of Early Medieval documents are no doubt abundant, but the explicit references to the artisans are extremely sporadic, and scattered in a myriad of texts[24]. Also, the archaeological documentation on quarrying activities during the Early Middle Ages is largely unavailable[25], and even the mere data on the stone type the sculptures are made of are something of a rarity[26]. At last, if further classes of evidence are at the researcher's disposal for the Roman, Byzantine or Late Medieval periods, for the Early Middle Ages they are either uncommon (e.g. inscriptions on the sculpted elements) or nearly non-existent (e.g. masons' marks; figural sources on the construction sites and the tools used)[27].

Yet the picture is not as dark as it may seem. Obtaining substantial information is possible within the framework of a comprehensive investigation on the subject, by considering, as said, a wide geographical area over a large time-span. This makes it possible to select the most significant archaeological materials (which must be studied, however, with an appropriate method[28]), to collect written evidence in a more exhaustive way (including the few inscriptions on the stones useful for our purposes)[29], and to examine a greater amount of petrographic data concerning the origin of the

[22] Brown 2003, 30.

[23] See Chapter I.2.

[24] See Chapter III.2.

[25] See Chapter II.3.

[26] See Chapter II.1.

[27] See Part II.

[28] See Chapters III.3 and III.4.

[29] See Part II. and Part III.

stone used for architectural carving (as only a minority of scientific publications provide this information)[30]. In turn, this approach represents the indispensable starting point to properly frame – and avoid misinterpretation of – the data from individual, specific geographical areas.

These data are *equally* essential in order to study all the aspects listed above. Such sources – carved stone fragments, written documents, inscriptions, and petrographic data – are commonly associated with different academic fields (archaeology and art history, history, epigraphy, geology, etc.), each of which carries indispensable pieces of information to reconstruct the whole picture of the production of stone objects in the Early Middle Ages (**fig. 1**).

There are of course many ways to merge the insights of diverse disciplines in the study on a given subject: knowledge theorists have contributed to defining the boundaries between interdisciplinary, multidisciplinary, cross-disciplinary, and transdisciplinary methods[31]. This last differs from the others for a more holistic approach and – as plainly explained by Alfonso Montuori – for specifically addressing subjects that *cannot* be researched by means of one and only academic discipline[32]. Thus this study, which matches the description very well, must necessarily be conducted within a transdisciplinary approach: although the archaeological materials – i.e. the sculptures – are central to this work, the investigation of their manufacturing requires inevitably the use of the selected, aforementioned sources and tools from disciplines other than archaeology.

[30] See Chapter II.1.

[31] For an overview, see: Nissani 1997. – Krimsky 2000. – Somerville / Rapport 2000. – Brand / Schaller / Völker 2004. – Thompson Klein 2004. – Nicoluescu 2008. – Montuori 2009.

[32] Montuori 2009, 238.

PART I.

STONE SCULPTURE

Chapter I.1.
Forms and functions

With few 'regional' exceptions (e.g. the free-standing crosses in the British Isles, or the sarcophagi massively used in the graveyards in 6th-7th century Gaul), by the Early Middle Ages, sculpture was almost exclusively limited to the domain of architectural decoration and stone furnishings used in ecclesiastical buildings, which practically became the only possible places where stone-carvers could work. In virtually every part of Europe, sculpture had stopped to be used in secular contexts[1], and a whole range of products which were common during the Roman period, and partially still during the 5th and 6th century, stopped to be produced: cases in point are statues and busts[2], or monolithic load-bearing columns[3].

The gradual process that resulted in the substantially exclusive use of sculpture in churches and monasteries will be analysed in Part II. of this work[4], while its first Chapter seems the appropriate place to briefly describe and define the very object of the study. This will also serve as a sort of glossary for the terminology used from now onwards.

Early Medieval sculpted items had specific functions and decorative patterns, with an overwhelming predominance of geometrical and vegetal motifs, more rarely animals, and only extremely seldom human subjects or narrative scenes[5]. As the definition «Flechtwerk- und Rankensteine»[6] suggests, plant-scroll (such as vine-scrolls or ivy-scrolls), plaits, and other and

---

[1] See Paragraph II.3.2 and III.2.8. On this point, see also Ward-Perkins 1984, 217 with literature. – Héber-Suffrin 1999, 450: all Early Medieval sculpted fragments come from ecclesiastical contexts. Among the few exceptions in secular contexts, are the Early Medieval wellheads, especially (but not exclusively) from Venice and surroundings. See: Polacco 1980. – Dorigo 1983. – Betti 1998.

[2] Héber-Suffrin 1999, 450. – Sodini 2000, 425. – Kidson 2004, 699 and 723. – Greenhalgh 2008, 17. – Ward-Perkins 2016. All with literature. – The sculpture in the round started to decline towards the 5th century: it will reappear from the 11th century onwards, while, in the pre-Romanesque centuries, it was limited to non-monumental, relatively small works in stucco and wood, or to portable objects in ivory.

[3] See Paragraph II.3.2.

[4] Especially Paragraph II.3.2.

[5] Petricioli 1985, 469-470. – Napione 2010. – Vanderheyde 2010. All with literature. – See also Part III. – In the same way as the sculpture in the round, narrative subjects will start again to be commonly used in the Romanesque period.

[6] Ginhart 1953, 79. – Bogyay 1957, 262.

interlaced ornaments (at times incorporating filling elements such as flowers, rosettes, or whirls), were quite typical, all carved in several types and variants[7]. Sculptures of this kind have been found in a very large territory, roughly coinciding with the former Roman empire: yet as mentioned in the Introduction, there is nearly a total lack of entire structures preserved *in situ* to this day: in most cases, the original sculpted furnishings and architectural elements were demolished during the High to the Late Middle Ages, and used as construction material for Romanesque or Gothic churches[8] (**fig. I.1**). Within the time-span considered in this work – 7th to the 9th centuries – the bulk of the materials clusters in the 8th and 9th centuries[9].

Early Medieval architectural sculpted elements can be divided into the categories of architectural decoration and 'actual' stone furnishings, i.e. independent, free-standing elements with functions related to the Mass service, the liturgy and, in general, to the worship practices and the differentiation of spaces within the ecclesiastical building[10].

Architectural decoration (**fig. I.2**) could include, for instance:

jambs, lintels and arches for door- and window-frames;

capitals for load-bearing columns;

corbels;

mullions;

window-*transennae* (also called window-screens);

friezes.

The main elements of the church stone furnishings (**figs I.3 - I.10** and **I.13**) were:

altars (*mensa* or *cippus* types);

altar screens (also called chancel screens; they include the high type, *pergula*);

ciboria (sing.: ciborium, also called baldachin, or canopy);

ambos (sing.: ambo, also called pulpit);

[7] See below, Part III.

[8] In general, on the practice of reuse from Late Antiquity to the Middle Ages see: Deichmann 1975. – Ward-Perkins 1984, 203-229. – Brenk 1987. – Rockwell 1993, 192-197. – Alchermes 1994. – De Lachenal 1995. – Esch 1999. – Atti Settimane CISAM XLVI (1999). – Clemens 2003. – Liverani 2004. – Kinney 2006. – Zanotto 2007, 21-49. – Greenhalgh 2008. – Marsili 2016a.

[9] The possible reasons why the 7th century appears 'scarcer' in architectural sculpture will be addressed in later parts of this work, especially in Paragraphs II.3.2 and III.2.8.

[10] Rohault de Fleury 1883-1889. – Krautheimer 1942. – Heitz 1963. – Krautheimer 1965. – Heitz 1980. – de Blaauw 1994- de Blaauw 2001. – Untermann 2006. – Destefanis 2012.

baptismal fonts;

decorated tombstones and sarcophagi, often hosting the bodies of saints or bishops.

More rarely, are also attested:

cathedrae or episcopal chairs;

holy water fonts;

capsellae or small reliquaries in stone.

These stone furnishings were composed by different elements (**figs I.11** and **I.12**), mainly:

slabs (also called *plutei* when employed within chancel screens);

pillars (also called posts, pilasters, or piers);

columns (also called colonettes);

capitals;

beams (also called architraves);

arches, and/or gable-arch-slabs (also called pediments, or *tympana*), and/or gable arches (to top the *pergula*'s entrances to the *presbyterium*)[11].

The altar screen had usually the function to separate the presbytery or sanctuary – also called *presbyterium*, i.e. the area around the altar, reserved for the clergy – from the rest of the church, but the same structure could be used to enclose other particularly sacred spaces, for instance the sarcophagus of a saint or of a prominent clergyman. In both cases, these structures were meant to control the flow of pilgrims, or to protect the saintliest sectors from 'too enthusiastic' believers. *Pergulae* were specific types of chancel screens with a lower part, with slabs assembled to pillars, and an upper part, with columns and capitals supporting a beam. When the screens had no upper part (so called 'low type'), the term *cancellum* (or chancel screen) is generally preferred[12] (**fig. I.4**). Within *pergulae*, the posts and their columns and capitals were often carved together, consisting of a monolithic vertical element (**fig. I.4, 1**). Elements as such are most likely listed in at least one Early Medieval written source: the *Memoratorium de mercedibus commacinorum*, a Lombard document which fixed the amount of money to be paid out to every master in a construction site,

[11] In the case of *pergulae* with more than one entrance to the *presbyterium*, different types of arches could be used in the same structure: at Trento, S. Maria Maggiore, for instance, the *pergula* had in all likelihood three entrances, two of which were topped with an arch, and the other with a gable arch (or vice versa): see Beghelli 2013, 67.

[12] On these two types of altar screens (*cancellum* and *pergula*, 'low' and 'high') see: Duval 1999, 26. – Jurković 2000, 226. – Orlandos 1954, 509-538, figs 490 and 492.

according to the type of work[13]. Above the entrance(s) of the *pergula* there could be a gable-arch slab (**fig. I.4, 2**), or a semi-circular arch (**fig. I.4, 1**), or a gable arch: the latter is very rare, but has been detected for instance in Trentino, Bavaria and Switzerland[14] (**fig. I.11**). Especially altars, but also baptismal fonts, could be enhanced by a ciborium, i.e. a stone baldachin which emphasised their «visibility, dignity, and firm spatial establishment»[15] (**figs I.7**, **I.10**). Placed outside the sanctuary, the ambo was used for the reading of the Gospels (**fig. I.6**). Stone reliquaries – often buried under the altar – were conceived as actual miniature sarcophagi[16] (**fig. I.9, 3**), at times provided with gabled-lids with corner acroteria, and containing smaller caskets in precious metals[17]. In the strict sense of the word, decorated sarcophagi and tombstones do not fall into the category of 'architectural sculpture'. However, they belonged *de facto* to the ecclesiastical buildings' stone furnishings: their elaborate ornaments – often comparable to those used for chancel screens, ciboria, etc. – show that these elements were intended to be fully visible and in evidence inside the church; also, their relative rarity might suggest that, at least in some cases, they corresponded to privileged graves with a commemorative function[18].

It goes without saying that not necessarily churches and monasteries displayed the 'complete set' of the above-mentioned furnishings. According to the archaeological evidence, some seem to have been more common than others: Early Medieval ambo fragments, for instance, are rarer than remains of chancel screens or ciboria from the same period, while the presence of elements such as decorated sarcophagi, episcopal chairs, baptismal fonts, holy water fonts, depended on the function, location, size or importance of the ecclesiastical building[19].

Slabs were usually assembled to pillars with a tongue-and-groove method: the same system was often used to set them on the *pergula*-base (**fig. I.14**). Pillars could be embedded to the base by

[13] Memorat. Merc. Comm. VII. Produced by the *marmorarii* (i.e. marble workers / stonecarvers), they are named *columnae* and are described as being four or five feet tall (180-220 cm); this size cannot refer to a load-bearing column, and corresponds instead to the height of chancel screen columns (including pillars and capitals) or columns for baptismal fonts. See Lomartire 2009, 175-177. – See also Paragraph III.2.7. Today, there is general consensus in dating the *Memoratorium* to the age of king Liutprand (712-744) rather than Grimwald (662-671). Jörg Jarnut, for instance, convincingly argued in favour of the first option, stressing that Grimwald issued very few laws (mostly about family and inheritance), whereas Liutprand, in his broad legislation, covered all the fields of jurisprudence (Jarnut 2009, 3. – See also: Fisher Drew 1973, 243, footnote 32. – Lomartire 2009, 170-182).

[14] Beghelli 2013, 60-65, with literature and examples.

[15] De Blaauw 2009, 48.

[16] On all these aspects, see: Destefanis 2012. – Destefanis 2017.

[17] This custom has a long tradition: see for instance the 5th-6th century example from S. Pietro, Cembra, near Trento: Possenti 2013.

[18] For instance at Molzbichl, Austria: **fig. I.10**.

[19] Destefanis 2017, 45.

means of a lower-end in the shape of a parallelepiped (**fig. I.14**, **A**) or by means of cylindrical reinforcing rods made of iron (**fig. I.14**, **B**). Cramps were an alternative system for assembling the elements of the altar screens – i.e. to secure the slabs to their upper decorative cornice and to the pillars – but could be also used to fix broken parts of the chancel screen (**fig. I.15**). Depending on the conditions of the soil, iron can deteriorate quickly: therefore, what the archaeologists usually detect are not remains of the cramps themselves, but the drill holes and grooves made to set them to the stone elements. The inside part of the drill holes often shows dark-red or brown spots – rust from the iron – and/or traces of lead (**fig. I.15**).

The altar screens had often the shape of the Greek letter Π, with up to three entrances to the presbytery, but they could also be simpler, i.e. rectilinear. The original arrangement of the chancel screen – Π-formed or rectilinear – can be inferred, if these are found during archaeological excavations, from its stone-bases with grooves for pillars and slabs (**fig. I.10**). Absent such stone-bases, a Π-form can at times be deduced from the discovery of fragments of corner-posts, characterised by two contiguous sides with grooves for the setting of slabs (**fig. I.14, A**), and by the decoration on the other two contiguous sides (e.g. **fig. I.4, 4**). In the same way, from other diagnostic fragments, archaeologists can deduce the types and shape of stone furnishings which were present in the Early Medieval ecclesiastical building. For instance, remains of rectangular slabs with an arch are recognisable as arcades for ciboria, while remains of colonettes, pediments or arches are hints for a *pergula* (not a chancel screen of the 'low type').

Within the reconstruction of the original architectural contexts, an aspect which is increasingly drawing scholarly attention is the interaction among different materials[20]. In some cases, the *pergula*'s beam, or even its whole upper part, was made of wood[21] (**fig. I.11**). Concerning this point, it is important to remark that not all chancel screens were it in stone: quite often the furnishings, including for instance ciboria, were entirely made out of timber[22]. Cursorily, it might be also noticed that, in the Early Middle Ages, the replacement of wooden structures with stone ones – be it a whole church or some pieces of its furnishing – is a well attested circumstance by both written and archaeological evidence, and in some areas of Europe, especially in its Northern parts,

[20] For an overview see Destefanis 2012. – Destefanis 2017.

[21] For a later example see Destefanis2017, 48.

[22] As for instance in Boppard: Ristow 2010, 87-89. – On wooden church furnishings see also Lomartire 2009, 172-174. – As well as the *marmorarii* (see above) the *habietarii* (woodworkers / woodcarvers) who manufactured these wooden *cancella* (chancel screens) are also mentioned in the *Memoratorium de mercedibus commacinorum* (Memorat. Merc. Comm. VI). – See: Lomartire 2009, 172-174. – See also below, Paragraph III.2.7.

was related to the prestige of the tradition in stone building radiating from Rome[23]. In the Papal See, however, wooden furnishings were also used: a case in point is the wooden ciborium in the church of St. Susanne, which was in use until pope Sergius I (687-701) replaced it with a new one in marble[24]. *Pergulae*, ciboria and other elements made in timber were most likely decorated, similarly to some 8th-century beams found at Zadar in Dalmatia, that were probably employed in the ceiling of the church[25] (**fig. I.12**). Wood was not the only material other than stone which could be used in the context of decorated church furnishings. The carved stone elements, for instance, could be painted, though the growing number of laboratory analyses carried out in the past few years is starting to show that the occurrence of painted sculpture in the Early Middle Ages is much rarer than the scholars initially expected[26]. Additionally, inlays made of coloured stones, glass, or even real gems, could enrich the sculpted elements: as for the last two cases, at times the internal parts of the settings for the inlays were gilded in gold foil fixed to the marble with red *minium*, pursuant to a technique inspired by the *cloisonné* jewellery[27]. At last, abundant written, iconographic, and archaeological evidence, shows to which extent several objects in the most diverse materials could complete the original appearance of the decorated stone furnishings. Coloured textiles – for instance altar cloths and curtains – played a major role, along with candles, icons (whether painted or made of silver or gold), and lamps in glass or metal, which were hung to the beams of the *pergulae* or laid on them[28]: among many written sources (some of which cited in the Appendix with Latin texts[29]), one can mention again pope Sergius I (687-701) and the silver lamps commissioned for St. Peter in Rome, which were placed *super trabes confessionis*, i.e. laid on the beams of the *pergula* enclosing the *confessio*[30]. As for the iconographic sources, there are countless Early Medieval illuminations depicting crosses, crowns, chalices, ewers, patens, thuribles, lamps, *candelabra*, curtains, and so forth, laying on (or near) the altars, or hanging from the stone furnishings, especially ciboria[31]. Evidence of this custom, however, can be also found on the carved fragments themselves, which

[23] See below, Paragraph III.2.1.

[24] Lib. Pont. 86, XIII. – Schlosser 1896, 67. See Appendix 2.

[25] Milošević 2000, 163-165. – Bertelli et al. 2001,

[26] See for instance Napione 2001, 117-118. – Lomartire 2009, 205.

[27] On these aspects see Beghelli 2017, 255-262. – Beghelli 2019. Both with literature.

[28] Lavers 1971, 183. – De Blaauw 1994, 563-564. – De Rubeis / Bordi 2001, 483-485, nn. IV.2.5a-f. – Beghelli / Pinar 2013. – Beghelli / Pinar 2014. – Destefanis 2017, 48. All with literature.

[29] See Appendix 2.

[30] Lib. Pont. 86, XI. – Schlosser 1896, 67. See Appendix 2.

[31] Beghelli / Pinar 2013, with literature.

sometimes show the drill holes bored for placing the hooks to suspend the items – e.g. those detected at Rome, Ravenna, and Trento[32] – or the groove which at times appear on the upper part of the *pergula*'s beam, along its length, possibly used to place icons and sacred images[33]. There are also testimonies of the holes for placing a cross at the top of the *pergula*'s arch, for instance at Ventimiglia[34] (**figs I.13** and **III.35**).

[32] Lavers 1971, 183. – De Rubeis, Bordi 2001, 483-485, nn. IV.2.5a-f. – Beghelli 2013, 67-68 and footnote 90.

[33] Beghelli / Pinar 2013. – Beghelli / Pinar 2014.

[34] Beghelli 2020a, with literature.

Chapter I.2.

Decoration (and a short history of studies)

Research on Early Medieval sculpture is vast and many-sided. Since the 19th century, scholars addressed a great number of different issues in studies that, sometimes, led to rather different results. The main problems described in the opening of papers and books are the almost complete lack of structures preserved *in situ*[35] and the extreme scarcity of securely dated sculpted remains: inscriptions or other kinds of evidence conveying a precise dating are indeed very rare[36]. Therefore, ever since the first scholars started to show interest towards the 'Dark Ages' in the 19th century, they had to face large amounts of fragments out of any context[37]. Also, the very geometrical structure of the decoration, combined with the sculptures' fragmentary condition, made it difficult to distinguish different versions of the same motif – so to speak, the carver's 'individual interpretation' of it – in different find-spots, or to appreciate the ways in which the motifs combined with each other within the original stone furnishings. Hence the development of the typological approach that characterised even the earliest studies on High and Late Medieval architecture – which could count on a large body of evidence in terms of still standing, almost entire structures, allowing the arrangement of buildings and their carved decoration according to their morphologic traits – was strongly hampered in the case of Early Medieval sculpture.

Rather than on assemblages, the debate begun to be generally built upon individual sculpted fragments, considered separately from the others coming from the same find-spot. In these circumstances, the decoration represented the most 'noticeable' feature of the stone remains, eventually turning into the sole aspect considered, to the detriment of other issues like, for instance the reconstruction of the architectural elements the fragments originally belonged to. Thus, with very few exceptions, the earliest scientific works on this class of materials were focused on the ornaments in themselves. This tendency was largely confirmed in the later studies although, over

[35] As seen in the previous Chapter, the sculptures are almost always found in fragments.

[36] In the pictures of the previous Chapter, the presence of many securely dated items results from an intentional selection.

[37] Concerning the new interest in Late Antique and Early Medieval architecture and art, Alois Riegel's and the 'School of Vienna' must surely be mentioned (Riegl 1893 and 1901). An overview on this period is provided in Carboni 2000, 60. On the idea of *Kunstwollen* as regards ornaments: Carboni 2000, 55-114.

time, the advancements of archaeological and historical disciplines and the new archaeological finds concurred to provide additional data, to raise doubts about earlier assumptions, to propose new interpretations.

I.2.1. **The beginnings**

Since the very first studies, one of the questions that most attracted scholarly attention concerned the origin of the sculptures' ornaments. Some of the most peculiar motifs, for instance the interlaces, were used nearly everywhere and in any period of the ancient world[38]: accordingly, as shall be seen in this and the next Paragraphs, the hypotheses formulated on the subject were immediately the most diverse. Coming from several types of artefacts (sculptures, jewellery, textiles, mosaics, illuminated manuscripts, etc.), the ornaments' original models were variously located in Coptic Egypt, Syria, the Byzantine Empire, the Roman classical Antiquity, or in the so-called 'Barbarian ethnic component' of the Germanic and Slavic world; then, these geographical and cultural contexts were taken as starting points for paths of diffusion north-south, south-north, east-west-south, and so forth. Another prominent point of discussion was the 'nationality' of the sculptors: among others, were thus postulated Latin stonemasons working for Barbarian commissioners according to the taste of these new elites; Barbarian stonemasons fascinated and civilized by the contact with the monumental grandeur of the Roman and Justinian periods; Byzantine stonemasons carrying to the West their own cultural and iconographic heritage.

Although they acknowledge some influences from the Byzantine East or from the Barbarian *milieu*, Italian scholars had a preference for the thesis of the Roman origin of decorative patterns and ateliers: among them Ferdinando Mazzanti (1896)[39], Paolo Fontana (1896)[40], Adolfo Venturi (1902)[41] and Giovanni Teresio Rivoira (1901)[42]. The last author pointed out that interlaces, running dogs, strings of beads, together with vegetal motifs such as plant-scrolls, rosettes, whirls, fleurs-de-lis were all largely employed already in the Roman imperial and even in the Etruscan periods: the Classical past would have handed them to Early Medieval sculpture through the intermediary work of Late Antique craftsmen[43]. The 'Roman thesis' was later supported by Pietro Toesca (1927)[44],

[38] Holmqvist 1939, 35 and 209. – de Francovich 1952, 256. – Augustyn *et al.* 2003, 863.

[39] Mazzanti 1896.

[40] Fontana 1896.

[41] Venturi 1902, 185 e 190.

[42] Rivoira 1901.

[43] Rivoira 1901, 123-125.

[44] Toesca 1927, esp. 274-276.

Arthur Haseloff (1930)[45] and Rudolf Kautzsch (1939 and 1941)[46]. Conversely, Raffaele Cattaneo (1888) claimed that the sculpture was produced by true Greek hands working in the *Regnum Langobardorum*, and had a sole Byzantine origin[47], while Louis Courajod (1899) admitted also a Lombard contribution besides the eastern roots of Early Medieval artistic language[48].

These first works were largely centred on Italian materials: other European regions equally rich in sculpted finds – e.g. Istria and Dalmatia – would need some time before steadily entering the international academic debate[49]. In these regions too, however, a tradition of studies developed rather soon. Raffaele Cattaneo, for instance, found a follower in Frano Radić, who presumed a Byzantine derivation for the motifs used on Early Medieval Croatian sculpture[50].

Besides the discussion on the decoration's origin, the late 19th and early 20th century also witnessed some rare, pioneering attempts to systematise and arrange the motifs typologically: for instance, the typology devised by John Allen for the sculpted ornaments[51] remained in use for decades in the British Isles, before being refined and adapted to the new finds[52].

I.2.2. **Tracing the origin of the ornaments: between ethnic labels and political ideologies in the first half of the 20th century**

Mirroring the contemporary debate on funerary archaeology, and influenced by a comparison to the so called 'Barbarian' jewellery artefacts, several scholars applied an ethnic label to stone sculpture[53]. In 1896 and 1897 it was defined 'Lombard' respectively by Ernst Alfred Stückelberg and Max Georg Zimmermann[54], while Albrecht Haupt's work on the «Baukunst der

[45] Haseloff 1930, 47-64.

[46] Kautzsch 1939. – Kautzsch 1941.

[47] The first edition appeared in Italy in 1888; the one used here is the French translation, published two years later: Cattaneo 1890, 76-83.

[48] Courajod 1899, 359-371.

[49] Petricioli 1985, 472.

[50] Radić 1900.

[51] Allen 1903.

[52] Cramp 1984.

[53] Apart from very rare exceptions, many scholars today are rather sceptical on the comparison between sculpture and jewellery, not only because of the remarkable chronological gap between metal and stone objects, but also because of the existence of much closer parallels (in space and time) in architectural or funerary sculpture. Almost always, similarities are indeed limited to single details belonging to completely different decorative contexts. On these points see, for instance: Mor 1976, 228. – Delahaye / Périn 1991, 303. – Héber-Suffrin 1999, 454. – Destefanis 2004, 282-283. – Ibsen 2013, footnote 36. – Périn2021. For an overview on 'Barbarian' jewellery and ethnic labelling see Brather 2004, 1-27 (with history of studies).

[54] Stückelberg 1896. – Zimmermann 1897. – See also Zimmermann 1894.

Germanen» got into print in 1909[55]: one of the book's plates (**fig. I.16**) is a significant example of its approach; about fifteen capitals are represented there, each provided with an image-caption which reads «*Verona, ostgotisch; Toledo, westgotisch; Ravenna, langobardisch*», and so forth[56]. In the subsequent decades, the political scenario was marked by the development of nazi-fascist ideologies in Europe: whereas the Italian regime celebrated the magnificence and grandeur of ancient Rome[57], the third Reich reappraised, in a propagandistic manner, an alleged contribution of the 'Germanic races' to European art. Thus Emerich Schaffran, in 1941, reasserted the *Langobardentheorie* from a sort of evolutionist viewpoint, arguing that when the Lombards arrived in Italy, they found a «weak and feeble art with Byzantine traits», which was then «strengthened» with the new Germanic style, that spread quickly because it was «vigorous and healthful»[58]. Karl Ginhart, however, pointed out just one year later – still at the height of the Second World War – that, in the 8th century, the Lombards no longer existed as an unflinching, unchanged people in contrast to the Romans, but had rather been inhabiting Italy for more than one hundred fifty years: therefore, it was not correct to call 'Lombard', in its ethnical meaning, the sculpture produced in the peninsula[59]. Opposite views of this kind – one emphasizing the ethnical background, the other the historical facts – can be found elsewhere, too. In 1927 in Croatian language and again in 1929 with his «altslawische Kunst», Josef Strzygowski asserted that the ornaments of Dalmatian sculpture were brought there by the Croats from their motherland[60]. Objecting this assumption, Ljubo Karaman argued upon more solid art-historical grounds, showing the evident continuity between the earlier Late Antique and the later 'interlace sculpture' in the region[61].

After the Second World War, a new phase of studies on Early Middle Ages begun, and someone started to realise that the sculpted stone fragments needed to be rid of labels straightforwardly referring to peoples. Albeit nazi-fascist connotations were now absent, the new course of studies was still partially characterised by a certain tendency to ethnical-labelling,

[55] Haupt 1909.

[56] Haupt 1909, 85. About the *Langobardentheorie* (a definition of B. Johannson-Meery 1993, 16) see also Picton 1931.

[57] See for example the *Mostra augustea della romanità* ('Augustan Exhibition of the Roman Spirit', 1937-1938). The opening speech, addressed directly to Mussolini, states that such an extraordinary collection of Roman masterpieces could have only taken place in «Rome and in fascist Italy», and «thanks to the *duce*» (*Mostra Augustea*, V).

[58] Schaffran 1941, 20-23. Original in German.

[59] Ginhart 1942, 160.

[60] Strzygowski 1927. – Strzygowski 1929.

[61] Karaman 1942.

probably still influenced by recent historical facts. Especially Italian scholars reversed, so to say, the medal, claiming for the *Flechtwerk- und Rankensteine* a Roman origin and a manufacturing by Italic stonemasons working for the Lombard (Germanic!) invaders: in 1951, during a conference, Géza de Francovich ascribed the so-called Lombard sculpture in Italian territories to native craftsmen of Italic ethnos and tradition[62]. The jewellery and the grave goods, he explained, showed that the Lombards had undoubtedly a «barbaric and innate taste for chaotic and convulsive ornaments» which did not match, according to the scholar, with some sculpted remains, characterized instead by a «limpid clarity and symmetry»: these carved stones must have been produced, therefore, not by Lombard but by Roman hands[63]. About a decade later, Joselita Serra used a comparable language in her introduction to the Corpus of Early Medieval Sculpture in the diocese of Spoleto[64]. After having described the stone-carvers in a rather unflattering way – as basically unable to carve as finely as their predecessors in the 6th century – she noted anyway that, as chaotic their compositions might be, they were still very different from the «true barbaric art», defined as «vehement, disorderly, irregular, intolerant of any form of spatial restriction [given by the margins of the composition] and characterised by an innate vitality»[65]. Here, some sinister political stereotypes on the supposedly free and fierce Germanic peoples were 'transferred' into a chisel; curiously enough, the words employed by Serra seem to echo the ones used by Schaffran in 1941, though reversing the meaning and, in a way, criticising some of the features that the German author presented as positive.

Advocate of a different way to think to the sculpted fragments, Carlo Cecchelli focused on issues, so to speak, of a more pragmatic kind. In 1951 – and during the same, abovementioned conference where Géza De Francovich also was – he pointed out that the aim of a study on any artefact of the past should be, first and foremost, to detect and distinguish historical and cultural periods, leaving aside the remarks on ethnos; every observation on artistic aspects, moreover, must be supported by archaeological data, which can provide, through the stratigraphic context, a reliable chronological framing to the finds[66].

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[62] These ideas were presented during the first Conference of Lombard Studies (*1° Congresso di Studi Longobardi*), Spoleto 1951, published in 1952 (see de Francovich 1952).

[63] de Francovich 1952, 266-267 and 272. As late as 2001, the same opinion and methodological approach were still shared by Paola Porta, who, analysing the Early Medieval carved fragments from Trento, S. Vigilio, wrote that «the decorative motifs and schemes are clear and precise», having «nothing in common with Lombard and Barbarian art» and being «strikingly in contrast with the tumultuous and incoherent Barbarian ornaments» (Porta 2001, 441). Original texts in Italian.

[64] Serra 1961, 9-10.

[65] Serra 1961, 9-10.

[66] Cecchelli 1952, 138-140.

I.2.3. **New viewpoints**

The positions of scholars like Géza de Francovich and Carlo Cecchelli revealed already, in embryo, the two different paths of later research. One approach would continue the practice of studying the ornaments *in themselves* (origin/provenance of the motifs, iconography, symbolic meaning) usually favouring 'pure' stylistic analysis over archaeological methods[67]. The other would focus on the historical and archaeological context, on the process of production of stone elements, on the reconstruction of the original architectural structures. A number of the earliest exponents of this second 'school' are to be found in the Croatian tradition of studies[68], which, decades later, would eventually mark the direction of many relevant scientific works in other countries.

Innovative ideas, however, were coming from different parts of Europe. One can mention, for instance, Gian Piero Bognetti who, in 1954, chose an historical perspective, basing upon social and economic rather than aesthetic and ethnic arguments[69]. Among other things, he was one of the first scholars who addressed the issue of the market for stone products and the relations between patrons and sculptors in the Lombard kingdom. Bognetti explained the boost in production of stone sculpture in 8th century as the apex of a gradual process which had begun with the conversion to Catholicism: the increasingly wealthier Lombard elites would increasingly fund church building, thus progressively creating a lively market for stonemasons and reviving a manufacturing sector which, until then, was stagnating[70]. Albeit in his work survived a certain idea of decay of the arts in Early Middle Ages, Paolo Verzone was another one who – already in 1945 – had shifted the focus of research from the detection of the stonemasons' ethnos and from aesthetic evaluations to the analysis of an objective phenomenon: the wide diffusion of a decorative sculpture centred on geometrical / vegetal motifs and the nearly complete disappearance of the previous narrative subjects. The aim was to frame, historically, this phenomenon, looking for its causes and finally explaining it as a natural result of artistic tendencies already existing during the early Roman Empire[71]. It is significant of the author's viewpoint, moreover, that he titled his book «Pre-Romanesque art in Liguria», thus revealing a preference for chronological rather than ethnic terms to refer to the subject of his work. The same preference can be found – again – within the 'Croatian school'[72]. In a similar way, in his titles, Thomas von Bogyay favoured words of a descriptive kind

[67] For a more detailed discussion on this point see below, Paragraph III.4.11.

[68] A concise history of research can be found in Petricioli 1985.

[69] Bognetti 1954.

[70] Bognetti 1954, esp. 67-69. For a critical overview on Gian Piero Bognetti's work, see Gasparri 2004, 11-14.

[71] Verzone 1945, 189-202.

[72] Petricioli 1985.

like *Flechtwerksteine*; he also pointed out for the first time, in 1957, that the subject of the interlace-*sculpture* had been too often mistaken to the wider subject of the interlace-*ornaments*, thus highlighting the distinction between the 'physical' objects (the stone fragments in their whole) and their decoration. According to von Bogyay, the phenomenon of the wide and rapid diffusion of the *Flechtwerksteine* could not be studied using only formal-aesthetical tools, but required instead historical ones[73]. Therefore, he focused on some concrete aspects related to the production of this architectural sculpture, which was a completely different matter from the origins or fashion of its ornaments. He argued that the relevant quantity and quality of carved remains testified a very well-structured manufacturing process, the existence of which should be explained with the survival of some Late Antique workshops, which had carried on their activity until reaching, after some generations, the *Massenproduktion* of the Carolingian period[74].

In Karl Ginhart's opinion, *Flechtwerk- und Rankensteine* were «an imperial art of a popular type» produced especially in the peripheral areas of the Carolingian empire[75]; the resemblance of ornaments in such a wide territory was explainable with the sending, from Rome to the minor centres, of books containing inventories of decorative patterns (*Musterbücher*) to be reproduced on the stone by local craftsmen[76].

During the Sixties a debate arose, opposing those who followed a 'traditional' view and reckoned that the *Flechtwerksteine* had spread starting from South (i.e., from the sophisticated and cultivated papal Rome[77]) to others who claimed the direction was opposite, i.e. from the Alps southwards. Jean Hubert took sides with the second hypothesis. Starting from the distribution map of the stone fragments known at that time – mainly in France, Northern and Central Italy, Switzerland, Austria, Southern Germany and Istria – Hubert asserted that the 'central' Alpine area must have been the production centre. From the Alps, where most of the stone quarries were concentrated, the finished carved artefacts would have been exported towards other regions[78]. Afterwards, Nicolò Rasmo, dealing with Carolingian stone sculpture in Alto Adige/Südtirol, would

[73] v. Bogyay 1957, 262-263: here the author also reports François Masai's remarks, who claimed that it was necessary to distinguish between the problem of the decorative patterns' origins and the issue of their success and diffusion (Masai 1947, 74).

[74] v. Bogyay 1957, 274.

[75] «eine karolingische Reichkunst volkstümlicher Prägung» (Ginhart 1954, 217).

[76] Ginhart 1954, 217. – See Paragraphs III.1.2 and III.1.3.

[77] See above, the thesis of the 'Roman origins'.

[78] Hubert 1968, 29. The scholar also expressed his opinion about the origin of the interlaced motifs, supporting Raffaele Cattaneo's thesis (see above) and claiming that they derived from Byzantine or Syrian models, which had arrived to Istria and had then gradually spread through the work of local craftsmen.

support this thesis, too[79]. Alessandra Melucco Vaccaro eventually proposed a compromise solution: the diffusion of *Flechtwerksteine* did not correspond to a 'one-way' phenomenon, but had rather been the result of a network of artistic exchanges among multiple centres, encouraged by the political relations between the secular and ecclesiastical powers[80].

I.2.4. **A further approach: the contribution of archaeology**

Starting from the Fifties and Sixties, therefore, the scientific debate on Early Medieval sculpture was enriched by either new or previously scarcely considered points of discussion. Some concerned the methodological approaches to be used, others concerned some aspects of production and diffusion of the architectural sculpture, and yet others the importance of a reliable historical framing to the stylistic analysis. The development of archaeological sciences had surely a role in triggering a growing awareness that the knowledge of sculpted remains needed to be contextualised and rearranged. The correct understanding of this and any other class of archaeological materials should be based on accurate chronological and geographical data: it was therefore necessary to create a solid superregional chronological frame of reference, and to systematically publish the stone fragments into *corpora*.

A few suggestions in this direction had already been made by Jean Hubert at the end of the Thirties[81], but we find again Carlo Cecchelli among the first scientists who outlined precisely the obstacles to research: one was the general unreliability of the chronology assigned to the stone elements, which could easily vary from a century to another depending on the scholars' inclination. Stylistic analysis depended too much on «subjective and personal perceptions», and it should therefore be used *cum grano salis*, always considering the archaeological context and, when available, the epigraphic data[82]. According to Cecchelli, a possible solution was to build a chronological grid containing exclusively the securely dated sculptures (from reliable stratigraphic contexts, through inscriptions on the stones, etc.) and then using this grid to date further carved remains[83]. Approximately in the same years, Mirko Šeper was already experimenting with this method, applied on Croatian finds[84].

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[79] Rasmo 1976, 148.

[80] Melucco Vaccaro 1995, 58. – Melucco Vaccaro 2001, 411.

[81] Hubert 1938, 164.

[82] Cecchelli 1954, 182.

[83] Cecchelli 1954, 181-182. This method will have been used by J. Hubert: see e.g. his essay of 1968, systematically based on well-dated objects.

[84] Šeper 1955.

In the meantime, the systematic publishing, region by region, of the sculpted remains had also begun, following the example of some 'pioneers' from the late 19th to the mid 20th century[85]. Respectively in 1959 and in 1978 the first volumes of the *Corpus della scultura altomedievale*[86] and of the *Recueil général des monuments sculptés en France pendant le haut Moyen Age (IV^e^-X^e^ siècles)*[87] got into print. Whether or not in the form of *corpora*, this activity of collection and publication of the finds was undertaken also in other areas, for instance Bavaria, Carinthia and Croatia, and, as well as the French and Italian series, it continues to this day[88]: to date, the only corpus which is nearly finished is probably the *Corpus of Anglo-Saxon stone sculpture*[89].

The Sixties and the Seventies were also the period during which most of the scholars finally rejected ethnic labelling to Early Medieval sculpture, now perceived as inappropriate and as a «static, monolithic historiographical concept»[90]. Connotations like 'Lombard', 'Visigothic', and so forth, were to be abandoned[91] or, at most, used only as a neutral reference to a given area and time, or even better, replaced by terms such as 'sculpture of the Lombard period', or 'sculpture produced in the Lombard kingdom'[92]. Not everyone, though, followed the advice, if Angiola Maria Romanini had to return on the same issue in 1991[93], and still in 1995 Alessandra Melucco Vaccaro reported «residues of racial archaeology» in the interpretation of the sculpted fragments[94]. Other new points emerged in between the Sixties and the Seventies were the growing interest in subjects like the

[85] See for instance: Bulić 1888 (area of Knin, Dalmatia). – Ginhart 1942 (Carinthia). – Baum 1943 (Switzerland). – Verzone 1945 (Liguria).

[86] Belli Barsali 1959.

[87] Fossard / Vieillard-Troiekouroff / Chatel 1978.

[88] Bavaria: Dannheimer 1980. – Johannson-Meery 1993. – Carinthia: Karpf 2003 (more recently, see also Gleirscher 2019). – Croatia: among many, see for instance Supičić 1999. – Milošević 2000. – Jurković, Matejčić, Ziherl 2006 – Piteša 2012 – and the numerous works published in the journal «Hortus Artium Medievalium» and in the archaeological guides to Early Medieval churches in Croatia (first volume: Jakšić 1995). The French corpus was interrupted after a few volumes, but has been recently resumed in digital form: see Mérel-Brandenburg / Le Pogam 2021.

[89] Initiated by Rosemary Cramp.

[90] For a general survey on the subject see Romanini 1991, with literature.

[91] Romanini 1969, 271.

[92] Tagliaferri 1981, 30.

[93] Romanini 1991, 2-4.

[94] Melucco Vaccaro 1995, 60. – For a parallel debate on the relations between objects and ethnicity in Late Antique and Early Medieval funerary archaeology see: Pohl 2000. – Gasparri 2003. – Brather 2004. – La Rocca 2004. – Barbiera 2005. – Pohl 2010. – Mathisen 2011. – Barbiera 2012.

manufacturing techniques[95], or the studies focused on the original architectural context and context of use of the church furnishings: one of the first scholars who dealt with these subjects for the Carolingian period was Carol Heitz in 1963[96]. At about the late Seventies, the methodological foundations for an archaeological approach to the study of Early Medieval sculpture had been laid. Attention had been called to material data (working techniques, stone types used), to the wider context of the fragments (historical, architectural, stratigraphic), to the inadequacy of the ethnic interpretation and to the importance of a more accurate method to date the sculpted materials. Yet this scientific legacy was well received by only a part of the studies published in the subsequent years.

I.2.5. From the fragment to its context. Decoration, typology, chronology, reconstruction of furnishings: open questions and advancements from the 2000s onwards

The long season of the debates upon the origins of the decorative patterns gradually came to an end, leaving the question unresolved[97]. Other issues remained open, too, such as those concerning chronology, involving the domain of both the relative and the absolute dating: needless to say, both are crucial to contextualise the sculpted fragments, from a smaller scale (e.g. the reconstruction of the furnishings in a single church) to a larger one (e.g. the understanding of the diffusion of architectural and sculptural fashions over long distances). As mentioned at the beginning of this Chapter, given the peculiarities of this class of materials – lack of structures *in situ*, scarcity of well-dated finds, impossibility to perform absolute-chronology tests, etc. – the decoration of the sculptures often represents the only reference available to archaeologists and art historians to establish their relative and absolute chronology. Decoration can not only 'guide' the researcher in the grouping of fragments aimed at the reconstruction of the original furnishings in a church – which should be considered an essential step in the research process[98] – and give hints on the contemporaneousness of groups of fragments in different churches (relative chronology); through the search for parallel finds – i.e. similar sculptures from elsewhere – decoration can also, obviously, provide direct information on the dating of a certain assemblage of fragments (absolute

[95] Macchiarella 1976. – However, studies of this kind remained rare in the context of Italian scholarship, and, still in 2001, Ettore Napione remarked that Macchiarella's work was «a cult-essay, given the almost total lack of further Italian studies specifically devoted to this subject» (original in Italian).

[96] Heitz 1963. – See also Heitz 1980.

[97] Johannson-Meery 1993, 15.

[98] Lomartire 2009, 193-194.

chronology). Clearly, a study of this kind needs to rest upon a systematic method. Chronology remains, to this day, one of the most challenging points: it represents as well, as shall be seen in Part III. of this work, the indispensable foundations for the study of the production process, the economic context, and the artisanal background related to Early Medieval architectural sculpture.

In the early 2000s, there were still many open research problems. Hans Rudolf Sennhauser pointed out that the sculpted remains needed to be contextualised in space and time, systematically and precisely, and on a European-wide scale[99]. Yet according to Alain Dierkens, a detailed and wide-range study of Early Medieval carved remains was hindered by a scarce attention to the archaeological evidence – even in cases where an archaeological framework is indeed available – and by a frequently unconvincing proposals for parallel finds[100]. Ettore Napione also stressed that the analysis of the decoration is often based on vague resemblances between fragments, which has resulted in a myriad of very generic datings to the 8th-9th centuries[101]. Moreover, one might add, at times the parallels were – and still are – listed basing on iconography, i.e. on the mere subject, be it a vine-scroll, a plait, or peacocks nearby a *kantharos*. But, as Raffaella Farioli pointed out already at the beginning of the Eighties, «iconographic affinities simply derive from a common cultural background, and should not be mistaken with morphologic, formal similarities»[102]: as is easy to understand, the same subject on two sculptures, but differently executed, can hardly provide relevant chronological data, as the same themes were used along centuries all over the Christian world[103].

Miljenko Jurković is undoubtedly one of the scholars who, in the past few decades, has intensively worked on methodological issues. Several schools of thought, he noted, have developed independently from each other at a regional or national level. When the architectural and archaeological contexts are not taken into due consideration, the dating of very similar carved remains coming from different European territories can diverge of more than two-hundred years, typically 8th-9th to the late 10th centuries, «comme si rien ne passait entre les deux periods!». The discrepancies among traditions of study persist as long as the chronology of new finds continues to be assigned by 'blindly' trusting previous literature on similar objects, neglecting that those fragments, very frequently, have in turn been dated using unsystematic criteria. Eventually, this

[99] Sennhauser 2007, 349.

[100] Dierkens 2004, 73.

[101] Napione 2001, 54-55.

[102] Farioli 1982, 195.

[103] On this point, see Petricioli 1985, esp. 467.

brought to «un nombre énorme de datations enchaînées sans que personne ne sache où cela a commencé». This derives, according to the scholar, from a widespread and totally unacceptable practice: on the one hand, the custom of publishing the fragments one by one, with no reference to the archaeological context, and no attempts to reconstruct the original furnishings. In these cases, the result consists in a simple catalogue or list of objects devoid of context, not mutually related but presented individually, each one dated upon approximate criteria. On the other hand, within this kind of studies, the search for parallels is conducted basing on single motifs, isolated both from the others on the same sculpted fragment, and from the ensemble of the other ornaments emerged from the same church. This practice «à isolement des éléments sculptés ou des motifs» entails the risk of suggesting the existence of a 'linear evolution' of decorative patterns, creating a fictious chronological frame of reference which is then used, in different European regions, to date new objects. Conversely, since every motif belonged to a composition, parallels should be looked for accordingly[104].

While the problems of research described so far certainly still exist, the picture should not be painted too dark. From a few pioneering works in the first half of the 20th century[105], some studies have shown the excellent results that can be achieved with a systematic method: in the past few years, these studies have been growing in number, and will hopefully mark the course of future research[106]. Using every single piece of information provided by the fragments makes it possible to frame them in the original architectonical context and to reconstruct the original appearance of the stone furnishings[107]. In some lucky cases, the furnishings have been physically reconstructed[108], but when this was not feasible, accurate graphic or digital reconstructions[109] could be achieved through

[104] Jurković 2000. – Jurković 2016. – On these points see Chapters III.3 and III.4.

[105] See above.

[106] For instance: Pani Ermini 1976. – Dannheimer 1980. – Dannheimer 1986. – Dannheimer 1989. – Glaser / Karpf 1989. – Lusuardi Siena 1989a. – Lusuardi Siena 1997. – Micheletto 1999. – Karpf 2001. – Lusuardi Siena / Piva 2001. – Napione 2001. – Karpf 2003. – Karpf 2003a. – Destefanis 2004. – Uggé 2004. – Micheletto 2005. – Sennhauser 2007. – Destefanis 2008. – Sennhauser / Roth-Rubi 2009. – Codou 2011. – Roth-Rubi 2011. – Vedovetto 2011. – Belcari 2012. – Faccani 2012. – Beghelli 2013. – Beghelli 2014. – Casati 2014. – Vedovetto 2014. – Crochat 2015. – Roth-Rubi 2015. – Beghelli / Dalba 2019. – Gleirscher 2019. – Beghelli 2020. – Beghelli 2020a. – Faccani 2021. – Schiavone 2021. – Vedovetto 2021. – Villa del Castillo 2021. – Schiavone forthcoming.

[107] Napione 2001, 53-54.

[108] This is for instance the case of many locations in Croatia (for an overview see: Petricioli 1985. – Milošević 2000. – Jurković 2016); S. Ippolito all'Isola Sacra, Rome (Pani Ermini 1976); Ilmmünster in Bavaria (Dannheimer 1989); Molzbichl in Carinthia (Karpf 2003, 887 and 893; on the excavations in the church see: Glaser 1989. – Karpf 1989. – Karpf 1996).

[109] Interdisciplinary cooperation (e.g. involving archaeologists and architects) can significantly improve the results of this kind of research projects, as it has been shown, for instance, in the case of St. Gabriel at Kos, Greece (Baldini / Livadiotti 2011).

careful typological grouping of the sculpted fragments, which is particularly helpful when no stratigraphic data are available[110]. Within 'standard' archaeological research, typological grouping obviously rests – as for any other kind of materials – on studies founded on sets of finds[111], not single fragments or units[112]. In the domain of stone items, substantial results have been accomplished on sarcophagi and grave markers (*stelae*, *cippi*, crosses, etc.) produced in Merovingian Gaul during the 6th and 7th centuries. Many of these were the object of methodical typo-chronological classification: the items were grouped according to their morphological and decorative features, thus building a relative-chronology system. The dating of each type was then based on the (few) examples provided with inscriptions/historical information, and on the chronology provided by stratigraphy, by the topography of the cemetery, and by the associated grave-goods[113], for which existing archaeological sequences can be as precise as a time-frame of thirty years or even less[114].

As will be seen, a similar method works very well in the case of Early Medieval sculpture, too, also procuring much additional information on the production context and on the artisans who manufactured it[115].

[110] See for instance: Karpf 2003. – Destefanis 2004. – Micheletto 2005. – Lusuardi Siena / Piva 2001. – Lusuardi Siena / Delpiano 2010. – Codou 2011. – Vedovetto 2011. – Ballardini / Pogliani 2013. – Roth-Rubi 2015. – Beghelli / Dalba 2019. – Gleirscher 2019. – Beghelli 2020a. – Faccani 2021. – Schiavone 2021. – Schiavone forthcoming.

[111] Manacorda 2010, 45.

[112] See Chapters III.3 and III.4.

[113] Among many works: Périn / Renou 1985. – Delahaye 1985. – Cuvelier / Guillaume 1989. – Delahaye / Périn 1991. – Flèche-Mourgues 1992. – Delahaye 1993. – Flèche-Mourgues 1995. – Flèche-Mourgues 1998. – Coppola / Flammin 1994. – Flèche-Mourgues 2008 – Liégard *et al.* 2008. – Büttner / Henrion 2009. – Cartron / Henrion / Scuiller 2015. – Finoulst / Guillaume 2015. – Flammin et al. 2015.

[114] Legoux / Périn / Vallet 2004.

[115] See Chapters III.3 and III.4.

PART II.

MATERIALS

In its simplest definition, production is «the use of resources to make goods or services»[1]. The Encyclopædia Britannica states that «all production systems, when viewed at the most abstract level, might be said to be 'transformation processes' – processes that transform resources into useful goods and services. The transformation process typically uses common resources such as labour, capital (for machinery and equipment, materials, etc.), and space (land, buildings, etc.) to effect a change. Economists call these resources the 'factors of production' and usually refer to them as labour, capital, and land. Production managers refer to them as the 'five M's': men, machines, methods, materials, and money»[2]. Economics of production can be described as «the theory used to explain the interaction of various factors such as knowledge, labour, capital, and material used in the design of products or use of processes or services in the manufacture or development of products or outputs». In other words, (technological) knowledge, labour, capital and material are the most important, interdependent, 'inputs' of a production process, that can interact in various ways and thus determine the characteristics of the final product or service, the so-called 'output'[3].

In a study on present-day production systems, these input factors can be precisely defined and quantified, whereas within most research about the past none of these variables are immediately available: each of the 'five M's' – men, machines, methods, materials, and money – requires a specific investigation in order to determine its nature and amount. In the case we are concerned with, it seems appropriate to begin with the most elementary question: what are Early Medieval architectural sculpted items made of?

[1] Black / Hashimzade / Myles 2009.

[2] Tanenbaum / Holstein, Enc. Brit.

[3] Frankel 1990, 30.

Chapter II.1.

426 churches and their sculptures. A sample-area and some statistics on the provenance of stone

As well as for any study on production of goods, the provisioning of raw materials is a key-point to the understanding of sculptures manufacturing process. Transport of stone has always been the most expensive element in the production cycle[4]: importing lithic materials from thousands of kilometres away, or sourcing them in the surroundings of the building site, imply not only different budgets, but also entirely different economic contexts.

However, the supply and transport of the stone used for sculpture in the Early Middle Ages represents a rather challenging subject to address. On the one hand, this matter is also concerned by the dearth of written sources about economy and material culture early medievalists are well accustomed to struggle with. On the other, the data on the provenance of stone are often unavailable in the scientific literature on Early Medieval sculpture[5], and even rarer is the investigation of the possible means and methods of stone transport[6].

That Early Medieval sculptures are *usually* made in regional or re-used stone, available nearby, is a fairly common remark in scientific literature: yet such unquantifiable observations are rather uncertain grounds to rely on, when the focus is on the economic background and production context of sculptural artefacts. Criticism against the lack of data on the stone-types employed is also recurrent, while general surveys on the matter remain rare[7]. An overall statistical study on a broad territory looked like an appropriate tool to shed light on the matter, enabling to turn that 'usually' into numbers, to quantify the cases of local supply of stone and to verify the possible presence of similar production patterns in different European regions. To this end, thus, a sample-area including nowadays Northern Italy, Austria, Switzerland, South-Eastern France and Southern Germany has been taken into consideration. In this territory, Early Medieval sculpted items have been retrieved in

[4] Cagnana 2012, 84, with literature. – See also below, Chapter II.5.

[5] See below in this Chapter.

[6] See below, Chapter II.5.

[7] Buis 1976. – Napione 2002, 332. Both with literature. On local materials used in building activities, see Prigent / Sapin 2004, 118. – Among the first few surveys on large areas, besides Buis 1976, see for instance Jope 1964.

426 churches and monasteries. For each site of the sample-area, research was carried out with the aim to locate the provenance of stone used in the manufacturing of sculpted objects (**Appendix 1**). Great effort has been made to try to list all the find-spots in the area, although, given its vastness, it is presumable that some find-spots were neglected. However, because of the large quantity of data considered, a few isolated omitted unities are hardly relevant from a statistical viewpoint. This sample-area was chosen for several reasons. Firstly, a significantly high number of find-spots cluster in it, aggregating in their whole thousands of objects. Secondly, a great variety of sculptures are represented in this territory, with regard to types of forms and decorations, levels of quality and chronologies. Thirdly, in many occasions the regions in and around the Alps have been the focus of debate on some aspects related to sculptures production processes: some relevant questions[8] may only be answered starting from an overall survey on the raw materials employed. At last, literature is largely available for this area, often covering entire districts whose sculpted remains have been systematically published.

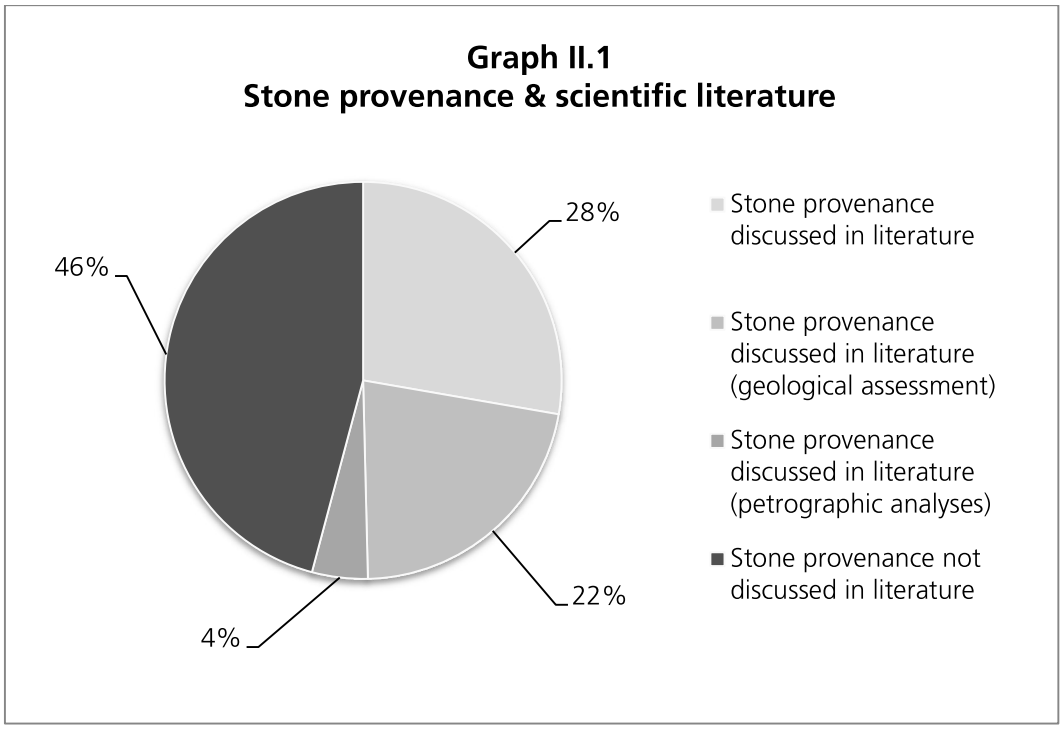
II.1.1. Stone provenance and distance of stone sources from the building site: statistical data

The 426 find-spots included in the table (see **Appendix 1**) correspond to 530 records on stone types, because in a number of find-spot the sculptures are made not in just one, but in several types of stone – different sorts of marble, for instance, could be used for producing the pillars and the slabs of a chancel screen, creating an alternation in colour[9]. A first significant issue to be discussed is the real extent of the dataset, i.e.: for the geographical area considered, the percentage of sites for which some information exists concerning the stone used to manufacture the sculptures, and its provenance. This datum is available in only 54% of cases, that is in 287 cases out of 530. In 85 cases, not even a generic reference such as ‘marble’, ‘limestone’ or ‘sandstone’ is provided[10] (**graph II.1**).

[8] See Chapter III.1.

[9] See below, Chapter II.4.

[10] See for instance, in **Appendix 1**, many find-spots in the province of Venezia. – On this matter see Greenhalgh 2008, 169.



Explanations for these circumstances, that deserve a few remarks, are diverse. The lack of information can depend, for instance, on the type of scientific contribution where the sculpted fragments were published. A general survey on the archaeology of the Early Middle Ages in a given region, including finds other than sculpture (metal objects, pottery, architectural features of buildings, etc.), leaves little space to discuss in detail the materials the items were made of. The same can be said about general surveys on sculptures over a broad area, where just a small part of the stone fragments retrieved in each site are considered[11].

Yet information on the provenance of stone – whether freshly quarried or reused from Roman or Early Christian monuments – is also often lacking in comprehensive studies provided with a catalogue and specifically devoted to a single find-spot or region[12]. Already in the Seventies, this situation was qualified as an obstacle to research on Early Medieval sculpture[13], but still in 2008 Michael Greenhalgh bemoaned «the frequent neglect by modern authors of the actual

[11] In such general surveys, systematic and exhaustive studies are almost always announced as forthcoming, but in a number of cases these were never published. The example of Italy is enlightening on this matter: in sixty years, from the first volume of the series published in 1959, the Corpus of Early Medieval sculpture (*Corpus della scultura altomedievale*) has covered about one fifth of the Italian territory. However, in their whole, the few volumes of the *Corpus* and other systematic publications cover quite well Northern Italy, i.e. the area considered in **Appendix 1**.

[12] See **Appendix 1**, column *Origin*. – On this point see Greenhalgh 2008, 169, who bemoans «the frequent neglect by modern authors of the actual materials ... in spite of otherwise careful cataloguing».

[13] Buis 1976, 233.

materials [...] in spite of otherwise careful cataloguing»[14]. In part, the problem depends on the little attention on manufacturing processes – from the supply of lithic materials to the carving methods and the internal organisation of workshops – that has traditionally characterised the studies on 7th-9th centuries sculpture, including in countries where this class of archaeological finds are extremely abundant: in 2001, a paper on sculpting techniques published in 1976 was still defined as a 'cult-essay', given the scarcity of research specifically devoted to this subject[15]. In some European areas, like France, at least the studies dealing with funerary sculpture (sarcophagi, *stelae*, crosses, etc.) developed eventually – since at least the late Seventies – a strong focus on production-distribution systems[16], but the situation has only very recently started to change for architectural sculpture. In part, however, the lack of information on stone types and their origin can be entirely unrelated to the intentions of the researcher, as these data can simply be problematic to collect. Difficulties in this respect can range from the mere scarcity of funds for geologists and archaeometric analyses to bare operational problems: for instance, Early Medieval sculpted fragments have sometimes been reemployed in the walls of later churches at a considerable height, which hampers their close examination or the withdrawal of samples[17]. Also, the analyses do not necessarily lead to the location of the quarry of origin: in some European regions, very homogeneous layers of stone, nearly identical from a geological viewpoint, extend over considerable distances. In these cases, it is indispensable, but not always available, the expertise of quarrymen or restorers from the surroundings of the find-spot, who have an «irreplaceable familiarity with the stone used in their region»[18].

The extent of the territory considered, however, allowed to collect a sufficient amount of data for statistical purposes, for a total of 287 records on the places of provenance of stone. In 116 cases there has been an assessment made by a geologist, and in 24 cases also the petrographic analyses.

At a first, general level, it is immediately evident that proximate supply of stone, including both newly quarried and reused materials, concerns the overwhelming majority of the find-spots, reaching more than 90% of cases (**graph II.2**).

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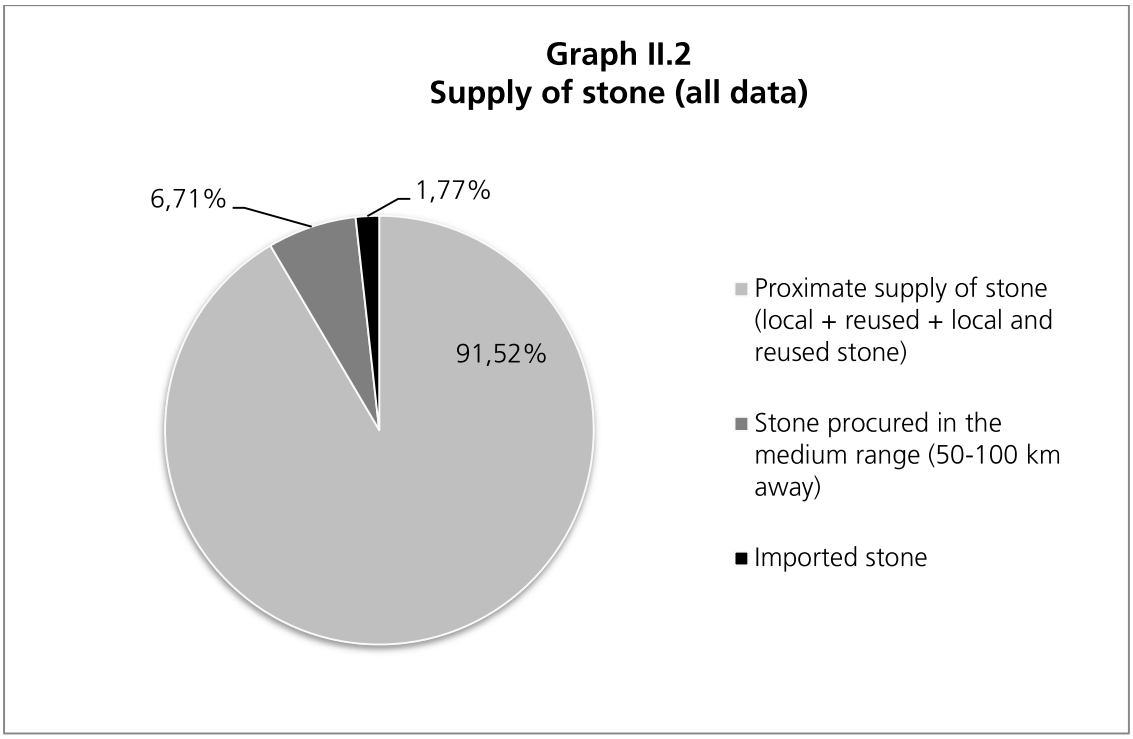
[14] Greenhalgh 2008, 169.

[15] Napione 2001 referring to Macchiarella 1976: see above, Paragraph I.2.4. In many Italian studies, the comprehensive work of Peter Rockwell (Rockwell 1993 [1989]) has not been given the attention it deserved.

[16] Cartron, Henrion, Scuiller 2015 is one of the most recent contributions in this field. See also: Delahaye, Périn 1991. – Flèche-Mourgues 1995.

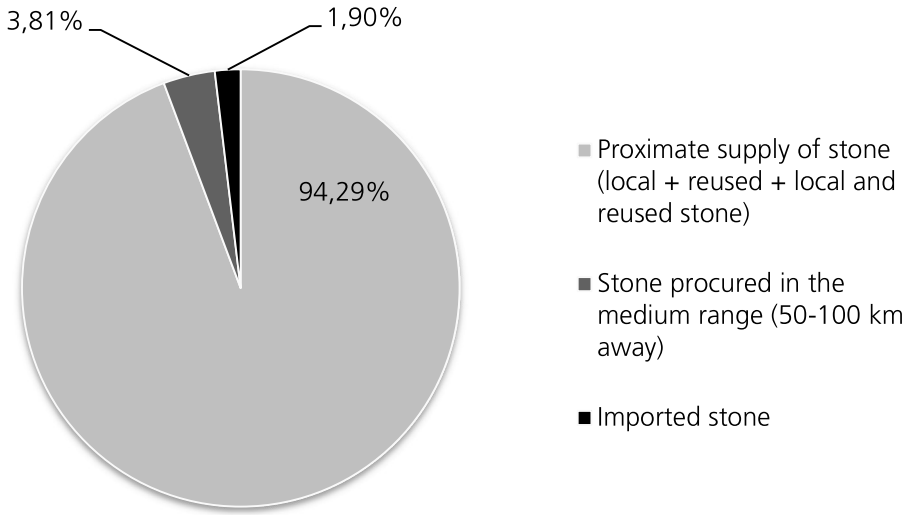
[17] Buis 1976.

[18] Buis 1976, 242. Original in French.



These percentages include the cases where the appraisal on stone types and their origin was made by archaeologists and historians of art who studied the sculptures. Yet when considering only the instances where the provenance of stone was assessed by a geologist (**graph II.3**), one can observe that the percentages do not vary much and, even, the ratio of locally procured stone raises from 91,52% to 94,29%. The percentage of stone procured in the medium range decreases from 6,71% to 3,81%. On the contrary, the percentage of imported materials slightly increases (circa 0,1%, from 1,77% to 1,9%), but this is only a consequence of the reduction in the total number of cases considered: the cases of imported stone in the whole dataset are 5, while those confirmed by a geological assessment are only two.

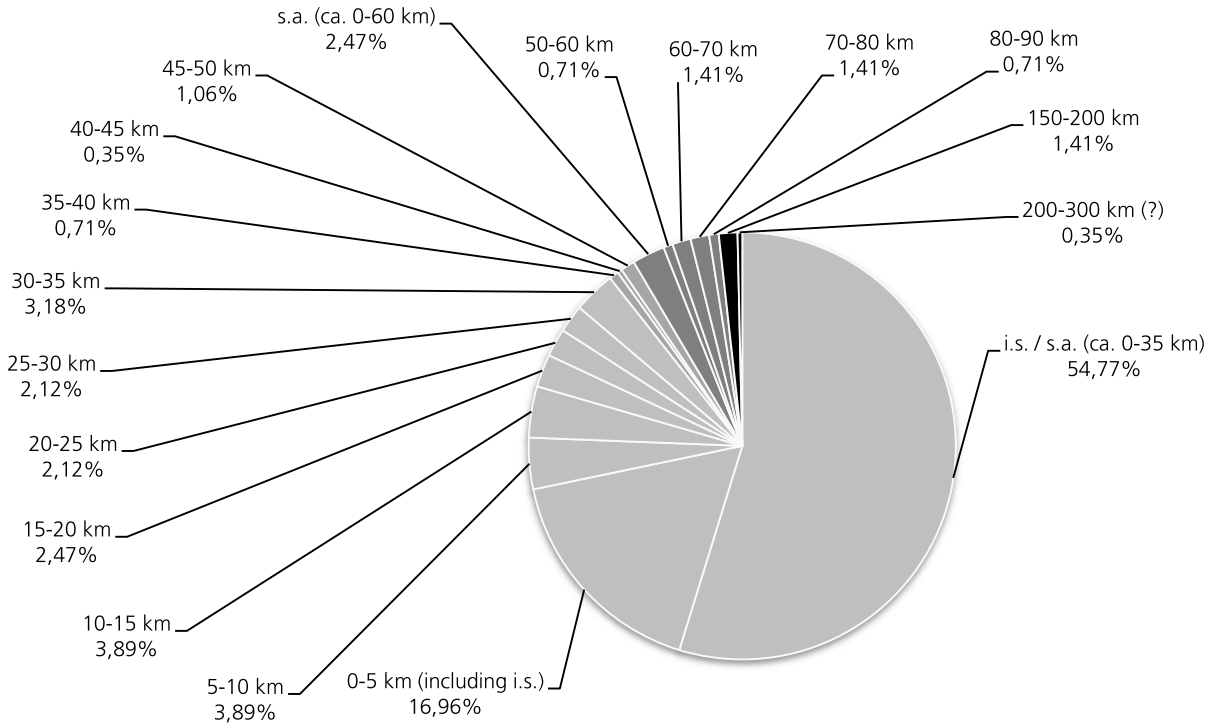
Graph II.3
Supply of stone (only data with geological assessment)



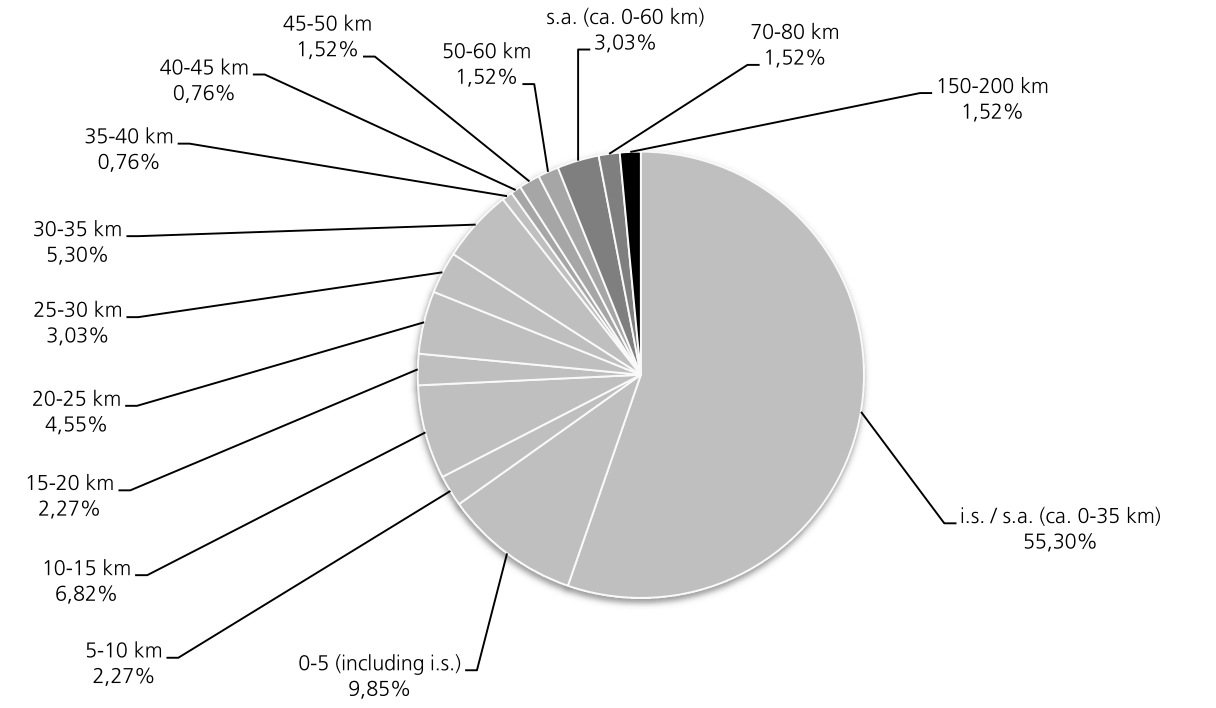
When analysing in detail the distances from the stone source, the percentages are likewise very similar in both datasets, i.e. the total of the records and only those with a geological appraisal (**graph II.4** and **graph II.5**). This is clear already at first glance, when observing the colours of the slices in both the pie-graphs. Yet it must be noticed that the maximum distances assessed by geologists are even slightly shorter: for instance, the maximum distance imported stone could come from shifts from 200-300 km (**graph II.4**, corresponding to just one, doubtful, case) to 150-200 km (**graph II.5**). Even the distances on the medium range (50-100 km) are shorter, with stone coming from a maximum of 70-80 km away (1,52%, **graph II.5**). A relevant point to stress, however, is that in most cases where the stone came from more than 40 / 50 km away, there were waterways available to ease its transport[19].

[19] See Paragraph II.5.2.

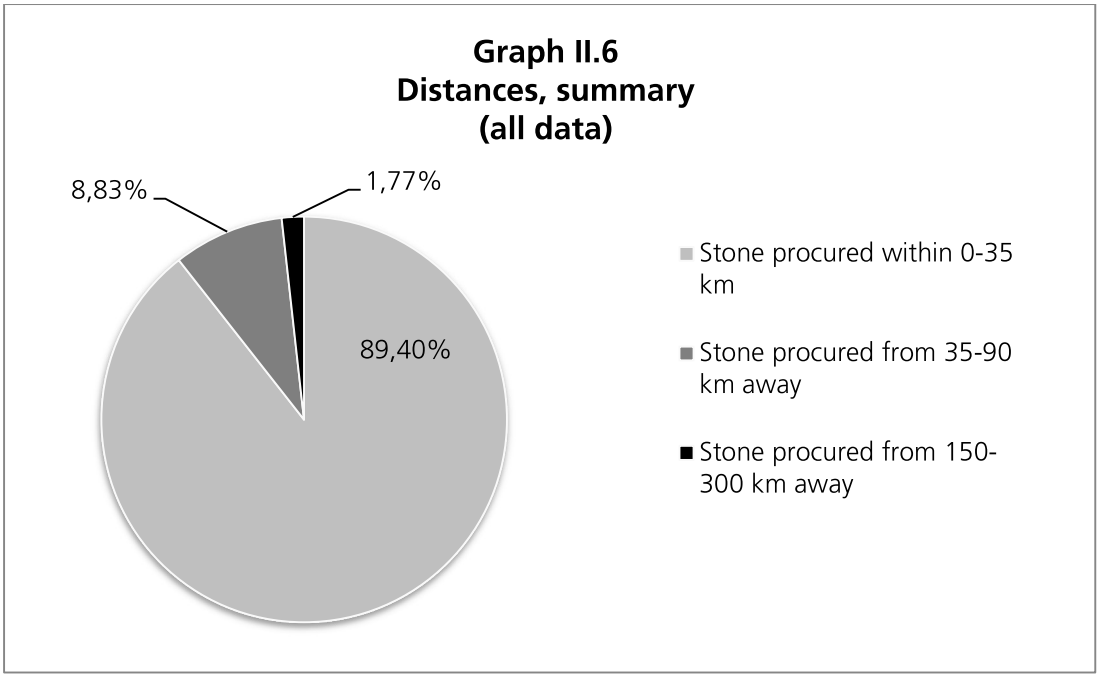
Graph II. 4
Distances (all data)

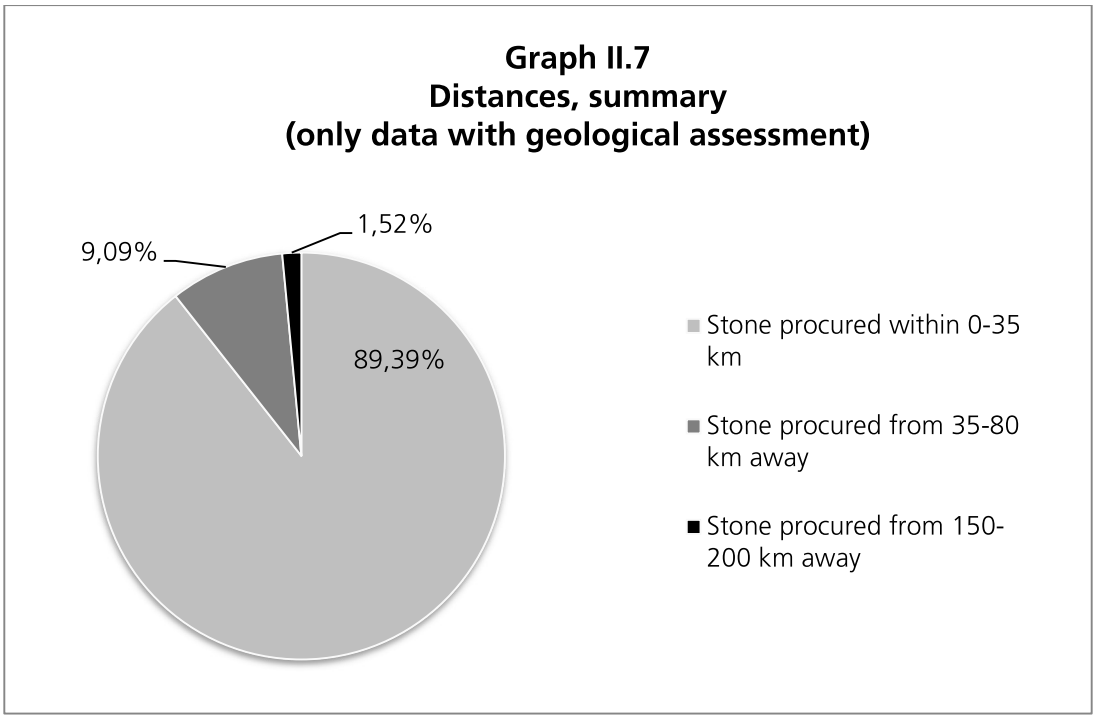


Graph II.5
Distances (only data with geological assessment)



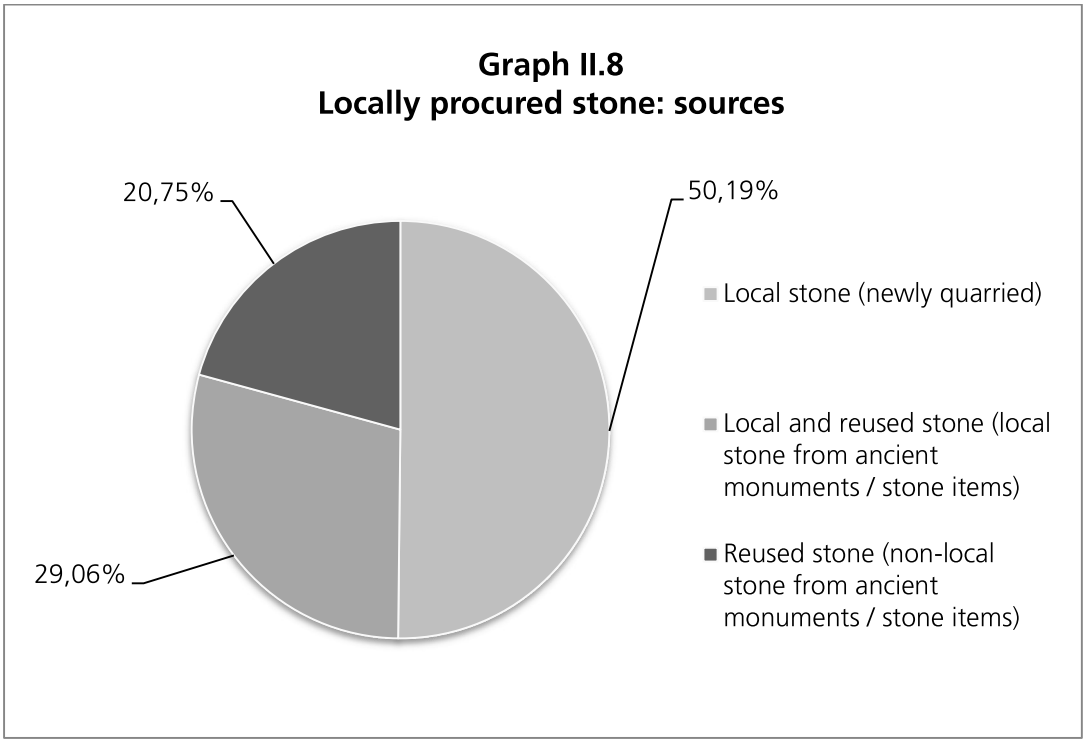
As can be seen in the **graphs II.6** and **II.7**, in both datasets, in the overwhelming majority of cases the stone was procured within 0-35 km (ca. 89%), while the stone coming from 35-80 km away corresponds to circa 9% of cases.





In the table (**Appendix 1**), the locally supplied stone was subdivided in 'local stone' – meaning lithic materials newly quarried and coming from nearby the find-spot – and 'reused stone'

– meaning lithic materials taken from ancient buildings or stone items, also nearby the find-spot. These categories can of course overlap, when the stone is procured from monuments or stone items that are both ancient (generally, from the Early Imperial to the Late Antique period) and made in local stone. Thus it is interesting to analyse the ratio of these three possibilities within the whole of the locally supplied stone (**graph II.8**).



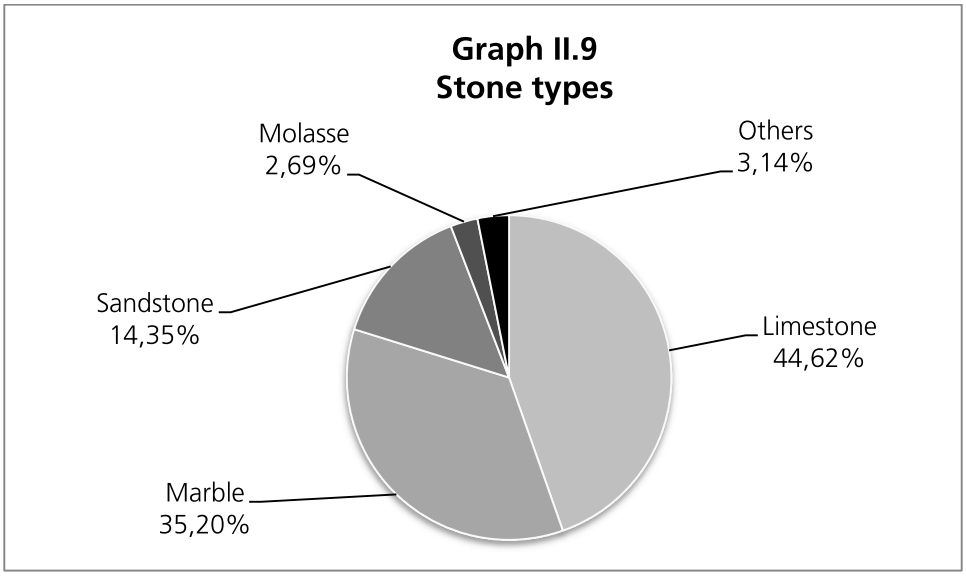
The high percentage of reemployed materials, about 50%, is not surprising: the considered territory is characterised by a high density of Roman settlements (unceasingly occupied over Late Antiquity and the Early Middle Ages), where ancient buildings, monuments, and other items like for instance sarcophagi, represented an ideal source of stone. By convention, the reused materials have been considered as coming from a radium of 0-35 km[20]; yet in almost all the Early Medieval find-spots resting on a Roman city, the stone used to manufacture the sculptures was taken in a narrower area, in most cases within 0-5 km[21]. A significant datum concerns also the lithic varieties within reused stone. When available, the beautiful and exotic sorts of marble that the Romans used to import to decorate their buildings were preferred to local varieties of limestone or sandstone as raw materials for Early Medieval sculptures. Local stone coming from ancient buildings could be

[20] See **Appendix 1**.

[21] See Paragraph II.1.1.

used for additional purposes, e.g. as construction materials. Hence, one might expect a statistical bias increasing the cases of originally imported materials reused in the Early Middle Ages for producing sculptures. Despite this probable bias, the percentage of reused non-local stone corresponds to 20,75%, while the reused local stone reaches almost 30%. This fact seems nothing but the normal consequence of the Roman construction practices: although many studies on the Roman period tended to emphasize the long-distance trade in decorative stone for architecture and sculpture, whenever possible the Romans used local stone, especially as construction material[22]. Therefore, it is very likely that the Early Medieval patterns of reuse simply follow the Roman patterns of use of stone[23] – as the quantities of imported decorative stone were usually minimal in comparison to the local stone used as building material, being the latter, moreover, often suitable for sculpting –, thus explaining the percentages in **graph II.8**.

Directly relating to this point, an additional datum that can be derived from the **table in Appendix 1** – though not strictly related to the distances from stone sources – concerns the main stone types employed for Early Medieval sculpture. As can be seen in **graph II.9**, limestone is the most commonly used, in about 44% of cases. However, marble (coming from *spolia* in the great majority of instances) is the second most common stone type, with around 35% of occurrences: this relatively high percentage confirms that, albeit it was not always possible to procure precious marble for making the sculptures, whenever this material was available in the surroundings, Early Medieval patrons and sculptors took advantage of the opportunity[24].



[22] On these points see below, Chapter II.2.

[23] See also Paragraph II.4.1.

[24] On the procurement of stone see also Part IV.

II.1.2. **Exceptions to the 'rule'**

The most remarkable exceptions to proximate supply of stone (corresponding to circa 90% of cases: **graphs II.2**, **II.3**, **II.6**, **II.7**), concern only five find-spots in three locations, two of which in Switzerland and one in Italy: Chur (Canton of Grisons; St. Florinuskapelle, St. Mariä Himmelfahrt, and cemetery between St. Stephan and St. Luzius/Luzi), Schänis (Canton of St. Gallen; St. Sebastian) and Novalesa (Piedmont; abbey of Santi Pietro e Andrea)[25].

As for Chur and Schänis, the marble used for manufacturing the early 9th-century chancel screens came from Lasa/Laas, Vinschgau Valley, 150 / 200 km away. Hans Rudolf Sennhauser and Katrin Roth-Rubi interpreted the import of the precious material as a sign of closeness to the Carolingian royal court[26], whereas Walter Sulser hypothesized that the bishop preferred to procure the materials from a distant location, but in his own diocese, rather than from a closer place, but outside its territory[27]. At Chur, two 8th-century gravestones also attest the transport of stone from afar: as expressly stated in the inscriptions engraved on them, the slabs came respectively from Vinschgau Valley and Trento[28] (**fig. II.1**). The gravestones, however, are very significant evidence of what an astonishing undertaking this must have looked like, so impressive to have it explicitly mentioned in the epitaphs[29].

While in the case of Switzerland there has been a geological assessment at least at Chur, and the studies concerning the fragments from Schänis agree in considering the marble as coming from Lasa/Laas[30], at Novalesa the import of materials from afar is much more doubtful. The excavations in the abbey have brought to light considerable amounts of architectural elements and gravestones dating from the Early Imperial period to Late Antiquity[31]. They are made in different stone types, just as the Early Medieval fragments are: moreover, the reuse of these ancient sculpted elements in the 8th century is surely attested in a few cases[32]. These circumstances – the presence of ancient stone items directly on site, in addition to the closeness to the Roman city of Susa, only 7 km away,

[25] See **Appendix 1**.

[26] Sennhauser / Roth-Rubi 2009, 672.

[27] Sulser 1980, 4, footnote 3. – Vinschgau Valley belonged to the diocese of Chur until the XIX century.

[28] Sennhauser 2009, 76-77. Both slabs were lost, but documented in a 16th-century book. In 1972, one of them was found, corroborating the reliability of the Renaissance source.

[29] Usually, the formulas generally refer to the beauty of the material or to the whiteness of marble, not to its specific provenance; see: Ciampoltrini 1991a. – Destefanis 2004, 54, footnote 192, with examples and literature.

[30] See **Appendix 1**, Chur and Schänis, with literature.

[31] Cantino Wataghin 2007, 306.

[32] 5th-6th centuries inscriptions on the rear sides of an Early Medieval decorated lintel or frieze (on these objects see Cantino Wataghin 2007, 307, and Aimone 2010); reemploy of a Roman frieze as a *mensa ponderaria*, used by the Early Medieval monks to weight the food to be cooked (Uggé 2010, 246, fig. 112).

and to the quarries in the Valley[33] – render very unlikely, or at least unnecessary to hypothesise, the transfer of freshly quarried stone from Ossola Valley or the Apuan Alps up to Novalesa (200 to 300 km away)[34]. Likewise, it would remain to be explained why, as Marco Aimone suggested, the Early Medieval artisans (or their patrons) would have taken the trouble to bring to Novalesa, all the way from Southern Gaul, two 5th-6th century inscribed slabs, just to cut them in pieces and reuse them as chancel screen lintel, with the (broken) inscription 'hidden' on the back part[35].

Among the extremely rare written sources attesting the long-distance transport of stone in the 7th-9th centuries, there are two particularly significant documents which – just as the inscribed gravestones from Chur – illustrate how exceptional these 'enterprises' were perceived by the contemporaries. In the year 701, after a stay in Rome – during which he had asked privileges to pope Sergius I (687-701) –, the abbot

> Aldhelm set out energetically on his journey home [to England]. He felt triumphant about the privilege awarded [...] and at the same time the blessing of the pope and the support of some

[33] Among others, according to the Oxford database online, two quarries already exploited in the Roman period were Bussoleno and Chianocco (10 km away circa):

http://oxrep.classics.ox.ac.uk/databases/stone_quarries_database (02.03.2017).

[34] The information is reported, as uncertain, in Uggé 2004, 71, footnote 42, who takes it from an unpublished thesis dating from the end of the Eighties (Dianzani 1987/1988). No petrographic / mineralogical analyses have been performed. It is unclear whether a geologist was asked for advice. For other fragments in Pentelic marble with inscriptions, reused in the Early Middle Ages, there might have been an identification of the stone type made by a geologist, yet without petrographic analysis: the information is reported by Aimone 2010, 118, footnote 10, basing on a third person's oral communication.

[35] It is, again, the inscribed fragments assumed to be in Pentelic marble (see previous footnote), which deserve a few additional remarks. Aimone reckons that they derive from two, not just one, similar 5th-6th century slabs originating in the area of Arles / Marseille / Aix-en-Provence (Aimone 2010, with literature). These would have been brought to Piedmont in the 8th century, during the construction works for the abbey, with the aim of cutting and reusing them. Aimone's hypothesis is based on the observation that Pentelic marble is not otherwise attested in Piedmont (a statement which seems to be contradicted by some decorated Early Medieval slabs in the Archaeological Museum, Turin, which labels reads precisely 'Pentelic marble'), and on the remark that the abbey had several possessions in Southern France (Aimone 2010, 134-136). As for the slabs' way to Novalesa, the author makes comparisons with notorious episodes like the transport of columns from Ravenna to Aachen by order of Charlemagne (see below in this Paragraph). The parallel with Novalesa, though, is not completely persuasive. Let alone the blatant differences between the building projects and their patrons, the *spolia* obtained by Charlemagne were an entire load of massive architectural elements for an imperial construction site, whose transport certainly required a challenging and accurate organisation, and whose use at Aachen had probably both utilitarian and ideological reasons. The same can be said about other similar cases (e.g. the aforementioned sculptures in Chur, or the transport of stone from Arles and Marseille to Auxerre, for which see below in this Paragraph, and Paragraph II.4.2), which involved the transport of way more than a single slab or two. A different instance is an altar stone that the pope gifted to Aldhelm (see below in this Paragraph), i.e. a relic, a highly symbolic object which was therefore worth to be transported all the way to Wessex, certainly *not* with the intention to cut it and reuse it. On the contrary, the «beauty of Pentelic marble» (Aimone 2010, 134) does not seem a plausible explanation for the selection and transport of *just* two slabs from Southern France to Novalesa to be used as *spolia*, in a context where considerable amounts of decorative stones were available on site, or in the nearby Roman city of Susa.

> sacred relics gave him confidence. He was also carrying with him many different pieces of valuable foreign merchandise, intending to bring to England a quantity of splendid novelties. Among these was an altar of gleaming marble, white in colour, six feet thick, four feet long and three hands wide, with a lip jutting out from the stone and beautifully decorated all around. A camel, so it is said (for what animal of our country could shoulder such a burden?) carried it safely all the way to the Alps. But there the camel (or whatever animal it was, for it does not matter which particular beast carried it) collapsed, injured by the excessive weight or undone by the steep slopes of the track. The fall crushed the animal and broke the marble in two pieces[36].

Later on, in answer to the abbot's prayer, both the animal and the marble are miraculously repaired. As the measures clearly indicate, what Aldhelm brought home from Rome was the stone slab for a *mensa* altar (to be set on columns, on a wooden support or on some structure in masonry: see **fig. I.3**, 2)[37]. Still, the transport of this single slab over the Alps is presented as an extraordinary undertaking: unusual animals and miracles characterise the account and are necessary to the success of the operation – but note how William of Malmesbury mistrusts his source about the actual presence of a camel[38]. Interestingly, the chronicler cares to specify that, after the wondrous repair of the marble, a small crack, like a 'scar' of the previous rupture (*cicatrix scissurae*), was still visible on the stone, as reminder of the holy miracle:

> But so that the memory of this remarkable miracle should not fade, the mark of the split can still be seen, visible if you look closely, however miraculous the mending[39].

Commenting on a 9th century account of a miracle – a blacksmith recovering his sight at the abbey of Saint-Hubert, nowadays Belgium – Philippe Mignot remarked that, in the written sources, the monks' medical knowledge is often carefully hidden behind supernatural forces (in the case he

[36] For this and all the next written sources quoted in this work, the original Latin text is available in the **Appendix 2**, at the end of the thesis. – Willelmus Malmesbiriensis, De gestis pontificum Anglorum V, 222. Translation: Preest 2002, 253. The word *cicatrix* has the double meaning of 'scar' and 'crack'. – Ginhart 1954, footnote 86, quotes the altar as being «decorated all around with crosses», but the Latin text does not mention such crosses.

[37] Probably, ca. 150 / 200 x 100 / 130 x 15 / 25 cm, consistent with the size of well-preserved Late Antique and Early Medieval altar stones.

[38] «[the camel] or whatever animal it was, for it does not matter which particular beast carried it».

[39] Willelmus Malmesbiriensis, De gestis pontificum Anglorum V, 222. Translation: Preest 2002, 254.

was concerned with, triggered by the intercession of the saint)[40]. In our case – very similar to that of a ciborium column at St. Riquier[41], and of another altar *mensa* mentioned in the *Life of Saint Amand*[42] – the miracle conceals the professional skills required for the restoration of the marble slab. This was most probably performed with mortar and / or iron cramps, which caused the fissure to be still visible after the work was done. In any case, the account of the accident reflects the difficulties and risks of moving even a single marble slab over such great distances. Arguably, similar efforts had been made to transport the abovementioned gravestones from Lasa/Laas to Chur.

Another of the few testimonies of long-distance transport of stone in the Early Middle Ages is reported by Heiric, who witnessed to the construction of the crypt in the abbey of Saint-Germain d'Auxerre in 841-858[43]:

> For such superbly sophisticated construction, [the monks] set out promptly on procuring every ornament they could; and since in our province there was no abundance of marbles, they decided to head for distant regions. For this reason, the monks faced twice the adversities of a dangerous expedition and, travelling through the vast whirlpools of the [river] Rhône, full of perils, they reached Arles and afterwards Marseille, at the farthest end of Gaul [...] They gathered a large amount of precious marbles, in part obtained after having [themselves] dug the ruins of ancient buildings in the surroundings, and in part for money, and once the vessels were loaded with this much desired cargo, they [succeeded in having] led, twice, a triumph that was made memorable by the victorious achievement of a bold venture[44] [...].

The *spolia* are then transported to Auxerre. As in William of Malmsbury's account, in Heiric's too, the tone is that of a celebration of an heroic enterprise. In this case too, a miracle is needed to escape the dangers of the way back home, and to allow the monks (and the stone) to arrive unharmed. The marble taken by the monks is meant to be used for decorating the building, which was probably, then, near completion, and only lacked some carved architectural elements[45].

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[40] Mignot 2015, 6-7.

[41] Hariulfus, Chron. Centulense II, 7: see below, Part III.

[42] Year 675. See Rohault de Fleury 1883-1889, vol. 1, 157.

[43] See: Heitz 1991. – Caillet 2010, 99-100. – Picard 1998.

[44] Heiricus, Miracula sancti Germani II, 92. Translation: M. Beghelli. – See Clemens 2003, 241.

[45] Picard 1998, 332.

Another miracle occurred while the stone items were being installed in the crypt[46]. This way, we find out that the cargo brought to Auxerre included columns, too:

> It is almost a miracle, I think, what occurred when the marbles reached their destination: the form of all the columns that had been transported [up to Auxerre] fitted to the different parts of the monument; [the columns] were harmoniously integrated [in the crypt] and, as it is said, they perfectly adjusted their own shape to the form of the [parts of] the building. I should not omit what, among other things, clearly appeared as a prodigious fact, while [the columns] were being installed. Some workers [with] strong hands, all together, with all their strength, were setting up under one arch one of these columns, a large one, already resting on its base. When [the column] was almost standing, its enormous size won the strength [of the men] who were pushing it: [the column] slipped from their hands, [almost] led to ruin by its own weight. Fearing the danger, everyone stepped back, not without an inner, deep regret for the fall of the marble, that was about to break into pieces. Against all expectations, the presence of God reversed the situation, and what could not be done by human hands, was much better and much more easily achieved by the divine Virtue. As suddenly as [the column had started to] fall down, it was raised again without any visible aid. So firmly fixed in place, it provides a perpetual memorial of a wonderful miracle[47].

The episode is related as a sort of *ante litteram* slow motion scene. As the column starts to totter while being handled by the workmen, everyone steps back and freezes, fearing the worst. A few seconds later, the column stops to swing and settles – being this explained with the divine intervention. Again, in Heiric as well as in William of Malmesbury, the stone items from far away are elevated into the object of a miracle, and provide perpetual memory of it. But if that was not enough to emphasise their importance, Heiric tell us explicitly how much distressed were the presents about the possible fall of the column.

The altar stone that Aldhelm carried to England – a precious relic from Rome, therefore worthy to be transported[48] – was a gift from the pope in person, and the crypt of Auxerre was constructed on the initiative of count Conrad I the Elder (d. 864), lay abbot, brother-in-law of Louis

[46] Compare to the abovementioned passage concerning the restoration of St. Riquier: Hariulfus, Chron. Centulense II, 7 (see below, Part III).

[47] Heiricus, Miracula sancti Germani II, 95. Translation: M. Beghelli.

[48] For a similar case attested by Andreas Agnellus (a tombstone in *lapis pirfireticus* which, treated as a holy relic, must be moved from Ravenna to France to be used as an altar *mensa*) see Greenhalgh 2008, 114, with sources and literature.

the Pious and uncle of Charles the Bald[49]. The other few records attesting long-distance transport of stone in the West during the Early Middle Ages, also show the implication of high-ranked individuals[50]. In the 8th century,

> The [Byzantine] exarch [of Ravenna] Eutychius granted him [pope Gregorius III, 731-741] six twisted onyx columns; these he brought into St. Peter's and set them over against the *presbyterium*, in front of the *confessio*, three on the right and three on the left, close to the other six ancient ones [i.e. Constantine's columns] uniform in design. On top of them he placed beams and coated them with fine silver on which were depicted in relief, on one side, the Saviour and apostles and, on the other side, God's mother and holy virgins. On top of these he placed lilies and lights of silver, weighing altogether 700 lb[51].

About in the same period, the 'eternal city' had provided marble, mosaics and columns for the church of Corteolona, not far from Pavia, founded by the Lombard king Liutprand (712-744); the building was constructed

> [...] with beautiful materials, it shines forth and glistens, decorated with various metals. Rome, the capital of the faith, has given it its precious marble, mosaics and columns, how these give light to the eyes of the world! Hooray for prince Liutprand, the author of this holy work![52]

Charlemagne was also solicitous in moving stone items, especially when it came to churches. For, according to his biographer,

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[49] Heitz 1987, 181-181. – Picard 1998.

[50] Transport of other types of materials for building or restoring churches are also attested: wooden beams are mentioned at least twice in the *Liber Pontificalis* (from *Calabria* to Rome: Lib. Pont. 86, Sergius I, 687-701, and Lib. Pont. 91, Gregorius II, 715-731) and again in a letter from pope Hadrian I to Charlemagne (Codex Carolinus 65; year 779 / 780). An ancient bronze door was brought from Perugia to Rome during the pontificate of Hadrian I (Lib. Pont. 97; 772-795). – For the Latin texts see the **Appendix 2.**

[51] Lib. Pont. 92, XV. Translation: Davis 2007, 21-22. – Eleven of these twelve columns (six that had been in the church from the times of Constantine I; five from Eutychius' gift) survive at St. Peter, are in Greek white marble and actually show similarities in the design, as stated by the *Liber Pontificalis*. According to Bryan Ward-Perkins, they date between the second half of the 2nd and the early 3th century and are all of eastern production – probably Greece. The place from where the columns were brought is not openly stated, though Ravenna (and not somewhere in Rome) seems the most plausible option: Ward-Perkins 1952. – Ward-Perkins 1984, 205, footnote 6. – See also Iacobini 2002, 676-677. – For the possible reasons of this gift, see Davis 2007, 21-22, footnote 14.

[52] In ecclesia beati Anastasii. Translation: Everett 2003, 248. – See Destefanis 2004, 54.

> He cherished the Christian religion, in which he had been brought up since childhood, most reverently and with the greatest devotion. For this reason, he built at Aachen a basilica of the greatest beauty, and he adorned it with gold and silver, with lighting fixtures, and with balustrades and doors of solid bronze. Since he was not able to obtain columns and marble for its construction anywhere else, he managed to have them brought from Rome and Ravenna[53].

A few years earlier, in 790, other columns and some marble from Rome had been sent to St. Riquier, in nowadays Hauts-de-France:

> And, since he [Charlemagne] wanted to increase by all means the glory of the monastery of Centula; because of his love to St. Riquier and to his friend Angilbert, he gave order that a great number of strong wagons were sent to Rome, to bring back from that city marble and columns for the decoration of this church[54].

On shorter distances, at last, Charlemagne had also some ancient columns from Nîmes brought to a newly built church in the area of Maguelone (Occitanie)[55]. In the year 812

> He made […] a church in the *comitatus* of Maguelone. […] Since he could not get columns and marbles for that building, with great solicitude he gave order that [these] were brought from the city of Nîmes[56].

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[53] Einhard, Vita Karoli 26. Translation: Noble 2009, 42-43. – New analyses allowed to date the construction of the Palatine Chapel between 798 ± 5 and 803 ± 10 (Ristow 2014; see also below, Paragraph III.2.2). – In general, see Clemens 2003, 273-274. – On the columns from Ravenna, see Zanotto 2001.

[54] Hariulfus, Chron. Centulense II, 6. Translation: M. Beghelli. – In general, see Clemens 2003, 274.

[55] Charlemagne used *spolia* to construct and decorate his palaces, too. The transport of large objects such as columns (from Ravenna and Rome) seems to be mentioned only once, for the palace in Ingelheim (Poeta Saxo V, 435-440; year 814), whereas 'smaller' – or more easily transportable – materials like mosaics and revetment panels were brought from Trier to Aachen (Gesta Treverorum, 25; see: D'Onofrio 1998, 96. – Clemens 2003, 240) and, with the permission of pope Hadrian I, from Ravenna (Theodoric's palace) to an uncertain destination, often identified with Aachen (Codex Carolinus 81, 614-615: letter from the year 787; see: Ward-Perkins 1984, 205. – Brenk 1987, 108. – Nelson 2010. – Ranaldi / Novara 2014. – See also below, Part IV.). About this last record, for a hypothesis on the routes used to transport the materials to Aachen, see Clemen 1916, 40-41 (rather than over the Alps: by sea up to Marseille, then on the Rhône up to Lyon, then on waterways and overland up to Metz, Trier, Köln). However, Binding 1997-1998, 69, noted that the letter does not mention the destination of the marbles and mosaics: Charlemagne's palaces at Regensburg, Frankfurt, Herstal, Ingelheim, Nijmegen or Worms are also possible options.

[56] Chronicon Moissiacense, 309. Translation: M. Beghelli. – See also D'Onofrio 1996, 96-98. – Greenhalgh 2008, 491, who notes that Charlemagne «might also have found materials on-site, for Maguelone was a Roman settlement».

And finally, his grandson Lothar seems to have carried on the family tradition, as in 829-830 he took in Ravenna a porphyry slab (part of a screen?) «shiny like glass», which stood before the sarcophagus of archbishop Maurus (642-671) in the narthex of the church of S. Apollinare in Classe:

> Lothar ordered it to be removed, and he enclosed it in a wooden chest on wool and carried it off to France, and placed it on the altar of St. Sebastian, as if it were a table[57].

For a period of three hundred years (7th-9th centuries), the number of these records is certainly not high, especially if one considers that many of them concern just one single person, Charlemagne. The emperor had of course abundant resources to invest in transporting stone; all the other personalities named in the just-mentioned written sources, however, also belonged to the highest layers of ecclesiastical and secular elites: the king, the pope, and, in only one case, 'just' a nobleman – though a rather prominent one[58].

In sum, transporting stone over long distances in the Early Middle Ages was surely something that deeply impressed the contemporaries. Heiric's and William's accounts – with their 'epic' tone and their miracles – as well as the epitaph of the gravestones in Chur (**fig. II.1**) show the same attitude towards these undertakings, which were perceived as worthy of being thoroughly described and handed down to posterity. The wonder revealed by both the epitaph and the narrative texts seems not explainable other than by the rarity of the cases of long-distance movement of stone: this is also indirectly proven by the abovementioned scarcity of written sources on stone transport over long distances – sources that always attest the high-rank of the individuals involved.

Together, all these data confirm the extraordinary nature of such operations, entirely consistent with the 1,5-1,9% of cases resulting from the statistical survey on the provenance of stone discussed earlier in this Chapter (**graphs II.4**, **II.5**, **II.6**, **II.7**).

[57] Agnellus, Lib. pont. eccl. Rav. 113. Agnellus bitterly continues the account: «It was commanded me by the bishop, that I go there, lest the workmen should act carelessly and break it; but since my heart was full of grief I withdrew to a different place». Translation: Deliyannis 2004, 231. – See Marsili 2019, 199.

[58] It is count Conrad I the Elder: see above.

II.1.3. **Trends outside the sample-area**

The same trend is to be recognised among stone items other than architectural sculpture – for example, the so-called Merovingian sarcophagi, almost always made in local or regional stone[59] – and in territories other than those considered in the statistical survey.

In 7th-9th centuries Iberian peninsula, for instance, the stone used both for building and for the decoration was locally procured, mostly from outcrops in the surroundings of the construction site, or from Roman monuments nearby[60]. Petrographic analyses have provided new data that have allowed, in some cases, to reconsider traditional assumptions: for example, before it was ascertained that the important collection of sculptures from San Pedro de la Mata were made in stones taken in a radium of 250 metres - 3 km, it had been conjectured that they were manufactured in Toledo (40 km away ca.) and then transported to the church[61]. Procuring stone in the surroundings of the building site was of course the easiest option, but, beside merely practical reasons, the widespread use of locally supplied stone had of course economic grounds[62]. Marble quarries had stopped their activity between the 3rd and the 4th century[63] and, as well as in many areas of our survey (see table in the **Appendix 1**), the reuse of this material in *Hispania* appears concentrated in the surroundings of Roman cities, such as Tarragona, Córdoba or Mérida[64].

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[59] See below, Chapter II.2.

[60] In general, among the most recent studies, see: Caballero Zoreda / Utrero Agudo 2005. – Untermann 2006, 14. – Caballero Zoreda / Mateos Cruz 2007. – Caballero Zoreda / Utrero Agudo 2012. – Quirós Castillo / Fernández Mier 2012. – Utrero Agudo / Sastre de Diego 2012. – Domingo Magaña 2015. – González Soutelo *et al*. 2016. – Utrero Agudo 2016. – Utrero Agudo *et al.* 2016. – Villa del Castillo 2016. – On the provisioning of stone and the recruitment of workforce in the Iberian peninsula, see also Part III. and Part IV. – A few imports of stone items from Byzantium are documented no later than the 6th century: in general, see Sodini 2000, with literature.

[61] Utrero Agudo *et al.* 2016, with literature. The fragments are 158, 74 of which can be undoubtedly attributed to San Pedro de la Mata. According to the authors, who rely on stratigraphic arguments, they must be assigned to the late 8th / early 9th century (i.e., later than the traditional dating to the 7th-8th centuries: Utrero Agudo *et al.* 2016, 66, with literature). Previously, in absence of petrographic analyses, Balmaseda Muncharaz 1998, 308, had assumed that the sculptures had come as finished products from Toledo, a city that the scholar reckoned to have been a production centre that distributed its produce in several locations.

[62] In general, see: Caballero Zoreda / Utrero Agudo 2005, 174-176. – Caballero Zoreda / Utrero Agudo 2012. – Quirós Castillo / Fernández Mier 2012, 37-40. – Utrero Agudo / Sastre de Diego 2012, 314. – Villa del Castillo 2016, 181-182. All with literature.

[63] Domingo Magaña 2015, esp. 533-534.

[64] Domingo Magaña 2015. – In Catalonia, several fragments of 6th-7th century stone liturgical furnishings have proven to be made in local or reused stone. The reemploy of Roman materials is particularly common at Tarragona and also, to a lesser extent, in Barcelona (Domingo Magaña 2010. – Domingo Magaña 2015). As for the 6th - early 7th century liturgical furnishings found at the episcopal complex in Barcelona – presumably in marbles from Paros, Carrara/Luni and Saint-Béat – Milagros Guàrdia i Pons and Immaculada Lorés hypothesised that the capitals were imported from Saint-Béat (Pyrenees; 330 km away ca.) in the 6th-century. However, they also pointed out that no petrographic analyses have been performed on these capitals, and that the marble from Saint-Béat looks very much alike Carrara/Luni marble (Guardia i Pons 1999. – Guardia i Pons 1999a. – Guàrdia i

As for the last point, Rome itself and neighbouring areas are one of the best examples. The city corresponds to one of the most significant find-spots for Early Medieval sculpture, both for the amount and for the quality and variety of finds. The presence of the pope and his court fostered countless restorations in many churches, among which the addition or renewal of stone liturgical furnishings and other carved architectural elements. Only a few of them are documented by the written sources[65], but hundreds of fragments have been found in dozens of locations[66]. Whereas in the 6th century are still documented imports from the Byzantine empire[67], in the Early Middle Ages the sculptors carved their products using exclusively reemployed stone coming from the ancient buildings in the city[68]. And this applies not only to sculpture, but also, in general, to stone for building: as noted by Michael Greenhalgh, «papal refurbishment and new building […] used earlier materials, because there is no evidence (either documentary or from the buildings) that quarries around Rome remained open»[69].

Farther in the North, the quarrying and construction industry of the Roman Britain came to an end in the course of the 5th century. The Anglo-Saxon civilisation had no stone construction tradition, but even later buildings and sculptures from the 8th century onwards – when stone was more commonly used – show an extensive employ of locally procured materials, mostly from the many surviving Roman structures, and partly from local lithic resources[70].

Pons / Lorés 2007). In fact, recent petrographic analyses on Roman stone items have shown that the Carrara/Luni, together with Monjuïc stone, is the predominant marble at *Barcino*; marble from Pyrenees is also present, albeit in smaller quantities, already in the Roman period (Garrido *et al*. 2015). Moreover, the reuse of Roman stone (including column shafts in marble from the Pyrenees) is well documented in all the phases of the episcopal complex of Barcelona, built in the 4th-5th century and then enlarged and renovated in 540-600 (Domingo Magaña 2010, 818-819, with literature). The 6th-7th century liturgical furnishings coming from the church, thus, have also been made, in all likelihood, from reused stone from Roman monuments in the city, including the aforementioned capitals in Saint-Béat marble. The decline of the capitals' production from those quarries in the Merovingian period (at the latest, shortly after 500) is, indeed, a renowned fact: Cabanot 1995, esp. 238. – Wood 2005, 765. – Untermann 2006, 60. – Greenhalgh 2008, 487. All with literature.

[65] See the passages from the *Liber Pontificalis* in the **Appendix 2.**

[66] The Corpus of Early Medieval sculptures in Rome has not been completely published yet. The existing volumes, however, give already an impression of the enormous amount of sculpted items: Melucco Vaccaro 1974. – Trinci Cecchelli 1976. – Broccoli 1981. – Melucco Vaccaro / Paroli 1995. – Barsanti / Flaminio / Guiglia 2015.

[67] Besides these imported items, is documented in Rome the presence of artists coming from (or formed in) the East, who produced a few capitals of Byzantine types using local *spolia*: Sodini 2000. – Barsanti 2002.

[68] See: Melucco Vaccaro 2001, 415. – Greenhalgh 2008, 199. – The only surely attested record of 'incoming stone' in the 7th-9th centuries seems to be the six twisted columns donated to Gregorius III by the exarch Eutychius (see below, Chapter II.2). As already highlighted, however, official gifts of entire (and symbolic) objects are a different matter from the ordinary provisioning of *spolia* to carry out the sculptural projects commissioned by the popes. – On the reuse of marble at Rome, see also Part IV.

[69] Greenhalgh 2008, 57, with literature. See also page 199.

[70] Jope 1964, esp. 112. – Parsons 1991, 6, 13-15, 17. – Stalley 1999, 34 and 109. – Wood 2005, 764, all with literature.

In the East, the export of decorative stone and finished stone items over long distances ceased at about the end of the 6th century. Even the trade of stone within the boundaries of the Byzantine empire, however, decreased dramatically[71]. As well as in the West, from the 7th century onwards the lithic materials used in the empire were also almost always reused, supplied in the vicinity of the building sites[72]. In the same way as in Rome, in the Eastern capital the «superabundance» of materials strongly favoured their reemploy[73]. Several architectural elements have proven to be made with reemployed marbles, but particularly significant examples are a capital reused during the reign of Heraclius (610-641) – where a mask has been transformed into a cartouche with an inscription mentioning the emperor –, and the architectural sculpture reemployed at St. Euphemia in 680: for the first time in Constantinople, the arrival of relics is not accompanied by newly-made stone furnishings[74]. If the emperors continued to use marbles in the same ways as their predecessors did, a number of sources attest «a disjunction between the knowledge of [different types] of marbles and the knowledge of their quarrying»[75]. In a text probably dating to the 8th-9th centuries, the author regrets that

> We live in an age where we no longer hew marble from the quarry. It is all reused architectural elements from antiquity, from nearby (the islands, Bythinia), fated to be pulled down[76].

In conclusion, the results of the survey on provenance of lithic materials (which trend is to be recognised in other areas, too) reveal that different regions of Europe, in the 7th to the 9th centuries[77], were characterised by similar patterns of provisioning and distribution of stone. This is a rather relevant point, for it clearly highlights a widespread economic phenomenon, occurring in very different political backgrounds and lasting over a considerable time-span.

This production context overwhelmingly dominated by proximate supply of stone is in many ways different from that of the Roman and Early Byzantine periods. In these periods, too, aggregate

[71] See below, Chapter II.2.

[72] Sodini 2000. – Sodini 2002. – Ousterhout 2008, 138-139. – Sodini 2008, 22-24. Significantly, the early 7th century is the date the last known document attesting the purchase of stone elements from a merchant in a ship. – See also: Vanderheyde / Prochaska 2011, esp. 374-375, with literature. – Ousterhout 2019, 92, 395-396.

[73] Sodini 2002, 138.

[74] Sodini 2002, 136-138. – Sodini 2008, 22.

[75] Sodini 2002, 137.

[76] The passage comes from the *Patria*: Sodini 2002, 137-138, with literature.

[77] As said above, the time-span considered has been 7th-9th centuries, although the overwhelming majority of the items dates to 8th and 9th centuries. On the 'scarcity' of architectural sculpture ascribable to the 7th century see above, Chapter I.1, and below, Paragraph III.2.8.

terms, locally supplied materials were the most commonly used, yet the long-distance trade of raw stone and carved products is extensively attested: in the Early Middle Ages, these activities cease almost completely.

Chapter II.2.

The decline of long-distance trade in stone and stone products

> The use of stone in vast quantities is a ubiquitous and defining feature of the material culture of the Roman world. In aggregate terms, far more stone was quarried and consumed in building and sculptural projects between the beginning of the first century BC and the end of the third century AD than at any time previously and for at least 1000 years afterwards[78].

In his work on the Roman stone trade, Ben Russell warns not to overestimate the long-distance movement of decorative materials[79]. This was mainly connected to imperial grand building projects, whereas most quarries were small-scale and served the regional market: «outside the imperial sphere, local materials were preferred for most architectural or sculptural projects». Yet the exotic, high-quality ornamental stones imported in large quantities for the imperial public building projects, soon became fashionable and set the trend among the elites, the 'middle classes', and whomever could afford these expensive goods coming from afar. The stone items transported over hundreds and thousands of kilometres were a fraction of the stone used for all purposes all across the empire; nevertheless, given the immense quantities of lithic materials consumed in the Roman world, those that moved over long distances were still a considerable amount, able to feed a vast demand that created a large, non-imperial, market[80]. In addition to stone blocks and revetment panels, these imports concerned part-finished and (more rarely) finished carved objects[81]. Not only the beauty, the colours, the quality of the materials were appreciated: it was the fact itself that they came from far away that gave them prestige[82]. Indeed, absolutely remarkable in the Roman period was «the extent to which customers were prepared to pay […] the vast sums necessary to move

[78] Russell 2013, 352.

[79] Russell 2013, 141-200, 352-359; and *passim*. – See also: Fant 1988, 147. – Russell 2008, 110. – Russell 2013a, 342.

[80] Russell 2013, 141-200 (esp. 199).

[81] See below, Paragraph II.3.2.

[82] Greenhalgh 2008, 133-134. – Russell 2013, 15-16.

large columns far inland – to Autun, Sagalassos, and Palmyra, for instance – and transport carved marble sarcophagi enormous distances both by sea and overland»[83]. Marbles were valued «not simply for their aesthetic impact but because they provided a 'material map' of the Roman Empire […], a physical statement of the conquest of distant lands and peoples[84]». In the Roman period as well as in the Early Middle Ages – as clearly shown by the abovementioned written sources – transport, and especially the challenging, problematic and expensive land transport, greatly augmented the preciousness of materials that were already precious in their home land[85].

II.2.1. **Sarcophagi**

In the non-imperial market, it was the sarcophagi, together with the statues, that covered the largest distances[86], and a few examples are useful to give an impression of the scale of this trade. The sarcophagi produced in Prokonnesos were roughed-out in different fashions and shipped mainly to the area of Northern Aegean, to the Balkans, to northern Italy and to the Near East, where they were then finished (**fig. II.2**). The materials used in the sarcophagi workshops at Rome were also imported from distant quarries in the form of roughed-out items. A slightly different case is that of Asiatic sarcophagi, the most expensive on the market between the mid 2nd century and the mid 3rd century AD, carved in Dokimeian marble and sumptuously decorated. Though sporadically shipped overseas, these sarcophagi were widely distributed all across western and central Asia Minor, seemingly accompanied to their destination by specialised artisans who finished them on place (**fig. II.3**). Roughly in the same period, the carvers who produced the luxurious Attic sarcophagi in the area of Athens, with Pentelic marble, worked for customers located in the city and also all around the empire, to where they shipped the products in a near-finished form[87] (**fig. II.4**).

The large-scale trade in sarcophagi reached its peak in the 2nd and early 3rd century. Afterwards, it started to decline: in important centres like Rome and Milan, for instance, production stopped around the 5th century, whereas the few specimens manufactured in Constantinople and Ravenna (respectively 80 and 35 against ca. 1.000 attested from previous centuries) are related to

[83] Russell 2013, 356. On the same point, see also Greenhalgh 2008, 133-134.

[84] Story *et al.* 2005, 163.

[85] Dodge 1991, 39-45. – Greenhalgh 2008, 133-134.

[86] Russell 2013, 141-200. As already mentioned, the production of sculpture in the round (statues, busts, etc.) started to decline in the V century: see above, Chapter I.1.

[87] Russell 2013, 274-285, with literature and examples. For the chronology see esp. 278.

the imperial presence[88]. In the 6th century, some Dalmatian sarcophagi, especially from the area of Solin / Brač island, were still exported in the Adriatic area, reaching at time the Northern Italian coastal areas (e.g. Treviso, ca. 30 km inland off the Venetian shore). Towards the early 7th century, though, manufacturing and trade appear to cease[89].

At the end of the same century, in the West, all that was left of a well-established production-distribution system, on a remarkable scale, had to be found in Merovingian Gaul[90]. Different types of stone sarcophagi dating to the 6th and 7th centuries were found in graveyards by the hundreds: there is hardly another European region the size of Gaul where sarcophagi were so abundantly attested, to the point that French archaeologists consider them as an 'index fossil' for the Merovingian period[91]. With a few exceptions, however, their dissemination was limited to a regional scale, and that concerned the most expensive types, too[92] (**fig. II.5**). It is true that, between the late 6th and the early 7th century, a customer in Paris could still purchase, for instance, a sarcophagus *à décor de bandes de stries gravées*, or one of the so-called *type nivernais*, or also one of the type *bourgignon-champenois*, all produced between 200 and 300 km away; arguably, this is something that only a narrow minority of Parisians could afford[93]. Yet distances like these are dwarfed when compared to those covered by the sarcophagi manufactured – in a different political and economic background – for the Roman elites (**figs II.2-II.4**). In any case, the bulk of the production (and circulation) of Merovingian sarcophagi ceased in the late 7th century, when the demand dropped dramatically, making unnecessary the existence of specialised labour in this sector: this type of industry, in the Roman empire and in Merovingian Gaul alike – albeit, of course,

[88] Brandenburg 2004, 15-17. – Greenhalgh 2008, 488. – Russell 2013, 170, 176, 278. – On the reuse of ancient sarcophagi in the Early Christian and Early Medieval West: Greenhalgh 2008, 207-212.

[89] Fisković 1996. – Cambi 2004, 79-80. – Cambi 2010, esp. 295-299 (with useful chronological table on page 299). – Basić 2015. All with literature.

[90] 'Serial' or 'bulk productions' did not always imply the stockpiling of the goods and their sale to the clients as 'ready-made-products': on this point, see: Périn 1990. – Russell 2011, 119-123. – Beghelli 2022. – On the debate on 'production-to-order' VS. 'production-to-stock' see also: Russell 2013, 214-224. – Hirt 2010, 326-328, 339, 354-355, 365.

[91] Dierkens 2015, 464.

[92] For a general introduction, see Delahaye 1990. – Delahaye / Périn 1991. – Delahaye 1993.

[93] Respectively produced about 200 km away in the area of Arcy-sur-Cure / Avallon; about 300 km away in the Bourbonnais; and about 200 km away in the area of Ravières: Delahaye 1985. – Delahaye / Périn 1991, 294 and 296. – Delahaye 1993, 145. – Liégard et al. 2005, 4. – Henrion 2015, 37, and typological table. – Henrion 2015a, 195. – Büttner / Henrion 2015, 219. New analysis on some sarcophagi preserved at the Musée Carnevalet in Paris, previously considered as coming from the Bourbonnais, have shown that they probably came from the surroundings of Autun: Büttner / Henrion 2015, 224.

at different scales – can only exist in the context of a developed market for these products, fed by a large 'audience' of customers[94].

During the 8th and 9th centuries, the situation in Gaul appears thus standardised to what was occurring in the rest of the West ever since the early 7th century: sarcophagi were uncommon, reserved to the elites or anyway to a privileged few[95], often reused – at times with symbolic meanings[96] –, and, when they did bear newly-made decoration, the ornaments were the same as those attested on stone church furniture[97] (see above, **fig. I.8**, and below, **fig. III.11**). Customers who had the means to purchase a sarcophagus, who frequently belonged to the highest ecclesiastical ranks, must therefore turn to the same artisans who manufactured chancel screens, ambos, and other decorative architectural elements for ecclesiastical buildings[98].

II.2.2. **Stone for buildings, stone for the household**

In the Roman period, the greater part of lithic materials which were transported over long distances were decorative ones, used for adorning public buildings commissioned by the emperors. This is not surprising, for rulers could count on incomparably larger resources than ordinary customers. At Rome, where could be found the widest variety of decorative stone – that set fashions everywhere else – the emperors were displaying their munificence, over the centuries, with the import of *bigio antico* from Lesbos, *granito rosso* from Aswan, *granito del foro* from Mons Claudianus (ca. 200 km north-east of Luxor), *cipollino* from Euboea, *pavonazzetto* from Dokimeion, *giallo antico* from Simitthus (in nowadays Tunisia), *verde antico* from Thessaly, and so

[94] On the Merovingian sarcophagi industry (both in stone and in plaster), see Delahaye / Périn 1991, esp. 301, 304-305, with literature. – See also Beghelli 2022, with literature.

[95] Delahaye 1985. – Périn / Renou 1985, 737, footnote 58. – Henrion 2015, 38, who points out that the scholarship often gives the use of sarcophagi as *completely* abandoned in the 8th century. However, starting from the early 8th century, sarcophagi (monolithic) are generally replaced with wooden and stone cists (wooden / stone-built coffin-like structures made from several pieces). On this phenomenon, and its possible causes, see also: Delahaye / Périn 1991, 298-299. – Delahaye 2015, 28 (both with literature). On marble (as opposed to stone) sarcophagi in the 7th-9th centuries, Greenhalgh 2008, 488, notes that «until the 9th century marble sarcophagi and veneer appear to have been used exclusively by clerics and saints, the earliest secular use we know being Charlemagne's brother Carloman, who was buried in an antique sarcophagus in 771 in S. Rémi at Rheims».

[96] Périn 1982. – Delahaye / Périn 1991, 298-299. – Reuse of Roman sarcophagi was popular among Early Medieval kings, emperors and popes; relics of saints were also buried in them, while their widespread use among the civilian population – perhaps, one could say, a comparable 'upper-middle class' to the one that purchased sarcophagi in Merovingian Gaul – seems not attested before the 11th c.: Greenhalgh 2008, 209-210.

[97] In France, see for instance the sarcophagus-fragments from Arles, Saint-Honorat des Alyscamps (Buis 1975, I, 82-83). – See also the decorated and inscribed sarcophagus mentioning bishop John, in Split: Coutil 1930, 64. – Basić, Jurković 2011. – In general on these points, see Beghelli 2020b.

[98] On the debate about the possible relations between production of sarcophagi and production of liturgical furnishings in Merovingian Gaul, see Dierkens 2015, 464, with literature.

forth, as well as large amounts of white marbles from Luni, Pentelikon and Prokonnesos[99]. Outside the capital, the imperially funded building projects were about 10% (the rest of them being mostly paid by the local elites or only part-funded by the State), but they showed a similar pattern in the use of stone imported from afar[100].

Many of these decorative stones are also found in non-imperial or private buildings commissioned by the elites, though the scale of their trade is of course narrower. Understandably, the vast majority of these imports from far away concentrated in coastal cities, where they could be more easily transported taking advantage of the sea. However, stone from overseas – mainly, but not exclusively, for flooring or revetment, to maximise the surface area – is attested in inland areas too, where the river networks played a key-role[101].

The long-distance transport of stone concerned not only sarcophagi, blocks of raw stone and revetment panels, but also architectural elements (**fig. II.6**). This practice is well attested until the 6th century in the West, especially – but not exclusively – in the regions controlled by the Byzantine empire, and was closely related to the imperial power and its representatives[102]. As in the Early Imperial period, this trade was limited to decorative stone types, as most of construction materials were quarried locally in the Byzantine empire[103]: yet in the late 5th and 6th centuries, for instance, some types of capitals were shipped in a part-finished or near-finished form from Constantinople and the Marmara Island to the surroundings regions and all across the Mediterranean[104]. The movement of stone concerned also columns, column bases, and church stone furnishings[105]: in fact, in the West, a substantial part of these imports from Byzantium consisted of architectural elements for churches; besides the countless stone items documented in western sacred buildings – including the renowned cases of Ravenna and Rome[106] –, one of the most striking pieces of evidence of this trade is provided by the Marzamemi B shipwreck, sunk off south-eastern

[99] Ward-Perkins 1971, 536-537. – Russell 2013, 146-166, 185-190 and 199. – Both with literature. On the imperial quarries (a narrow minority of the total), see Hirt 2010.

[100] Russell 2013, 187-190, with literature.

[101] Russell 2013, 164-166 and 196-200.

[102] In general, see: Sodini / Barsanti / Guiglia Guidobaldi 1998. – Sodini 2000. – Barsanti 2002. – Guiglia Guidobaldi 2002. – Marano 2008. – Marsili 2014. – Marano 2016. – Marsili 2019.

[103] Ousterhout 2008, 137.

[104] For an overview see Marsili 2014, 53-57, and Marsili 2019. Both with literature. For the 5th-7th centuries, the typological classification made by Rudolph Kautzsch in the Thirties is still widely used (Kautzsch 1936), whereas Martin Dennert authored a detailed study on the Middle Byzantine capitals (Dennert 1997).

[105] In general, see Sodini 2000 and Marsili 2019.

[106] In general, see Sodini / Barsanti / Guiglia Guidobaldi 1998. – Sodini 2000. – Barsanti 2002. – Guiglia Guidobaldi 2002. – Marano 2008. – Marsili 2014. – Marano 2016.

Sicily in the mid 6th century. The load comprised 27 finished Corinthian capitals (only the final polishing was left to be done), 28 column shafts, 28 part-finished column bases, 7 panels and 21 small columns and pillars for a chancel screen (all in Proconnesian marble), and a number of finished elements for an ambo (in green marble from Thessaly)[107]. The concurrence of stylistically homogeneous items, but made in different types of marble – a fairly frequent circumstance in the Early Byzantine period, while Roman ships usually transported stone from just one source[108] – has led to the conclusion that blocks of raw stone, quarried in different locations, were brought to Constantinopolitan workshops, where they were worked and then shipped to their destinations; moreover, four capitals from the Marzamemi B shipwreck bear masons' marks referable to ateliers operating in the area of Constantinople[109].

The bulk of this trade flourished until 550 circa. By the end of the 6th century, the export of Byzantine sculpted items had stopped to concern the West[110] and, from the 7th century onwards, just like in the West, the lithic materials used in the Eastern Mediterranean were almost always reused, supplied in the vicinity of the building sites[111].

The 5th and 6th centuries had undoubtedly been a 'great age' for construction, especially of churches[112], which required an actual «mass production» of stone items[113]. Yet in aggregate terms, the amounts of stone shipped over long distances in this period, were certainly smaller than in the 1st-3rd centuries[114].

Even smaller were the quantities in the 7th-9th centuries West: except for extremely rare occurrences concerning for instance emperor Charlemagne (who, like his Roman predecessors, could certainly «draw on enormous reserves of manpower... [and] had far more resources to expend on the transport of stone than ordinary customers[115]») the petrographic analyses and the written

[107] Kapitän 1969. – Kapitän 1980. – Bohne 1998. – Castagnino Berlinghieri / Paribeni 2011. – Marsili 2015. – Leidwanger / Greene 2017. – Russell / Leidwanger 2020.

[108] Russell 2013a, 356.

[109] Marsili 2014, 59-60. – Marsili 2015. – Marsili 2019 – On occasion, in the same site are found imported sculpted items together with locally produced ones, but these last are at times later repairs or junctions, as for instance at Apollonia (nowadays Marsa Susa, Libya): Sodini / Barsanti / Guiglia Guidobaldi 1998, 308.

[110] Sodini 2000, 443. – Marano 2016, 177. – See also Sodini / Barsanti / Guiglia Guidobaldi 1998. – Sodini 2000. – Barsanti 2002. – Guiglia Guidobaldi 2002. – Greenhalgh 2008, 50. – Marano 2008. – Marsili 2014. – Marano 2016. – Marsili 2019.

[111] See above, Paragraph II.1.3.

[112] Sodini / Barsanti / Guiglia Guidobaldi 1998, 301-302, with literature.

[113] Sodini 2002, 134.

[114] Marano 2016, 176, with literature.

[115] Russell 2013, 199.

texts alike, seen in the previous Chapter, show that the movement of stone over long distances was absolutely uncommon, which was the point, for the chroniclers, of relating it[116]. It is crucial to notice, moreover, that *all* the above-mentioned written records do not cite shipping of freshly quarried stone and newly-made objects – as in the Roman and Early Byzantine periods – but only *spolia* to be reused, at times cloaked with symbolic meaning, and at times out of bare necessity: some types of large architectural elements had indeed stopped to be produced in the Early Middle Ages[117].

The evidence seen so far in this Part II., thus, suggests a gradual but constant decline in the movement of stone items intended for architecture and architectural sculpted decoration, until reaching minimal levels in the 7th-9th centuries, with an almost total lack of long-distance transport: this phenomenon, as shall be seen, concerned many other types of goods, and is entirely in line with the broader economic context. At this point, however, it seems interesting to compare the trends in the domain of stone used for building to that of stone used in different domains, namely in the everyday life: among these, the hand-quern-stones from the area of Mayen and Niedermendig, in the Eifel region in Germany, and the soapstone vessels from the Alpine regions, are most significant examples.

The Eifel hand-quern-stones makers worked a volcanic rock particularly suitable for grinding cereals, being involved in a standardised, large-scale bulk production which played a prominent role in the local economy. Even though the amount of manufactured goods had more than halved in comparison to that of the Roman period, in the Early Middle Ages, on average, ca. 15.000 pieces per year (40-50 cm in diameter) were still made, employing an estimated workforce of about 120 craftsmen. The close proximity to a major waterway – the Rhine river – allowed direct shipping of the goods, surely one of the reasons for this industry's success. Following a downturn in their trade during the 5th-mid 7th centuries, from around 650 to the Carolingian period the Eifel quern-stones were again increasingly exported over remarkably long distances: countlessly many of them have been found in Northern Europe – and in all emporia – from England to Jutland, and some even reached the Alpine foothills[118].

In the Alps, which account for more than two hundred outcrops, the manufacture of vessels in soapstone (or steatite, or talc-schist) began in the Late Iron Age, but the 'boom' occurred in Late

[116] See Paragraph II.1.2.

[117] On this matter see below, Paragraph II.3.2 and Chapter II.4.

[118] Steuer 1987, 142-146. – Czysz 1998. – McCormick 2001, 609-610. – Verhulst 2002, 93, 102-103, 110, 112-113. – Lebecq 2005, 651-652. – Wickham 2005, 683-687, 802, 811-812. – Belmont / Mangartz 2006. – Mangartz 2006. – Hodges 2012, 63-64, 102-103, 107-110. – Schaaf et al. 2013.

Antiquity and the Early Middle Ages; also, in this period was developed a new technique, permitting the manufacture, from a single block, of many vessels with thinner walls, which improved their efficiency when used for cooking. The special properties of the material – easily workable with a lathe, resistant, waterproof, refractory, and allowing direct contact with fire – made it a formidable competitor to ceramics: this was possibly one of the reasons for the largest diffusion of soapstone vessels occurring between Late Antiquity and the Early Middle Ages, coeval with the slump in imports of pottery from overseas and the generalised regionalisation of the European economies[119]. Alpine soapstone vessels have rather numerous attestations in present-day Northern Italy, Switzerland, Southern and Eastern France and Southern Germany. Fewer specimens of these products – mainly transported by sea or river – are also known in the Rhône valley or Upper Austria, and as far as Northern Germany, Northern Spain, Central and Southern Italy, and Albania[120]. However, despite the overall sizeable quantity and wide distribution of finds, in the individual find-spots soapstone vessels were never retrieved in massive amounts, being traded in limited numbers as secondary goods. In the case of the Adriatic route, for instance, the items travelled via the Po river, possibly together with wood, iron and minerals from the Alps. They were probably commercialised by merchants from Comacchio (earlier) and Venice (later), who also exported products like salt from the Venetian lagoon as well as glass and metal objects. The longer durability of soapstone vessels in comparison to ceramics, the small size of the natural deposits and outcrops, difficult mountain topography, distance from buyers, were all factors that prevented this production from becoming a driving sector in local economies, favouring instead the development of a multitude of small-scale manufacturing centres, including extraction and roughing-out sites and workshops located just downhill, nearest to the quarries (such as the one at Zermatt-Furi, Switzerland) and, if possible, villages (such as Chiavenna and Piuro, Italy)[121].

Despite the blatant discrepancy in the mechanisms and extent of manufacturing and distribution – mainly originating from the geographical context of a 'fixed' production area, as the contiguity to sources of *specific* raw materials was vital to both industries –, hand-quern-stones and soapstone vessels had in common a relatively limited size and weight, and the fact of belonging to

[119] Mannoni / Giannichedda 2017, 279-282. – Valente 2019, 271-272. For some remarks on the economic context see below, Paragraph III.2.8.

[120] Gross / Zettler 1991. – Sannazaro 1994. – Alberti 1997. – McCormick 2001, 625. – Wickham 2005, 731-732, 734. – Santi *et al.* 2009. – Pfeifer *et al.* 2011. – Billoin 2012. – Winckler 2012, 164-165. – Arthur 2017. – Botalla 2017. – Cirelli 2017. – De Mitri / Loprieno 2018, 86. – Valente 2019, 272. – Giannichedda *et al.* 2020. – On soapstone production in Scandinavia and Northern Europe, see Hansen / Storemyr 2017.

[121] Sannazaro 1994. – Paccolat 2005. – Gelichi / Negrelli 2008. – Hodges 2012, 63. – Mannoni / Giannichedda 2017, 280, 284-285. – Valente 2019, 272.

the small group of the very few commodities that, in the Early Middle Ages, were traded *both* over long distances *and* on a significant scale[122]. Differently from the much more cumbersome, much heavier, and comparably 'less necessary' stone elements for building and sculpted furnishings, hand-quern-stones and soapstone vessels were utilitarian goods, essential in everyday life, and, as such, continued to broadly distributed[123].

In addition to the material and written evidence seen so far, however, there is yet another category of testimonies which decidedly confirms these divergent trends in the economics of stone items with diverse functions: this is the shipwrecks with stone cargoes.

II.2.3. **The evidence from the shipwrecks**

Although they represent only a small percentage, under 5%, of the total of wrecks known, shipwrecks with stone cargoes are among the best documents for analysing the trends in the short and long-distance transport of stone in the long run, mirroring the evidence emerging from remains of monuments and archaeological investigation. The distribution, on land, of the just-mentioned utilitarian stone items finds a 'shipwreck counterpart', for instance, in some 6th-7th centuries logboats or monoxyla from Northern Italy, and a 9th century Western German wreck (Lüttingen), which carried respectively soapstone vessels[124] and querns from Mayen[125]. To these cases, one should add a late 8th century logboat from the Rhine near the Dutch border (Kalkar-Niedermörmter), transporting recycled tuff from Roman ruins[126]: such *spolia*, as the abovementioned written sources shows, could be procured from locations close to (more often) or

[122] Another exception were some luxury goods, however in rather limited quantities, attested in prominent cities, for instance Marseille and Rome, and addressed to an exclusive clientele (Saguì 1998. – Saguì 1998a. – Delogu 2010, 73-74. See also Verhulst 2002, 109-110). The decline of the Provençal ports had already reached a low ebb in the 7th century; during the Carolingian period, the Rhine gained importance as a trade route in comparison to the Rhône. Some connections with Marseille and the Mediterranean persisted into the 8th century (Verhulst 2002, 103-104, with literature). As Chris Wickham (2005, 697) puts it, «our understanding of any economic system as a whole does not depend on the availability of luxuries. Anyway, some form of luxuries will always exist, because prestige exists; if the rich cannot get gold, they will monopolize silver; if pepper is too freely available, they will focus on cumin; and so on. In general, luxuries only represent prestige».

[123] As Meinrad Pohl noted, «Until the enactment of thirlage by emperor Friedrich Barbarossa, almost every household owned a quern and could have been a possible consumer. By the enactment of the thirlage, household grinding of cereals was prohibited and milling restricted to the mills belonging to the landowners. This led to a declining demand for querns, and as a consequence, the production of quern-stones declined too» (Pohl 2015, 266).

[124] Gelichi 2019, 72-74.

[125] Pohl 2015, 263, with literature.

[126] Obladen-Kauder / Peiss 2000.

far from (much more rarely) the building site, especially when there was a waterway available for shipping[127].

Conversely, ships transporting newly-made objects, in decorative stone, for building and sculptural projects, seem to disappear from the Early Medieval archaeological record. Here one must quote again Ben Russell, who, in his systematic study, collected 95 of them between the 2nd century BC and the 8th century AD, ordered them chronologically, and singled out the 48 securely dated ones (within 100 years)[128]. Both datasets, securely dated and not (**figs II.6**, **II.7**), show the same pattern: the number of shipwrecks with stone cargoes gradually rises, up to a peak in the 3rd century AD (first half), and then dramatically drops in the 4th century[129].

During the 4th century, the demand for stone in the West had considerably dropped, while the substantial building activities in the new capital Constantinople relied on closer stone sources – Proconnesos, Greece and Asia Minor – than 3rd century Rome did[130]. In the 5th-7th centuries, the overseas transport of stone (and bulk of building activities) concerned almost exclusively the eastern regions (9 shipwrecks from off Turkey, Israel, and Syria)[131]. According to the Oxford Database online, too, the latest records of wrecks carrying stone date to the late 6th / first half of the 7th century, and were all found in eastern Mediterranean[132]. Both in the East and in the West, the shipwrecks that can be assigned to the subsequent period (late 7th - end of the 9th centuries) are only 10 on a total of 1784, all transporting amphorae, foodstuffs, and similar goods[133]. During the 8th century, in any case, there is a clear-cut *zero* occurrences of shipwrecks with architectural stone cargoes consisting in newly-made items (**fig. II.7**).

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[127] See above, Paragraph II.1.2.

[128] Russell 2012. – Russell 2013, 112-118. – Russell 2013a.

[129] Russell 2013a, 345-346. – On the downturn in the 4th century see Marsili 2019. – It has been noted that the peak in distribution of decorative stone indicated by the monuments on land, roughly in the 2nd century AD, is not reflected by the peak in the number of wrecks, occurring in the 3rd century. The explanation lies in the routes taken by the ships and their destination. Many of the 3rd century wrecks were detected off southern Italy, and many carried marble from Greece and Asia Minor: during the second half of the 2nd century, the main source for white marble had shifted from Luni to the East, and by the 3rd century the Proconnesian was the most common marble at Rome. The long (and most dangerous) routes taken by the vessels seem therefore the best explanation for the 3rd century peak in shipwrecks. Apart from this case, the pattern shown by the statistics on wrecks (fig. II.7) mirrors the trends on stone trade displayed by the sites on land (on these points see Russell 2013a, 346-349). – On the Luni quarries, that ceased activity within the 3rd century, see also: Walker 1988, 189-92. – Marano 2014, 414.

[130] The shorter routes made the probability that vessels could sink lower; in any case, one should consider that underwater survey in the North Aegean and Sea of Marmara is poor in comparison to other areas: Russell 2013a, 349. See also Marsili 2019.

[131] Russell 2013a, 344-345.

[132] Strauss 2013.

[133] Strauss 2013, Wreck IDs: 7539; 8054; 8099; 8432; 8502; 8618; 8665; 8715; 8848; 8850.

As for the West alone, the latest shipwreck with architectural stone cargo is the aforementioned Marzamemi B, sunk off Sicily, which indeed mirrors the evidence from monuments on land during this period, namely church construction activities of a certain importance, and the transport of architectural elements from Byzantium to the Western Mediterranean[134]. One should bear in mind, however, that Marzamemi B represents the only exception within a background otherwise characterised, from the 5th century onwards, by the absence of shipwrecks transporting stone intended for buildings. Except for Marzamemi B, the last occurrences date to the 4th century[135] (6 occurrences: **fig. II.8**), while the next ships with architectural stone cargoes (marble) sunk off Puglia and Capri between the early 11th and the 15th centuries[136]. In this period too, the data emerging from the analysis of the shipwrecks are mirrored by the High and Late Medieval monuments on land and by the contemporary texts[137]. Starting from the Romanesque and Gothic periods, intensive quarrying resumed, and a «rash of quarries across European landscape» were opened to supply building projects in the neighbouring areas[138]. Though local materials continued to be preferred for construction and continued to play a very important role, this process was accompanied by a revival of the trade in stone over medium and long distances, coming from major quarries which developed at times an «international status»[139]. Just to quote a few examples, the limestone of Caen (Normandy) was shipped to Southern England after the Norman conquest in 1066, and the churches of Canterbury were built with three types of stone shipped from Normandy, the isle of Wight and Nord-Pas-de-Calais[140]. The cathedral of Modena (12th century) was erected with stone from Istria and Veneto, and the Veronese marble was employed in Parma cathedral and baptistery, in both cases transported by waterways[141]. The quarries in the Apuan Alps were reopened to produce veneer for churches in Pisa and Florence[142]. The tuff from the quarries in the Eifel region, in Germany, was widely traded along the Rhine throughout the 11th and the 12th

[134] See above.

[135] Russell 2013a, 347, graph in fig. 4. – See also Greenhalgh 2008, 126

[136] Strauss 2013, Wreck IDs: 8306; 8692.

[137] Stalley 1999, 112 and 115. – Bessac 2004, 36-39. – Kidson 2004, 699-700. – Cagnana 2012, 84. – From the 12th century onwards, the stone trade gathered additional volume, «when castles and serious fortifications were added to the list of works which needed stone in large quantities» (Kidson 2004, 700). – On the revival of long-distance trade in stone products in the 11th-13th centuries see also below, Paragraphs II.2.3, II.3.2, and IV.2.1.

[138] Kidson 2004, 699-700.

[139] Brugnoli 1999, 117. – Stalley 1999, 115 (where the citation is taken from).

[140] Parsons 1991, 17. – Stalley 1999, 115. – Prigent / Sapin 2004, 120.

[141] Brugnoli 1999, 118 and 130-132.

[142] Kidson 2004, 699.

centuries, and was used in hundreds of ecclesiastical buildings on the Rhine, in the Netherlands, and on the North Sea coast up to Denmark[143]. From the Rhineland came also a red sandstone that travelled up and down the river[144].

On the contrary, coming back to 'our' period, evidence from shipwrecks attesting long-distance trade of architectural stone items in the 7th-9th centuries West is currently completely lacking. The data seen in this Paragraph, thus, sum to – and are consistent with – the other categories of written and material sources discussed so far in this Part II. The gradual decline of the long-distance trade of stone items is related to the abovementioned contraction of the market, which obviously implied a decrease in the production of architectural sculpture and sarcophagi: further evidence of this comes, as shall be seen in the next Chapter, from the archaeological investigations in quarry sites.

[143] Pohl 2015, 253, who remarks that this trade seems to fade in the 13th century, owing to the rising number of toll stations on the Rhine and the competition with the much cheaper bricks, which became common in the stone-poor areas of the North during the 12th century.

[144] Kidson 2004, 700.

Chapter II.3.

Quarrying

In the last decades, archaeological excavations in ancient quarries have improved our knowledge of Roman and Medieval extraction practices. This peculiar branch of archaeology is developing slower than others, due to the operational problems in digging in such sites: the ancient walking surfaces, for instance, can be hidden under several meters of lithic flakes (i.e. production waste) or being completely covered with vegetation[145]. Moreover, any attempt to investigate pre-modern quarrying is worthless if later extraction has obliterated the ancient and medieval layers[146]. However, when a concurrence of favourable circumstances – including an appropriate funding – allows to start an excavation, quarry sites archaeology can convey scientific results which could not be achieved otherwise. In some cases, it has been possible to identify settlement areas with dwelling places for the workers, canopies, half-finished and finished sculpted objects produced directly on site, traces of lifting structures, storage areas, etc.. Extraction marks – or masons' marks, carved on the stone with different purposes – must also be cited among the most relevant pieces of evidence that one can find during an archaeological survey in a quarry. Their study enables to detect changes in the working techniques and to evaluate the quantity of stone extracted, the size of the blocks, the number of quarrymen at work, their professional level and productivity, their grouping in equips, etc.[147].

All this, as shall be seen, does not mean that this whole range of possible archaeological pieces of evidence is evenly distributed over the centuries. Thus, in the same way as in the previous Chapter, it seems appropriate to put in comparison the Roman, the Early Byzantine and the Early Medieval periods, in order to evaluate the changes in quarrying activities over the *longue durée*.

In the Roman period, stone extraction and production of stone items reached a remarkably high degree of complexity of management and organisation of work, especially at imperial quarries. During the 2nd-1st centuries BC, the most prominent marble quarries in Greece, Asia Minor and

[145] Bessac 1996, 81-192. – Bessac 2004, 33. – Cagnana 2012, 80. – Marsili 2021, 134-137.

[146] Parsons 1991, 4. – Greenhalgh 2008, 93-94, with literature.

[147] Bessac / Sablayrolles 2002. – Cagnana 2012, 80-81. – Marsili 2014. – Marsili 2019.

Egypt had fallen in Rome's political sphere of influence[148]. Stone from these quarries, thus, started to be employed in public buildings, while among the Roman elites spread the taste for marble statues: these, according to Pliny, had started to replace wood and terra-cotta sculptures after the Battle of Magnesia, in 189 BC[149]. In the Augustan age, the *princeps* initiated a process of acquisition of a number of quarries, with the aim to obtain high-quality stone to be employed in public monumental buildings in the Capital and in the provinces[150]. Tiberius (14-37 AD) took away from many cities the *ius metallorum* (the rights on metal and stone extraction), putting some important stone quarries under the state control[151]. Large-scale activities of extraction of decorative stone – white and polychrome marbles, porphyry, etc. – and its transport over long distances started to develop in this period, reaching their zenith between the Trajanic and the Severan periods (late the 1st to the first half of the 3rd centuries AD)[152]. Evidence of the imperial management are quarry labels and inscriptions on stone blocks (and on half-finished artefacts), referring to the emperor or to the imperial officials who were at work in the quarry[153]. Many scholars have focused on the imperial control of quarrying activities, at times even supporting the thesis of an actual 'nationalization' of extraction sites. It has been stressed, however, that the imperial administration concerned only a minor part of the whole system, i.e. not *all* the quarries, but just some of the most valuable ones, which provided decorative stone[154]. On the contrary, the overwhelming majority of quarries, which often provided construction materials, were owned by the city (*municipium*) or by private individuals and operated beyond state control, as they did prior to the Imperial period[155]. There are also cases of mixed ownership[156]: one prominent example is Luni, where private and municipal management of some of the quarrying sites continued to exist even after the imperial control had been established[157]. Smaller, private and municipal quarries, though, are not always

[148] Pensabene 1998, 335. – Pensabene 2013, 29-30.

[149] Pensabene 2013, 24; 29-30. – Plinius, *Nat. Hist.* XXXV, 34.

[150] Russell 2013, 94.

[151] Svetonius, *Vita Caes.*, *Tiberius* 49,2. – Russell 2013, 53. – Pensabene 2013, 197. – Marsili 2014, 16.

[152] Russell 2013, 116.

[153] Hirt 2010, 370-445. – Russell 2013, 39.

[154] Russell 2013, 38-39; 53-61; 199. – Quarries like Mons Claudianus, Mons Porphyrites, Tiberiane, Mons Ophiates (Egypt), Dokimeion (Asia Minor), Simitthus (North Africa), Karystos (Euboea), however, were probably public property under the emperor's control rather than private domains of the emperor (Hirt 2010, 106).

[155] Russell 2013, 53-55. – Hirt 2010, 89: «Only a limited number of marble or granite quarries stood under direct imperial control». – It has been hypothesised that also important sanctuaries could have owned quarries (Long 2012, 30-31).

[156] Russell 2013, 57-61, with literature.

[157] Which occurred in the Flavian period according to Hirt 2010, 317-318.

easy to investigate, for the amount of available written and material evidence is limited. Inscriptions, for instance, are extremely rare, as they were hardly needed in these contexts – or, when present, they often consisted in simple numbers, letters or ligatured initials[158].

Information on large imperial quarries, on the other hand, is more abundant. At the top of the hierarchy, the *procurator marmorum* / *metallorum* was the intermediary between the emperor and the extraction sites in the provinces[159]. Some of the procurators' names, who were usually members of the imperial family, equestrians, or military officers[160], are conveyed by inscriptions and marks preceded by epigraphic formulae such as *sub cura*, as in the cases of Irenaeus (AD 136) and Maro (AD 194), both attested in Dokimeion/Bacakale (Asia Minor)[161]. The quarrymen were usually organized in groups led by a foreman[162]. Several specialized professionals were in charge for different tasks: the selection of the extraction-spots depending on the 'bedding' of stone, the splitting of blocks, the cut into slabs, and the carving and decoration of the objects intended to be shipped in a finished or half-finished form[163]. The degree of division of labour which could be reached is well illustrated at Mons Claudianus (Egypt)[164]. The *ostraka* found in the site, dating mostly to the first half of the 2nd century, mention, among others, engineers and architects, stonemasons, hammermen, adze specialists, hardeners, smiths, bellowsmen, crane-specialists and so-called 'side-wedgemen'[165]. An inscription from Almadén de la Plata (Spain), moreover, mentions a *statio serrariorum* (sawyers) *augustorum*[166].

The quarry label *officina* (workshop) followed by a name in the genitive form such as *Tiluris*, *Age*(*ntii*), *Agrippae*, etc., specified the location in which a stone artefact had been cut and refined, i.e. the group of craftsmen who had worked on it[167]. Interestingly, at Simitthus/Chemtou

[158] These last are control marks or records of orders: Russell 2013, 56-57. – An interesting example comes from El Mèdol near Tarragona, where was detected a formula CAES: it probably referred to an imperial purchase at this locally-owned limestone quarry, given that imperial building projects needed, of course, further stones besides the precious, decorative ones: Mar / Pensabene 2010, 512-513. – Russell 2013, 59-61.

[159] Pensabene 1998, 358-361. – Serafino 2007, 23-38. – Hirt 2010, 107-119. – Marsili 2014, 25-26; 33-34.

[160] Hirt 2010, 107-119; 166-167.

[161] Hirt 2010, 300-307. – Pensabene 2010, 80.

[162] Hirt 2010, 209.

[163] Rockwell 1993, 156-165. – Bessac 2004, 9. – Marsili 2014, 25-31.

[164] Hirt 2010, 12. The quarry was probably active from the reign of Claudius (41-54 AD) until the first third of the 3rd century circa, though the earliest firm date for a permanent exploitation is during the reign of Nero, 68 AD.

[165] Hirt 2010, 12; 208-212. As argued by A. Bülow-Jacobsen (1992), these last ones were probably specialists in breaking away the blocks from the rock face.

[166] Russell 2013, 42.

[167] Hirt 2010, 297-299. This kind of quarry label appears around the year 136 AD.

(Tunisia), blocks marked with the same workshop's name have been found clustered together[168]. From 147 AD, in quarry labels at Dokimeion, a *caesura* is specified besides the *officina*: Michael Hirt argued that the term *caesura* pinpointed the group of craftsmen in charge to cut the stone from the rock face, whereas the *officina* continued the work, refining the artefacts until they reached the desired stage of manufacturing[169].

The *dispensatores* provided for the distribution of payments and probably, in some contexts, of bread, grain and quarrying equipment[170]. The quarrymen's work was monitored by a range of imperial officials, often belonging to the military ranks (centurions and *frumentarii*[171]; from the Diocletian period onwards, *agentes in rebus*[172]). Centurions could, also, hold other specialised administrative positions[173]. Soldiers were present in some quarries too, being military forts and watch-towers, sometimes, archaeologically attested; they were responsible for the defence of the site and, at times, for the surveillance of the *damnati ad metalla* (prisoners convicted to the penal servitude)[174], but if necessary they could themselves turn into labour force, holding unskilled tasks[175]: this was the ground for the complaints of some soldiers of the *Legio III Cyrenaica*, who wrote in their letters home that they had to work as stone-cutters during their service at Petra and Bosra[176]. The quality of the products and/or their compliance with the client's purchase was checked by the *probatores*[177]; the quarry label most commonly related to the *probatores* is the P or REPR mark (*probatum* / *reprobatum*), carved on artefacts to indicate whether they had been approved or not[178]. The *tabularii*, at last, took care of account books and financial matters[179]. The

[168] Hirt 2010, 304-305.

[169] Hirt 2010, 293-299. – Russell 2013, 47.

[170] Hirt 2010, 255-257. – Marsili 2014, 27. – Marsili 2019, 20.

[171] *Centuriones frumentarii* are attested at Mons Porphyrites (Egypt) and Luni (near Carrara, Italy) quarries, as overseers for construction works in Delphi (Hadrian reign, 117-138 AD) and in Salona (AD 170): Hirt 2010, 174. The centurion Sergius Longus appears in Karystos as a supervisor of the quarrying activities, and other two (Tullius Saturninus, AD 136-137, and Aelius Antoninus) are recorded in Dokimeion: Russell 2013, 44.

[172] Kazhdan 1991. A Diomitius, *agens in rebus*, is attested at Simitthus by an inscription of the late 3rd century: Hirt 2010, 304.

[173] Russell 2013, 44.

[174] Peacock 1993, 59. – Koželj / Wurch-Koželj 1995. – Hirt 2010, 97-98, 222-225. – Marsili 2014, 27-30. – Marsili 2019, 20. – Contra Russell 2013, 41, who notes that there is little archaeological evidence for the presence of convicted and that, if they were used in some quarry sites, then they worked alongside freeborn skilled workers.

[175] Hirt 2010, 175-179.

[176] Russell 2013, 45.

[177] Marsili 2014, 27; 34; 80-81. – Marsili 2019, 29.

[178] Marsili 2014, 34. – Marsili 2019, 29. Both with literature. The resolution of the marks P / REPR, however, is discussed: for an overview see Hirt 2010, 299-300.

management of Roman imperial quarries could vary significantly from a site to another, depending by the size of the quarrying district and its geographical location, geology, and topography[180]. In any case, the archaeological excavations and the written and epigraphic evidence such as *ostraka*, inscriptions, quarry labels, and so forth, attest the complexity of the administration system and division of labour reached at least in some sites.

Of course, labour division depended on the size of the market[181]: this well organised system was nothing but a way to respond to the «disproportionately high demand» for stone, which had massively increased between the 1st century BC and the 2nd century AD[182]. This demand – which concerned not only imperial quarries and decorative stone, but also countless municipal and private quarries, providing both materials for construction and for decoration – had caused remarkable changes in the exploitation of stone sources, in the extraction techniques (as attested by the archaeological excavations) and in the logistics of transport of stone items. Quarrying had become more and more intensive, and permanent quarries had turned more and more common alongside the temporary ones, connected to specific building projects[183] (**fig. II.9**). The outcome of this massive production was then transported to destination owing to a quite diversified transport network on waterways – which has left the shipwrecks analysed above – and overland, even with the creation, as for instance in Gaul, of new roads specifically designed to reach previously inaccessible stone sources[184].

II.3.1. **4th-6th centuries in East and West: divergent paths**

During the 4th and 5th centuries, the Western and Eastern Mediterranean took two separate paths in the exploitation of stone sources: while in the West the Roman system was gradually abandoned, in the East quarrying activities continued to feed a sustained demand for stone products[185], whether imperial, episcopal or, to a lesser extent, private[186].

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[179] Cockle 1996. – Hirt 2010, 156-157. – Russell 2013, 51-52. – Marsili 2014, 27. – Marsili 2019, 20.

[180] Hirt 2010, 10; 351-356. – Russell 2013, 52.

[181] Russell 2013, 292.

[182] Russell 2013, 39, 53-61, 357. – See the passage quoted at the beginning of Chapter II.2.

[183] For all these aspects see: Waelkens / De Paepe / Moens 1988, 97. – Waelkens 1990. – Bessac 1993. – Koželj / Wurch-Koželj 1999. – Bruno 2002. – Bessac 2004, 35-36. – Cagnana 2012, 79-84. – Russell 2013, 37-94 («the patchy data available from the Levant, Italy, and Britain indicate that this pattern of highly localized but intensive quarrying was ubiquitous»). – Marsili 2014, 16-17. – Marsili 2019.

[184] Bessac 2004, 35-36.

[185] McCormick 2001, 49. – Cagnana 2012, 82. – Pensabene 2013, 223-227. – Russell 2013, 359-361.

As seen above, in the Early Byzantine empire the market for stone products was still lively, albeit scaled down if compared to the 1st-3rd centuries Roman empire. The foundation of Constantinople in the 4th century had of course stimulated an enormous demand for decorative stone[187], but quarries like the ones in Prokonnesos, Aliki in Thasos, and several other in Asia Minor and the Aegean islands, kept being intensively exploited well into the 5th and the 6th century[188]. Shipwrecks as the one from Marzamemi and the many churches provided with Early Byzantine capitals, columns, other architectural elements and stone liturgical furnishings, attest the extent of the exports from eastern quarries to the West[189]. Also, the Byzantine management of the extraction sites and the organisation of production maintained a number of traits in common with the Roman Imperial period[190]: this is well illustrated by the masons' marks, that spread especially during the 6th century. Usually engraved on capitals, column bases, shafts, chancel screen slabs and pillars – some of which found in quarries as leftovers –, these marks can provide precious information on how the manufacturing system functioned. In her systematic study, Giulia Marsili has collected more than 3400 examples dating from the late 4th to the 6th century[191]. According to the author's classification, they can be sorted in: control marks (signs made in different stages of manufacture by the *probatores*, who checked on the quality of the stone artefacts); destination / patron's marks (specifying the name of the building or the client the stone item was intended for[192]); positioning / assembly marks (to guide the stonemasons in assembling the elements, once they had been delivered at the construction site); storage marks (detected on objects discovered in large storage areas, where they were purchased by the clients or by the marble merchants); workshops' marks (specifying the atelier or the group of craftsmen who had manufactured the object, usually carved in spots where they could have been visible even after their assembling)[193]. The manufacturing in the

[186] On the demand for stone products in the 5th-6th centuries: Sodini / Barsanti / Guiglia Guidobaldi 1998, 301-302. – Sodini 2002. – Greenhalgh 2008, 41. – Marano 2014. – Marsili 2014, 162-192. – Marsili 2014a. – Marsili 2016. – Marsili 2019.

[187] The new capital had also drawn many of the most skilled craftsmen in the carving of decorative stones: Pensabene 1989, 56. – Baldini 2008, 212-217. Both with literature.

[188] Sodini 2002. – Marsili 2014, 52, with literature. In the Prokonnesos quarries, a decrease in the production of stone items in the 3rd-4th centuries was 'counterbalanced' by a massive resumption of work in the 5th-6th centuries.

[189] See above in this Part II.

[190] On the private and imperial administration of quarries in the Byzantine empire see: Sodini 2002, 134-135. – Marano 2014, 415-416.

[191] Marsili 2014. – Marsili 2019.

[192] In the first case the name is usually in dative, in the second case in genitive.

[193] Marsili 2014, 77-128. – Marsili 2019.

quarry (at different stages), the quality checks, the custom for workshops of 'signing' stone items (for calculating wages, but possibly, at times, an indication of the prestige of the atelier), are some of the features in common with the Roman imperial quarrying[194].

The first signs of crisis of this system appeared towards the second half of the 6th century and gradually intensified. The interruption of the export of stone products and the generalised practice of reusing older stone items[195] are parallel to the decline of the intensive exploitation of quarries: this occurred at Prokonnesos at about the end of the 6th century, at Aliki around 615-620 and roughly in the same period at other prominent Phyrgian quarries[196]. These events are generally explained with the lack of demand due to the slowdown in imperial and ecclesiastical building activities, which was related, in turn, to the political instability of the 7th century: it was even conjectured that the maritime trade was disturbed by the Slavs, Avars and Persians to the point that Constantinople itself was isolated from its nearest and 'favoured' source of marble, the Prokonnesos island[197].

In the West, however, a sharp decline in intensive quarrying had already begun in the 4th century. With the end of the «golden age of public munificence» and the decrease of building activities, the quarries of the Roman world – whether small, or large and well organised – experienced a critical lack of demand[198]. Until the 5th and until the mid 6th century, at least, demand was still characterised by a certain vitality and partially concerned the private sector (for upper-class houses, sarcophagi, etc.), although it was particularly stimulated by church building. A number of workshops existed in the continent, those in Rome, Languedoc, Aquitaine, and Mérida being some of the best-known ones, among others operating at different scales. Construction materials were largely of local origin, and so were the decorative ones, given the ubiquitous presence of Roman marbles to be reused. Western demand was also met by the repeatedly mentioned flow of Eastern architectural items, that were mainly dispatched in the areas under Byzantine control or political influence, for instance in Italy or in Istria and the Balkans, but could sporadically reach as far as France and Spain. In the Pyrenean quarries – that had supplied, for instance, the columns for the 5th century Daurade in Toulouse and capitals for many Merovingian

[194] In general, see: Sodini 2002. – Russell 2013, 359-361. – Marano 2014. – Marsili 2014. – Marsili 2019.

[195] See above, Paragraph II.1.3. and Chapter II.2.

[196] Marano 2014, 423-424. – Sodini 2002, 135-137. – Sodini 2008, 22-23. – It is unclear whether the interruption of activity at Aliki depended on an earthquake or on an attack by the Slavs. The quarrying at Prokonnesos will restart only in the Ottoman period. The Phyrgian quarries will resume activity, on a significantly reduced scale, in the 10th-11th centuries. – On quarrying in Islamic world: Greenhalgh 2008, 93-139.

[197] Greenhalgh 2008, 41. – Sodini 2002, 135-136. – Sodini 2008, 22.

[198] Russell 2013, 359-361.

churches – some sustained extraction activities continued throughout the 6th century. This, however, was one of the very few exceptions, as by this period the Western quarries that had not ceased functioning were only sporadically exploited, or episodically, in occasion of specific projects. Towards the end of the century, even the Pyrenean centres will suffer the same fate[199].

Of course, some of the largest quarries outside the European territory were also affected by the decrease of demand occurring since the 3rd century, and a number of materials stopped to be extracted: for instance, at Simitthus/Chemtou, the production had started to reduce in the second half of the 3rd century, the latest archaeological evidence being a coin hoard dating to the reign of Honorius (395-423), while the granites quarries at Mons Claudianus and Mons Porphyreticus in Egypt ceased their activity before the 6th century: the latest pottery found in the second site dates to the 5th century[200].

In the whole Mediterranean, the trend in the period following the 3rd century shows for sure a gradual but constant decrease in the market for stone products. Masons' marks, a very significant indicator of production complexity, also follow the pace and the geographical shifts of the market: disappeared in the West towards the late 3rd c., they reappeared in the East, as seen, from about the early 5th c., lasted until demand supported sizeable volumes of production, and are no longer documented in the 7th c. Significantly, they will come in use again in the 11th-12th c. West, at the threshold of the grand season of construction activities of the Romanesque and Gothic periods[201]. This is the moment when Eastern and Western construction markets, and related economics of stone, drift apart once more, as they had done in the late 4th century[202].

[199] In general for Western Europe and on specific regions see: Ward-Perkins 1971, esp. 538-539. – Parsons 1991, 6 and 13. – Melucco Vaccaro 1998. – Stalley 1999, 112-113. – Sodini 2000, esp. 132-133. – McCormick 2001, 49. – Quirós Castillo 2001, 281-282. – Sodini 2002, esp. 423-424. – Bessac 2004, 36-38. – Greenhalgh 2008, 485-487. – Gutiérrez Garcia-Moreno 2009, 259 and table 16. – Cagnana 2012, 82-84. – Utrero Agudo / Sastre de Diego 2012, 312. – Caballero Zoreda / Utrero Agudo 2013, esp. 135-136 and 142-143. – Russell 2013, 359-361. – Domingo Magaña 2015. – All with literature. – The Pyrenean quarries, that produced sarcophagi too, continued their production until the late 6th / 7th century (discussion and literature in: Ward-Perkins 1971, 539-540. – Boudartchouk 2002). The decline of the capitals' production at the quarries of Saint-Béat occurred shortly after 500 (Cabanot 1995, esp. 238. – Wood 2005, 765. – Untermann 2006, 60. – Greenhalgh 2008, 50 and 487). – For the imports of Eastern marbles in Gaul, up to the 6th century, see also Weidemann 1982, 350.

[200] Sodini 2000, 423. – Sodini 2002, 132. – Marsili 2019, 46-47.

[201] See for instance: Stalley 1999, 106107. – Alexander 2007. – Esquieu et al. 2007.

[202] Whittow 2009, 491, with literature.

II.3.2. **7th-9th centuries in the West: the contraction of the market for stone products, the decline of intensive quarrying, and the disappearance of quarry workshops. The end of civilisation?**

> After the rebuilding or refurbishing efforts of Late Antiquity, monumental building stagnated for several centuries in the West, enlivened by only a few exceptions. Marble transport and distribution from East to West declined and then stopped[203].

By the 7th-9th centuries, a whole sector of the non-imperial and private market had disappeared: not only the elites had stopped to purchase new columns, capitals and other architectural elements for their houses[204], but they no longer made a generalised use of sarcophagi – being 6th-7th century Gaul the latest example of this custom in the entire West[205]. Judging by the decorations, in Gaul and everywhere in the West from the 8th century onwards, the workshops that manufactured the quite rare monolithic sarcophagi seem to have been the same as those producing church stone furnishings. The privileged few allowed to be buried in a church and in a sarcophagus – which, because of the elaborate ornaments, must have been fully visible – belonged to the highest social ranks, often ecclesiastics, as shown for instance by the inscription mentioning bishop John in Split (see above, **fig. I.8**, and below, **fig. III.11**)[206].

Above all, a whole sector of the ancient public construction industry – theatres, *thermae*, *fora*, etc. – had also disappeared[207]. While these traditional buildings were starting to be abandoned in Late Antiquity, noted Bryan Ward-Perkins, in places like Rome, Milan and Lucca the churches had attracted to them «some of the monumental paraphernalia that once surrounded secular public

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[203] Greenhalgh 2008, 50. – On the low incidence of building activities see also Greenhalgh 2008, 15-16, and below in this Paragraph.

[204] This seems an option reserved to persons of the rank of the emperor, as in the case of Charlemagne (but with reused elements): see above, Paragraph II.1.2.

[205] See above, Paragraph II.2.1.

[206] Reuse of ancient sarcophagi, too, was reserved to the Saints and to the most important members of the elites: «The vogue for [Roman] sarcophagus burial was early adopted by the Longobards, largely for saints rather than rulers. [...] The vogue spread, and the popes translated several saints into such vessels, some of them porphyry. [...] Kings, emperors and popes were buried in them, the bigger the better. [...] Indeed, the popularity of antique sarcophagi with the upper classes of society both clerical and secular (if only in certain areas) was the most important factor in the rate of survival of this class of artefacts. [...] The vogue for their prestige and widespread use among the civilian population does not appear to date from before (perhaps) the 11th century». (Greenhalgh 2008, 209-210).

[207] Ward-Perkins 1984, 1-37. – Greenhalgh 2008, 50-52.

monuments, particularly in the *fora*. A number of churches were provided with suitably splendid approaches in the form of porticoed roads»[208]. In general, across the former Roman empire, «the triumph of the Church instituted a new administrative bureaucracy […] that paralleled the existing administrative structure, and with the gradual decline of central authority, the role of the Church increased, with the bishop emerging as the most important civic leader. Thus, as churches replaced temples as the signature monuments of a community, they also replaced its older administrative buildings. Theatres and other settings for public spectacle also gradually fell out of use, as the Church gradually replaced older sites of public entertainment»[209].

As stressed by Ian Wood, by the Early Middle Ages the Church had unquestionably become the only major builder[210], thus the public monumental architecture was mostly consisting of ecclesiastical buildings: these were practically the only places where architectural stone sculpture was commonly employed, and where stone-carvers could work[211]. Residential architecture widely employed wood and perishable materials[212], while secular grand residences, such as the renowned palaces of emperor Charlemagne[213] (and, in the East, Theophilos[214]), were uncommon, and rare were also public infrastructural projects of very large size like the reconstruction of walls and aqueducts, for instance in Rome, under popes Gregory III and Hadrian I[215], or in Constantinople, under Constantine V[216].

Against this background – a sheer reduction in the demand for building stone and architectural decoration, in both private and public sectors – the cessation of intensive quarrying in most of Western extraction points, seen in the previous Paragraph, is not surprising.

As for the limited amount of newly carved materials in the 7th-9th centuries, it is interesting to observe the case of Northern Italy, where the archaeological record on churches is particularly

[208] Ward-Perkins 1984, 63. – On the same point, for the East, see Ousterhout 2019, 147, 345.

[209] Ousterhout 2019, 147.

[210] Wood 2007, 236. – In general, on the Church as the main patron for new stone buildings in the Early Middle Ages, see: Jope 1964, 91. – Ward-Perkins 1984, 49-154. – Marcenaro 1994, 195. – Sodini / Barsanti / Guiglia Guidobaldi 1998, 301-302. – Chavarría Arnau 2009, 99-106, with further literature. – Farioli Campanati et al. 2009.

[211] Ward-Perkins 1984, 217 with literature. – Héber-Suffrin 1999, 450, notes that all the material evidence of Early Medieval sculpted fragments comes from ecclesiastical contexts. – See also below, Paragraph III.2.8.

[212] In general, see: Jope 1964, 91 and footnote 1. – Parsons 1991, 20. – Santangeli Valenzani 2011. – Ousterhout 2019, XXIII and *passim*.

[213] Gesta Treverorum, 25; Poeta Saxo V, 435-440.

[214] Ousterhout 2019, 345.

[215] Lib. Pont. 92, XV; Lib. Pont. 97, LXII.

[216] Whittow 2009, 485; Ousterhout 2019, 345.

abundant (see **Appendix 1**). The overwhelming majority of sculpted materials date to the 8th-mid 9th century[217]: yet if one relates the number of ecclesiastical buildings where carved items have been attested – roughly 300 – to this period of 150 years, one obtains a ratio of only 2 churches per year. It must be assumed that some churches could be missing from the list in **Appendix 1** – accidentally neglected, or absent for being still unpublished – and that new churches yielding Early Medieval stone furnishings will be discovered in the future, but even in the hypothetical case that they would double in number, the ratio per year would remain low for such a large territory. However, the renewals of stone furnishings were surely not perfectly and evenly distributed over the period: peaks in sculpture production took place, for instance, in Liutprand's Italy or in the early Carolingian empire[218]. As for the concentration of sculptural projects in relatively short time-spans, Rome is a case in point: between the late 8th and the early 9th centuries, almost all its churches – the overwhelming majority of which predated this period – received new chancel screens, ciboria, and so forth[219].

Concerning the fluctuations in building activities within the period 7th-9th centuries, together with the '7th century hiatus'[220], the most renowned of scholarly axioms on the matter is perhaps the boost in construction between the late 8th and the early 9th centuries[221]. This occurred during the reigns of Charlemagne and Louis the Pious[222] and is widely known as the 'Carolingian Renaissance'[223]. In 1965, on the occasion of one of the first major exhibitions on Charlemagne, it was estimated that under his rule 16 new cathedrals were founded or reconstructed, along with 232 monasteries[224]. Also, a series of capitularies of the late 8th and early 9th centuries strongly encouraged to restore sacred edifices that were falling into ruins[225]. Surely, as Richard Hodges

[217] See Paragraph III.2.8.

[218] From a strictly archaeological viewpoint, the quantitative variations in production are currently quite difficult to detail, given the lack of an accurate typo-chronological framework (which would allow to date most sculptures beyond a generic indication '8th / 9th centuries'). – See Paragraph I.2.

[219] Paroli 2001, 477, with literature.

[220] See Paragraph III.2.8.

[221] Among others: «the sheer quantity of buildings was quite breathtaking»: Stalley 1999, 37. – «Increasing cadence in building»: Greenhalgh 2008, 358. – «Carolingian boom in construction»: Hodges 2012, 7-8.

[222] Heitz 1987, 137-138.

[223] As for architecture, this long established idea has been reopened to discussion in some of the most recent contributions on the period: was Charlemagne really an innovator in this respect? Greenhalgh 2008, 334-336, with literature.

[224] The total for the years between 768-855 amounts to 27 new cathedrals and 417 monasteries founded or reconstructed: Charlemagne 1965, 384. – Heitz 1980, 6. – Heitz 1987, 137. All with literature.

[225] Some of these repairs were considered a public duty already by the Lombards. In general see: Ward-Perkins 1984, 63. – Stalley 1999, 38-39. – Some of the capitulars: Capit. Reg. Franc. I, nr. 89, 189 (years 780-790 circa)

remarked, all these activities stimulated a spike in the procurement of materials like iron, timber, stone, *spolia*, and so forth[226]. Over the *longue durée*, however, the Early Middle Ages as a whole – as opposed to most of the Roman, High and Late Medieval periods – were still characterised by a «very low incidence of new building except in prestigious locations»[227]. Stone buildings, in general, were fewer, and churches were generally smaller than those erected in Late Antiquity and in the High to Late Middle Ages[228]. Hence in aggregate terms, the amounts of stone consumed for construction and architectural decoration were smaller than those used in earlier and later ecclesiastical buildings, let alone a comparison with the Roman world and its vast and diversified market for stone products.

Yet precisely this kind of comparisons should be made with extreme caution, avoiding especially judgments related to the 'level of civilisation'. Context must be always carefully taken into account, and Romanists themselves have stepped away from a strictly comparative approach: in many ways, Roman economy was atypical, and so were the exceptional volumes of production of stone items, and the extent of construction activities: therefore, to classify it «as either 'developed' or 'underdeveloped', in comparison with other historical economies, is unhelpful» or even misleading[229]. In the case of the Early Middle Ages, as shall be seen in the remaining pages of this Paragraph, some features of the market traditionally associated to the notion of 'decay' (the scaling down of the building industry and of the size of buildings, the downturn in the demand for newly made architectural stone elements, the changes in the quarrying practices and the reuse of *spolia*, etc.) should not be read a sign of cultural decline, and only in part depended on economic factors, such as less wealthy elites than before. Many of these features, instead, are connected to practical determinants, or represent intelligent strategies to exploit the available resources and to cope with a new geopolitical background.

Bryan Ward-Perkins has repeatedly investigated the question of the reduction in size of Early Medieval churches, particularly in his well-known work of 1984 and in his more recent «witty and challenging polemic»[230]: in the latter, the smaller structures are eventually branded as another

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and nr. 91, 191-193 (years 782-786). – For some references to legislation on restoration of buildings in the 4th-6th century see below, Part IV.

[226] Hodges 2012, 67-90.

[227] Greenhalgh 2008, 15. – See similar considerations in the quotation at the beginning of this Paragraph. See also Cagnana 2012a, 171, who defined the Early Middle Ages as an age of 'free fall in construction activities'.

[228] On this point see for instance Parsons 1991, 20.

[229] Jongman 2002, esp. 32-35. – Russell 2013, 5, with literature.

[230] Ward-Perkins 1984, 58-61. – Ward-Perkins 2005, 148-151. – The definition is Ian Wood's: Wood 2007, 223.

sign of a «dramatic downturn at the end of the Roman world»[231], whereas in the volume of some twenty years earlier there was a little more room for optimism[232]. In the newest book, the comparative image with some plans of ecclesiastical buildings is certainly striking, with a colossal St. Peter of Rome dwarfing all the others[233]. However, in this plate – used to make a point, in general, for the Post-Roman period – St. Peter is compared to only other seven churches, all Italian, three from Rome, from the 4th-9th centuries. In this context, the presence of the 'Roman giant' founded by Constantine – over 100 metres long, 250 including the atrium – could actually be misleading, as the exceptional size of St. Peter remained practically unmatched for centuries. Also, some doubts remain whether one of the most important places of worship of the whole Christendom – if not *the* most important – is really comparable with churches constructed *ex novo* in the 8th-9th centuries in a rural area or in a town of medium importance[234]. Indeed, when considering other contexts, sizes are not so dramatically different. The Constantinian basilicas in Rome (San Paolo Fuori le Mura, San Pietro, San Giovanni in Laterano) were remarkably large, about 100 metres long, but abbot Fulrad's reconstruction of Saint-Denis (the 'Pantheon of the Merovingians'[235], consecrated in 775), was more than 80 metres long[236], and the Old Minster at Winchester, founded in the mid 7th century and enlarged in the second half of the 9th century, was about 75 metres long[237].

Extreme comparisons apart, if on the one hand it is true that examples like Saint-Denis are not common in the Early Middle Ages (even amongst papal or royal foundations)[238], on the other, in some types of ecclesiastical buildings, such as many monastic churches, the limited size was of course related to their specific function: and a remarkable part of Early Medieval new foundations consisted precisely of monastic ones[239]. Interestingly, the churches' shrinkage in size occurred also

[231] Along with, for instance, the lower degree of literacy: Ward-Perkins 2005, 148.

[232] Ward-Perkins 1984, 61-62.

[233] Ward-Perkins 2010 [2005], 183, fig. 7.4. – See also the remarks of Wood 2007, 236.

[234] As Walter Pohl puts it: «Does a comparison between the size of Old St. Peter for the fourth century and of rural Castelseprio for the eighth really prove collapse, or should we not rather compare total numbers of maintained and newly-built churches instead?» (Pohl 2009, 110).

[235] Heitz 1987, 132.

[236] On Fulrad's Saint-Denis see: Heitz 1987, 132-135. – Wyss 2001. – Périn / Wyss 2004, 21 (colour plans). – Périn / Calligaro et al. 2005, 181-182.

[237] Parsons 1991, 21, with literature.

[238] Ward-Perkins 1984, 58-59. – See also Stalley 1999, 32.

[239] Just as an example, see the abovementioned statistics on building activities in the age of Charlemagne: during his reign, 16 new cathedrals were founded or reconstructed, against 232 monasteries. – For the same fenomenon in the East: Ousterhout 2008, 9.

in the Byzantine empire during the 'Transitional age', where it has been related to a change in worship practices, with devotion becoming increasingly private[240]. For the West, Ward-Perkins ruled out a change of aesthetic tastes, and explained the smaller scale with the fact that, in the Early Middle Ages, patrons invested proportionally comparable amounts of money as in Late Antiquity and in the High to Late Middle Ages, but in absolute value they had less resources to spend in churches[241]. Moreover, it is relevant to stress that, since a long while, most of the scholars dealing with both the East and the West no longer believe that the smaller size of ecclesiastical buildings depended on a suppositional lack (or loss) of technological skills in construction[242].

Also, it should be considered that, in the 7th-9th centuries, almost all the most important urban centres of the former Roman Empire – especially, but not only, in Italy – were already well equipped with their relatively recent ecclesiastical buildings[243], erected in Late Antiquity, especially in the first half of the 6th century[244]. In the Early Middle Ages, these churches were just two or three centuries old, still standing and constantly maintained or restored. Just to make an example, many of nowadays European churches, constructed during the Renaissance and the Baroque periods, are older than that – and still, generally in very good conditions. In 1984, Ward-Perkins had acknowledged that «if we accept, as we must, that the early Middle Ages was a time of tight patronage and not one of history's great periods for building, the picture should not be painted too dark [...] It is important to realize that, even in periods when little new building occurred, the old was carefully and successfully maintained. The huge Late Antique churches built all over Italy were not replaced in this period (this process began only in the 11th century), but nor were they allowed to fall into ruin»[245]. When available, comprehensive studies on other European macro-regions tend to show the same phenomenon[246]. Hence the rarity of large buildings is not always to be explained

[240] Ousterhout 2008, 9. – Ousterhout 2019, 303.

[241] Ward-Perkins 1984, 59-61. – Similar conclusions in Ward-Perkins 2010.

[242] Ward-Perkins 1984, 59-61. – Ousterhout 2019, 303. Both with literature.

[243] In general, see: Krautheimer 1965, 125-152. – Hubert 1967. – Hubert / Porcher / Volbach 1967, 367-369, nr. 317-361. – Stalley 1999, 17-35. – Lomartire 2013, 372.

[244] See: Sodini / Barsanti / Guiglia Guidobaldi 1998, 301. – Sodini 2002, 134. Both with literature. As seen above (Paragraph II.2.2), the expansion in church construction in the first half of the 6th century, both in East and West, was surely remarkable, though building activities were quite reduced in comparison to the Roman period. The boost in church building (and, consequently, in sculptural production) was connected by Sodini, Barsanti and Guiglia Guidobaldi to the improved economic conditions and population growth during the early 6th century.

[245] Ward-Perkins 1984, 61. – On this point, see also Lomartire 2013, 327, who noted that in many cities all over *Langobardia Maior*, at the moment of the Frankish conquest, the most important buildings and churches were relatively freshly constructed, still magnificent in their architecture, decoration and furnishings.

[246] See for instance the case of *Hispania Tarraconensis*, where the overwhelming majority of Early Christian temples have been used uninterruptedly until at least the 10th century, only renewed or repaired during the

with a budget shortage: in a remarkable number of cases, there was simply no need to build a new major church, as there was already one (or more) in very good conditions[247].

If churches had nearly become the only possible workplace for sculptors[248], archaeology has shown that the stone furnishings corresponded to just an addition, a renewal operated in an already-existing building[249]: this is another, natural consequence of the pre-existence, in a great number of locations in Europe, of Late Antique churches, and must be in many instances connected to the laws fostering restorations issued by the Early Medieval sovereigns[250]. The abovementioned case of Rome is an emblematic one: almost all its churches were erected in Late Antiquity, and almost all of them were equipped with new decorated stone furnishings in the late 8th to the early 9th centuries[251].

As anticipated in the previous Paragraph, the contraction of the market for stone products had of course an impact on the quarry industry: not only many extraction centres ceased activity and reusing ancient materials became a standard practice, but also, intensive quarrying was abandoned, and quarry workshops – i.e. production centres of stone items placed at or near quarries – disappeared[252]. The last two phenomena are clearly recognisable trough quarry archaeology.

As for the first one, the large rock faces methodically cut of the Roman period (**fig. II.10**) are replaced – as can be seen in a number of European sites – by the sporadic and unsystematic signs of limited extraction activities in the Early Middle Ages, when small stone blocks are cut in

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Early Middle Ages (Barral i Altet 1981, 64-67). – Sales i Carbonell 2012, 405-406, has pointed out that the 6th and 7th centuries had been characterised by a «Christian building fever» to such an extent that for the remaining part of the Early Middle Ages it is generally «more appropriate to speak of reconstructions or restorations rather than actual building activities» (original in Catalan).

[247] In general on this point, see: Arthur 2002, 60, 79. – Delogu 2010, 55. – Lomartire 2013, 372. See also Paragraph III.2.8, with additional literature. – A parallel phenomenon will characterize Rome in the 11th-12th c.: the most impressive churches erected in this period are not found in the Capital of Christendom, but elsewhere in Europe. As noted by Peter Kidson (2004, 727), we must of course rule out a shortage of budget or a lack of interest in ecclesiastical building in cities like Rome: here, and in a number of other locations which already had all the churches they needed, «ecclesiastical architecture during the Middle Ages seldom got beyond repairs and restorations».

[248] See above in this Paragraph.

[249] In general on this point, see Basić 2008, 260. – An overall view on the volumes of the *Corpus della Scultura Altomedievale* can be enlightening to get an idea how often this happened. As said above, during the Carolingian period hundreds of churches were restored, very often with the addition of new liturgical furnishings: Dodds 1999, 148-151, with further literature. The phenomenon is well attested, for instance, in North-western Italy, where the abundance of archaeological data has improved knowledge on the matter: Lomartire 2007, 318, with literature.

[250] See above in this Paragraph.

[251] Paroli 2001, 477, with literature.

[252] See previous Paragraph.

the approximate final dimensions of the architectural element[253] (**fig. II.11**). Early Medieval sculpted items themselves can provide indirect evidence of these limited, but existing, extraction activities: sets of pillars or slabs in the same stone, and with exactly the same measurements – that in some cases coincide to the millimetre[254] – are hardly explainable other than with a well planned (and well done) work of stone extraction, aimed at obtaining uniform elements for a certain structure. The figures in our survey (**graphs II.6**, **II.7**) are also revealing: the high number of cases in which the stone comes from nearby the building site (i.e., is a local variety) *and* is the only one stone type employed (i.e., reuse from ancient monuments is less probable, as reuse often entailed different sorts of lithic materials), strongly suggests newly quarried, and not reemployed, blocks[255] (**Appendix 1**).

Extracting stone in small blocks remarkably eased their transport up to the construction site, where they were worked or carved. Not always, as it has been suggested for plans of buildings, size matters: getting rid of large blocks can be interpreted, rather than a sign of technological incapacity, as an intelligent way to rationalise the production process and to reduce the freight costs. This may have been a good system, for, judging by the monuments and by a number of illuminations, it was adopted by High and Late Medieval builders and sculptors, who transported small blocks in small crafts (**fig. II.16**) and worked them close to the building site. As Peter Rockwell noted, «when one compares the size of blocks used in Greek and Roman architecture to the many small blocks of a Gothic vault, one sees a major change. The change is seen particularly in the ease of lifting and construction. By carving much smaller blocks […] the architects acquired some of the constructional advantages of brick with the detail advantages of stone. From such seemingly small differences, major revolutions are made»[256].

In some quarry sites, the occasional nature of the extraction activities is also shown by the working traces, which are eloquent of both the heterogeneity of the tools employed, and,

[253] Rockwell 1993, 12, 202-203 and *passim*. – Cagnana 2012, 82-84. – Bessac 2004, 36-38. – Micheletto 1999, 333. – Micheletto 2005, 48-50.

[254] E.g. at Vigo Lomaso (Trentino-Alto Adige, Italy): Beghelli / Dalba 2019, with literature. – Given the usual fragmentary state of the sculptures (see above, Chapter I.1), depth is often revealing.

[255] See the similar remarks of Crosetto 2013, 368 about Borgo San Dalmazzo (all the – many – fragments are in marble from Valdieri except one) and Belcari 2006, 583 about Tuscany (the presence of different, and all local, stone varieties in the sites of the region cannot be accidental, but must be considered as a sign of some limited extraction activities). – See also the case of Trento, Santa Maria Maggiore, where sculptures made in the same stone are indeed ascribable to the same period and original structures, whereas the few items in a different material show different features and are ascribable to different chronologies: Beghelli 2013.

[256] Rockwell 1993, 202-203. – On this point see also Parsons 1991, 5.

sometimes, of techniques implying lack of experience of the artisans at work[257]. Sporadic traces of extraction are often detected in natural outcrops very close to the building site: as it has been noted for the abovementioned case of San Pedro de la Mata, quarrying stone in the immediate vicinity had the advantage that the blocks preserved a higher degree of humidity, being therefore easier to work[258]. Moreover, since Early Medieval buildings were generally smaller in scale than before, the quantities of stone needed for architectural and sculptural projects[259] were also smaller: in some areas, this may have allowed to profit from new, and previously insufficient, extraction points. Erratic rocks and boulders were also excellent sources of raw material: in the Vinschgau valley, for instance, they have been exploited for centuries, even in the periods where actual quarries were functioning in the region. These marble blocks, that could reach several meters in diameter, were displaced down-slope as an effect of the ice ages, and are of the best quality, for they survived glacial and fluvial movement. Some of them still bear traces of extraction[260] (**fig. II.12**).

As for the second phenomenon mentioned above – the disappearance of quarry workshops – the main difference between the Early Middle Ages and the earlier periods, from an archaeological viewpoint, concerns the discarded objects, the most tangible evidence of carving at the quarry sites. These were faulty stone items, cracked or broken during the manufacturing process, that were abandoned just as they were. Both for the Roman and the Early Byzantine periods, hundreds of finds of this kind attest the carving and working of stone at or nearby the quarries[261]. The study of discarded objects provides significant information on the manufacturing process and techniques, allowing to appreciate their changes over time. The oft-quoted works of Nusin Asgari on Prokonnesos quarries, for instance, have shown the rigorous and repeated application of the same stages in the production method of Corinthian capitals, thus suggesting a level of specialisation[262]. As also shown by the evidence from shipwrecks, the products made in the quarries could be shipped

[257] In general on this issue, and in particular on the quarries of Bois de Lens, near Nîmes, see: Bessac 1996, 301-305. – Bessac 2002, 42. – Bessac 2004, 36-38. – Radiocarbon analyses have been performed in the Early Medieval layers, giving a date corresponding to 630 ± 50 years: Bessac 1996, 240.

[258] Utrero Agudo *et al.* 2016, 66. – See above, Paragraph II.1.3. – In general on this point (the advantages of working the stone while it is still full of the so called 'quarry sap', its natural moisture) see Parsons 1991, 6.

[259] For an estimate of the amount of stone necessary for an 'average' set of church furnishings see Chapter II.5.

[260] Unterwurzacher / Obojes 2012, 31-32; 35.

[261] Greenhalgh 2008, 116-119. – Džin 2012. – Russell 2013, 214-220; 260-269. – Marano 2014. – Marsili 2014, 54-61. – Marsili 2015. – Marsili 2019 (all with examples and literature).

[262] Asgari 1988. – Asgari 1995, 275-285. The production processes differ from one period to another, as in the 5th-6th centuries they appear simplified in comparison to the 2nd century (5 stages instead of 12). – See also: Sodini / Barsanti / Guiglia Guidobaldi 1998, 314. – Sodini 2002, 130.

to destination at different stages of manufacturing[263], from simply roughed-out to near-finished or finished items – the latter practice being more common in the 5th-6th centuries than earlier[264].

In the Early Middle Ages, with the drop in demand for stone products and the use of architectural sculpture almost exclusively in churches, quarry workshops were no longer necessary, for a standardised production of half-finished or finished sculpted objects and architectural elements is only cost-effective when the amounts of manufactured goods are significant, and demand is relatively stable. From the viewpoint of quarry archaeology, this emerges from the fact that discarded stone objects completely vanish from Early Medieval layers of Western extraction sites, alongside with any sign of carving or manufacturing at the quarries – the latest evidence of this practice being the repeatedly mentioned Merovingian sarcophagi, up to the late 7th century[265].

Fragments of Early Medieval architectural sculpture known in Western Europe are thousands: not always their exact provenance is recorded, but it seems safe to affirm that, to this day, no near-finished or finished item was ever recovered in a quarry. As the quarry workshops for architectural elements disappear in the 7th-9th centuries, their production moved to the vicinity of the construction site: archaeologists, indeed, find the unfinished, cracked or faulty sculpted items from this period in the churches, usually reused as building material[266].

The disappearance of quarry workshops in the Early Middle Ages was not exclusively a consequence of the contraction of the market for stone products: other practical factors may also have played an important role. In general, the prime motivation for roughing out the objects in the quarries was weight reduction, which of course lowered the transport costs[267]: a column shaft weights 20% less than a parallelepipedal block of the same width and height; for a 8-meters high shaft, with a diameter of 1 meter, the weight reduction equals to 4.500 kg[268]. For the same reason, sarcophagi were hollowed out at the quarries, in the Roman period as well as in Merovingian Gaul[269]. The characteristics of the overwhelming majority of the 7th-9th centuries architectural and sculpted items, on the contrary, did not allow a comparably significant weight reduction: while the

[263] See above, Chapter II.2.

[264] Marsili 2014, 195-196. – Marsili 2019.

[265] In general, see: Delahaye / Périn 1991. – Cartron / Henrion / Scuiller 2015. – Delahaye / Périn 1991, 293, quotes a possibly 'Merovingian' statue – an extremely rare find – from Saint-Pierre-de-Maillé. – I am grateful to Dr. Beate Böhlendorf-Arslan, who shared with me her discoveries on a number of previously unknown Byzantine quarries with evidence of stone-carving, currently being studied by the same scholar.

[266] For both points see below, Part III. and especially Paragraph III.1.4.

[267] On this matter see: Stalley 1999. – Russell 2013, 215.

[268] Russell 2013, 215.

[269] Delahaye / Périn 1991.

production of load-bearing large columns seems to cease completely[270], most of the stone elements preserved to this day are much smaller and belonged to stone furnishings, which were composed by slabs, piers, and so forth (see above, **figs I.10, I.11**). The technique used to decorate them was low relief: consequently, the size of a chancel screen panel, lintel or pillar are not so different from those of the original stone slab or block used to manufacture it. The same can be said about the small columns and capitals that could be also used in a chancel-screen: given their limited size, the weight reduction in comparison to the original block was minimal[271]. Considering the features of the sculpted items to be produced, then, a manufacturing at the quarry was not only unnecessary, but also possibly disadvantageous: the transport of a slab or block from the quarry to the church exposed it anyway to a certain risk of breaking on the way, being therefore preferable to expose to this risk a plain stone item instead of a fully decorated one.

Conversely, the abovementioned production and trade of utilitarian goods like soapstone vessels and hand quern-stones, suggested by the distribution of the finds and by shipwrecks containing this kind of cargo, is also attested by the traces of continuative manufacturing at or nearby the quarries: as the archaeological evidence clearly shows, within the period 7th-9th centuries, these workshops were the only ones which remained active on a substantial scale, to feed a demand that was regular enough to keep them operative[272].

All over Western Europe, large-scale extraction activities connected to the architectural domain will only resume during the High Middle Ages (from the late 10th / early 12th centuries, depending by the region)[273], in parallel with the long-distance transport of stone[274] and other indicators of production complexity such as masons' marks[275]. Quarry workshops and trade in finished or near-finished stone items will reappear too, as shown for instance by the templates sent

[270] Columns in newly-built Early Medieval churches appear always to be reused: see below, Chapter II.4.

[271] At the quarries of Bois de Lens (Nîmes) the Early Medieval layers have delivered traces of extraction of cylindrical elements. They cannot, however, be interpreted as small columns, as the faulty items found at the extraction site have proven to be vessels, probably intended for food storage: Bessac 1996, 56; 239-243; 260-264.

[272] See above, Paragraph II.2.2.

[273] Parsons 1991, 19-20. – Stalley 1999, 112. – Bessac 2004, 38-39. – Kidson 2004, 699-700. – Cagnana 2012, 84. – Caballero Zoreda / Utrero Agudo 2013. – Stalley 1999, 115, quotes the example of William of Sens who, as a first task after taking over the workshop at Canterbury in 1174, sends templates to the quarries at Caen, showing that some carving was done at the quarry itself. – The resumption of large scale quarrying is not only detectable from the traces of extraction in the quarries, but also from monuments: newly manufactured columns and capitals and walls entirely made of regular blocks in the same type of stone (usually local) are also indirect signs of considerable extraction activities (as it has been stressed, for instance, by Caballero Zoreda / Utrero Agudo 2013, 142-143).

[274] See above, Chapter II.2.

[275] See above, Paragraph II.3.1.

at Caen in 1174 for the production of elements destined to Canterbury[276], and by the bosses, bases and capitals sent from Portland to Exeter cathedral in 1304[277]. These circumstances were the result of a conspicuous increase in the number of new building projects – churches, castles and fortifications alike. This stimulated, along with the development of quarries, a widespread use of ashlar masonry and the growth of production of sculpture and ornaments – which, in turn, required the improvement of professionalism and a higher degree of specialisation of labour[278]. As Raoul Glaber (985-1047) puts it, in a passage which is a classical quotation for art historians,

> On the threshold of the 1000th year […] it befell almost throughout the whole world, but especially in Italy and Gaul, that the fabrics of churches were rebuilt, although many of these were seemly and needed no such care; but every nation of the Christendom rivalled with the other, which should worship in the seemliest buildings. So it was as though the very world had shaken herself and cast off her old age, and were clothing herself everywhere in a white garment of churches[279].

[276] Stalley 1999, 115-116.

[277] Parsons 1991, 4 and 24.

[278] In general see: Stalley 1999, 106-107. – Kidson 2004, 699-700. – This demand for stone from the 11th century was first created by church building and then remarkably enlarged by the construction of castles, fortifications, town walls from the 12th century onwards.

[279] Rodulfus Glaber, Hist. III, 4. See: Stalley 1999, 213-214. – Davis-Weyer 1971, 124-125.

Chapter II.4.
Reusing

> The reuse of bricks and stones should not in itself be branded as a sign of decline, but seen as an obvious approach to exploiting the materials of unwanted buildings. Only when the robbed bricks and stones are badly used in the new buildings (by being ill selected, poorly trimmed, or badly laid) can we speak with confidence of technical or economic difficulties. When used with care and precision, older bricks or stones could be just as good as new material, and, of course, were much cheaper[280].

The availability of immense amounts of stone left in the West by the Romans – and, in some areas, by the Greeks, too[281] – surely favoured their reuse, which was as common as – or even more common than – the extraction of new materials[282]. The survey on the provenance of stone presented in Chapter II.1 highlighted indeed a very widespread use of reused materials, usually procured in a maximum radium of a few kilometres. Together with isolated items like sarcophagi and *arae*, and stockpiles of ancient stone elements – including the discarded and unfinished objects still lying at the inactive quarries – the main source for these *spolia* were classical monuments[283]: «by the end of the first century AD even the smallest town was endowed with a more or less standard collection of monumental public buildings: town walls, paved streets, aqueduct, baths, drains, temples, amphitheatre, theatre, forum square, basilica, curia, porticoes, and a population of statues»[284].

In the urban centres, reemploying ancient stone was of course the most convenient and cost-effective option, as the expenses for the transport could be sensibly reduced: Rome is certainly one of the most prominent examples, with its Early Medieval sculptures *exclusively* produced out of

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[280] Ward-Perkins 1984, 218.

[281] See above; see also Russell 2013, 352.

[282] On this point see: Parsons 1991, 13-14. – Sodini 2002, 138.

[283] This can be considered as an actual way of quarrying in the Middle Ages: Ward-Perkins 1984, 203-229. – Greenhalgh 2008, 89-91; 111-124.

[284] Ward-Perkins 1984, 12.

spolia[285]. According to the data emerging from the survey, too, the reuse of stone is more frequently attested in the cities than elsewhere (**Appendix 1**). Besides saving money or obtaining precious marbles, however, another very good reason to reemploy stone was to avoid the dangers connected to unstable structures: since Late Antiquity, some ancient monuments had been adapted to new functions – e.g. as churches[286] – but some other «unwanted classical buildings» were in ruins, and their transformation in quarries contributed to prevent possible accidents due to their collapse and to clean the city[287].

Not all materials were good or desirable enough for being reemployed[288]: decorative stone types – above all marble – were particularly sought-after, and much more spoliated, than others[289]. Of course, ancient buildings were not entirely composed of stone suitable for sculpting[290]. An interesting record on the matter concerns the construction of a new church in St. Albans, not far from London: when the abbot, in 1077, started to look for stone in the ancient *Verulamium*, found out that his Anglo-Saxon predecessors had already selected and put aside the best construction materials[291].

Parts of old buildings like friezes, capitals, mouldings, and so forth, were obviously made in stone types apt to be carved, and were therefore the most appropriate to be reused as raw material for Early Medieval sculptures. On occasions, the ancient decoration had to be chiseled away before carving the new one; but when possible (e.g. when the stone element had to be inserted in a wall, or anyway with the old ornaments hidden from view) the Early Medieval sculptors preferred to simply turn over the stone elements and use their rear, already smoothed and ready to be carved (**fig. II.13**). In most cases, precisely the remains of ancient decoration or engraved inscriptions – whether clearly recognisable or barely noticeable on a corner of the stone object – are the proof that the Early Medieval sculpted fragments are made out of reused stone.

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[285] See above, Paragraph II.1.3.

[286] Ancient structures could be reused in a number of ways: for instance, as it is well-known, former public areas were often adapted to housing; theatres could be still used for public executions. For an overview see Ward-Perkins 1984, 117-118.

[287] Ward-Perkins 1984, 211-212.

[288] As Greenhalgh 2008, 45, puts it, we cannot think to classical remains as a «gigantic box of Lego». The surplus – e.g. free-standing sculpture – often ended up in the kilns for producing lime, for white marble was particularly suitable for this purpose.

[289] In general, see: Ward-Perkins 1984, 211-218. – Destefanis 2004, 57. – Greenhalgh 2008.

[290] As seen above, building stone (for foundations, walls, etc.) was often procured nearby and not necessarily good enough to be sculpted.

[291] Parsons 1991, 17, with literature.

As shown by the survey, among the locally procured materials employed for the production of architectural sculpture in the 7th-9th centuries, *spolia* represented about 50% of cases (**graph II.8**): yet the practice of reuse was even more common when it came to other classes of stone elements. Load-bearing columns are probably the best example: all over Europe, their production had ceased before the Early Middle Ages, as suggested by the evidence from both quarry sites (which did not deliver any trace of their manufacturing) and, above all, from the monuments, which display a generalised use of reemployed shafts from ancient buildings[292]. In the Byzantine empire, too, after the cessation of marble quarrying[293], all columns were *spolia*[294]. The written sources quoted above show that these were so prized to be almost the only stone elements worth being transported over long distances, even by kings and emperors[295]. It has been observed that the value of column shafts (especially in marble) did not only depend on their quality or beauty, but also, precisely, on the fact that they were no longer produced[296]: the efforts documented all over the Mediterranean to repair old columns is another clue that points in this direction[297]. Budget limitations, distance from the Roman centres, or difficult topography, however, could hinder the procurement of ancient shafts: in these cases, square or rectangular piers built of brick, ashlar or rubble masonry were good alternatives, as shown for instance by the churches founded by Einhard at Steinbach (827) and Seligenstadt (831 ca.)[298].

Michael Greenhalgh has correlated the practice of reemploy to the decrease in town-based population – much lower in the Early Middle Ages than in Antiquity – arguing that fewer people meant poor building maintenance, little reconstruction, low incidence of new construction, and no quarrying. Especially in past scholarship, these facts have been interpreted in a very negative way: until at least the mid 20th century, the Post-Antique building employing *spolia* was generally seen as a sign of cultural decay[299]. More recently, however, scholars have abandoned this perspective,

[292] Kinney 2001, 146. – Binding 2003, 7. – Greenhalgh 2008, 10; 182-188; 191; 525. – Jurković 2009, 101. – Lomartire 2009, 183-184. – Utrero Agudo / Sastre de Diego 2012. All with examples and literature. – Even the much smaller columns for *ciboria* are very often reused: Greenhalgh 2008, 215.

[293] For examples and dates, see Paragraph II.3.1.

[294] Ousterhout 2008, 146. – Ousterhout 2019, 396.

[295] See Paragraph II.1.2: almost all the (few) written records attesting the long-distance movement of stone items concern, or include, load-bearing columns.

[296] Utrero Agudo / Sastre de Diego 2012, 323, with literature.

[297] Greenhalgh 2008, 18, and *passim*.

[298] Stalley 1999, 42, with literature.

[299] Ward-Perkins 1984, 211-212. – Esch 1999, 102. – Greenhalgh 2008, 15-16. – For a history of studies on this matter see also Utrero Agudo / Sastre de Diego 2012, 310-311.

and have more thoroughly inquired into the intentions and motivations for, and the ways of reusing ancient stone[300].

II.4.1. **Local stone: reworked or freshly quarried?**

In most occasions, it is relatively simple to recognise when Early Medieval sculpted items are made with reused stone: usually, as said, one or more pieces coming from the same site show traces of ancient ornaments or inscriptions. In other cases, the items are made in stone types that were no longer quarried or imported in the Early Middle Ages, but are common to find in Roman buildings: Luni marble, for instance, is abundantly attested in classical architecture all over the Western Mediterranean, but the quarries ceased activity between the second half of the 2nd and the 3rd century[301]. In yet other cases, the materials were most probably reused when many different stone types were employed within the same set of liturgical furnishings or architectural decoration[302].

Romans, however, extensively exploited local varieties of stone, too. Construction blocks and, in general, non-decorative stone came usually from nearby: some of these were also suitable to be sculpted, as in the instance of the calcareous molasses of Southern France[303], and were therefore abundantly reused for this purpose in the Middle Ages[304]. Early Medieval architectural sculpture cut out of ancient, plain blocks in local materials can make it very hard for the archaeologists to recognise them as derived from *spolia*. The same is true – when there is no trace of ancient ornaments or inscriptions – for any type of locally quarried stone used for carving both in the Roman and in the Early Medieval periods[305]. For instance, some of the fragments from Bobbio (Emila-Romagna, Italy) are made in a calcarenite available in the immediate surroundings of the abbey; probably, in this case, the stone was freshly extracted, but a Roman inscription found nearby shows that the calcarenite was exploited and used on site much earlier than the Early Middle

[300] See Paragraph II.4.2.

[301] Walker 1988, 189-92. – Russell 2013, 91. – Russell 2013a, 346-349. – Marano 2014, 414.

[302] See for instance Greenhalgh 2008, 335-336.

[303] Buis 1976.

[304] In general terms, the patterns of reuse of stone in Medieval Europe, both for building and for sculpture, follow the 'map of stone types' left by the Romans. Limestones and sandstones continued to be predominant in those areas where they were predominantly used in the Roman period, as in France or Spain, whereas Medieval buildings in Italy, where marbles were imported in larger quantities by the Romans, show a broader use of this material: Greenhalgh 2008, 521-522.

[305] On this point see Utrero / Sartre 2012, 317 and *passim*. – Sodini 2002, 142. – In general, on the difficulties of recognising reused stone when the new carving has covered all the ancient surfaces, see Parsons 1991, 15, with examples from Anglo-Saxon England.

Ages[306]. The cases of reemploy of antiquities, then, might potentially be even more numerous than the 50% emerging from the survey (**graph II.8**). When in doubt, in presence of sculpture in local varieties of stone, there can be clues that the materials were newly quarried (and not obtained from *spolia*): for instance, as seen above[307], when a set of slabs are all made in the same stone type and have exactly the same size, or when one can observe, in the surrounding territory, a recurrent 'supply-pattern', with a number of roughly contemporary churches all employing the same lithic variety in their architectural decoration[308].

From a practical viewpoint, the stone was anyway procured in a few kilometres radius, whether taken from an ancient building or freshly cut. Therefore, one or the other possibility makes little difference in the context of studies focused on the construction of individual ecclesiastical monuments. When inquiring building activities, sculptures' production processes, and their economic framework on a larger scale, however, it could be interesting to distinguish the ratio of newly quarried and reused stone within the locally sourced materials. In order to do so, a possible solution, as Micheline Buis and Alberto Crosetto suggested, could be comparing, in each location or micro-region, the percentages of stone types used for carving in the Roman period and in the Early Middle Ages[309]. This is not an easy task, given the abovementioned frequent lack of data on the materials used for Early Medieval sculpture (**graph II.1**) and the fact that, in order to give results, a comparison as such needs large datasets. Nonetheless, this method provides promising results, as shown by the instance of the area of Turin. The Romans had lavishly furnished the city with marbles of different provenance, some of which originating in regional quarries; according to the petrographic analyses, the Early Medieval sculptures from Turin are in Greek marble (53,1%), marble from Foresto (40,7%), marble from Varaita valley (3,1%) and marble from Germagnasca valley. These percentages turned out to be almost exactly identical to those attested in the monuments from the Roman period, thus indicating that all marbles were most probably reemployed, including the local varieties[310].

[306] Destefanis 2004, 55-56. – Destefanis 2008, 74-76.

[307] Paragraph II.3.2.

[308] See above, Paragraph II.3.2.

[309] Buis 1976, 237 and 240. – Crosetto 2013, 368.

[310] Crosetto 2013, 368.

II.4.2. **Aesthetics, ideology, possibility, or necessity?**

While the academics, especially after the Second World War, were starting to get more and more interested in the Post-Antique period, they begun to question the traditional view of the reemploy of *spolia* as a sign of decline in civilisation. The four words aesthetics, ideology, possibility, and necessity, taken from the titles of two papers signed respectively by Beat Brenk[311] and by María de los Ángeles Utrero Agudo and Isaac Sastre de Diego[312], summarise fairly well the scholarly debate on reuse of ancient building materials during Late Antiquity and the Early Middle Ages. Since the beginning, this debate was dominated by two interpretative trends concerning the motivations behind the use of *spolia*: practical grounds and symbolic meanings, with several shades in the middle. Among the practical reasons one could mention the impossibility to get the materials otherwise, and/or the intention of acquiring the very best materials: costly marbles, exquisitely carved ancient capitals, and so forth. Among the symbolic meanings one can quote the legitimation of imperial power (through the display of Roman antiquities from buildings erected by previous emperors) or the ambition of being perceived as a champion of Christianity (trough the import of 'stone relics' from Rome, St. Peter's seat). Two of the earliest and most renowned studies are those by Friedrich Wilhelm Deichmann and Richard Krautheimer: according to the former, the use of *spolia* depended primarily on economic reasons and on the change in aesthetical sensibility, rather than on ideological motivations[313], whereas the latter spoke of «renascence of classical antiquity»[314]. Of course, reasons could be combined or change according to the case: thus, in interpreting Constantine's monumental buildings (the Arch, the Christian basilicas, etc.), Beat Brenk did not «ignore an economic explanation» but considered it of «marginal importance», as the transfer of antiquities to the new constructions was «by no means inexpensive, let alone practical, since the different heights of the columns (e.g., in the Lateran) had to be adjusted and levelled». Rather, the emperor intentionally created a new taste in mixing the classical orders, albeit «there is some ideology inherent in any kind of aesthetics»: Constantine's *varietas* was at once an innovating architectural principle and a traditionalistic, conservative gesture as it aimed at preserving antiquities by integrating them into a new context. Conversely, Theodoric's intentions were not mainly related to aesthetics. The king used only new materials for his churches, while he employed

311 Brenk 1987.

312 Utrero Agudo / Sastre de Diego 2012.

313 Deichmann 1975, 3-5 and 98-101. – The author pointed out that reuse was a common practice long before Late Antiquity; what is new in this period, though, is that older stone elements were not hidden in foundations or modified as to be unrecognisable, but were at times reemployed in a way that preserved and highlighted their original decorations.

314 Krautheimer 1961.

spolia in his palace at Ravenna: in so doing, he showed both his reverence for the Roman history and the will to turn *spolia* into an «expression of his power politics», as they reminded of «the historical tradition of Rome on the site of Theodoric's sovereignty». With the import of marble antiquities from Ravenna and Rome, at last, Charlemagne was looking for imperial legitimation as well as presenting himself as a keeper of the Christian Roman-imperial tradition[315].

Can any of these interpretative approaches be applied to Early Medieval architectural sculpture – as it has been attempted in some studies?[316] Actually, the impressive extent of the practice of reemploy all over the Medieval Mediterranean is precisely what led many scholars to assume that, in general terms, in the choice of using ancient materials the practical grounds were prevailing over the symbolic meanings. Among other interesting points, in the conclusions of his comprehensive work, Michael Greenhalgh observed that, in most cases, reuse did not imply «any consistent attitude to the glories of Rome, or any desire to resurrect or imitate them by exact architectural reproduction, although it seems likely that Mediaeval people could certainly have connected marble generically with empire»[317]. Contrary to what some studies suggested, moreover, ancient and new materials did not entail similar costs: using *spolia* was much cheaper than quarrying and transporting new stone items, especially the large ones[318]. María de los Ángeles Utrero Agudo and Isaac Sastre de Diego argued that, since during the Early Middle Ages the sources of stone (both new and reused) were almost always very close to the building sites, the motivations for employing *spolia* were mainly of economic nature, and only secondarily and in fewer cases connected to symbolical-ideological or stylistic-iconographic grounds[319]. Among the exceptions, the use of antiquities in the arch of Constantine – certainly not related to the lack of funds, as the emperor had built *ex novo* a remarkable number of buildings, and even founded a new city – was not the expression of innovative aesthetical tastes, but, rather, betrayed the unavailability

[315] Brenk 1987, 107-109. – For the written sources on Charlemagne, see above, Paragraph II.1.2.

[316] See for instance Aimone's interpretation of the slabs, supposedly in Pentelic marble, from the abbey of Novalesa: Paragraph II.1.2.

[317] Greenhalgh 2008, 525. – Of course, this was all the more true in the case of Moslems: «Islam used more marble in its earlier centuries than (at least Western) Christians, and did so without any of the classical-tradition-renovatio baggage»: Greenhalgh 2008, 232.

[318] Ward-Perkins 1984, 217. – Liverani 2004. – Utrero Agudo / Sastre de Diego 2012. – Greenhalgh 2008, 16. – Ward-Perkins 1984, 217 notes that « Although at the root of the reuse of architectural *spolia* lay convenience, this did not prevent them being shipped widely, especially in the case of materials difficult to obtain locally. Even with large transport costs, *spolia* would still be much cheaper than newly quarried material, which needed the full cost of extraction and in many cases [...] originated in areas much more distant (and in some periods politically more hostile) than the sources of reusable stone».

[319] Utrero Agudo / Sastre de Diego 2012, 314.

of professionals with the skills to accomplish some specific tasks, e.g. producing monumental friezes[320].

In any case, instances like the ones considered by Beat Brenk concern monumental buildings promoted by emperors and kings where, very relevant point, the *spolia* were used so as to be clearly recognisable as such: intact friezes, entire load-bearing columns, etc. The same goes for the abovementioned altar stone transported by Aldhelm from Rome to England and for the twisted columns given by Eutychius to Gregorius III[321]. Both occurrences involve a pope – whether donor or receiver – and in both occurrences the stone items, obviously, were intended to be set up in their new context as they were. On the contrary, in the case of Early Medieval sculpture, the *spolia* were used as mere raw materials. The ancient stone elements were cut and reworked, or anyway reemployed in a way that concealed, or completely removed, their original decorations: this makes it hardly possible to surmise any kind of symbolical or ideological statement. At most, one can assume the very generic association with the materials used in the Roman period mentioned by Greenhalgh. Another difference concerns the rank of the persons involved. Kings, emperors and popes are by definition individuals who act outside the norm, who often have a message to deliver through their actions, and who often want these actions to be perceived as extraordinary: it is reasonable, then, to envisage that symbolic meanings and 'propaganda' may have played a role in their use of antiquities, largely because antiquities were still clearly recognizable as such in their new architectural context. Vice-versa, it is unlikely that the characters lower in rank (bishops, abbots, 'simple' *presbyteri*, and so forth) had similar ambitions when commissioning furnishings and decorations made with reworked *spolia*, deprived by the elements which bore witness of their Classical origins.

This also applies to load-bearing columns, where we find again the same contrast between the ruling classes and the rest of patrons. On the one hand, reusing ancient shafts was a necessity for everyone, for, as seen at the beginning of this Chapter, their production had ceased in the Early Middle Ages. On the other hand, Liutprand's and Charlemagne's motivations for fetching columns from so far away – from Rome and Ravenna[322] – entailed in all likelihood a symbolic, or political, statement related to the locations of provenance of the materials, i.e. cites which were emblems of spiritual and secular power[323]. In the case of Liutprand, a religious main motivation is inferable by

[320] Utrero / Sartre 2012, 322, with literature. – An edict promulgated in the name of the emperor soon after his death might indeed confirm this hypothesis (see below, Part III).

[321] See above, Paragraph II.1.2.

[322] See above, Paragraph II.1.2.

[323] Clemens 2003, 240, 273-274, with literature.

the words chosen by the poet who celebrated his deeds, who wrote that the marbles came from the «Capital of faith». In the case of Charlemagne, the written record lacks similar explicit references; therefore, scholarly interpretation of the monarch's aims ranged from the will of presenting himself as a defender of Christendom[324] to the desire of representing the Frankish triumph, of spreading papal influence, of showing his artistic sophistication and his technological and logistical reach, or all of them at once[325]. The last point is particularly interesting, for the chroniclers did indeed care to mention some details which hint at more practical grounds. Einhard states that Charles needed columns from Rome because he could not find them elsewhere: since it is obvious that this is not true (as a number of Roman cities existed not far from Aachen), Einhard presumably implied that the materials from Rome were considered to be of a better quality than those available nearby[326]. Just like any other emperor before him, Charles probably wanted to obtain stone items that adequately represented his «intended majesty»[327]. Above we have seen what an astonishing undertaking was, in the eyes of Early Medieval society, the long-distance transport of stone[328]: this factor should not be underestimated when inquiring the intentions of Charlemagne in importing materials from afar. If, given the silence of the sources, other specific, more elaborate symbolic meanings (like those listed above) are plausible but difficult to prove, one can be confident that one of his goals was to show that he could achieve things that could not be achieved by others: his subjects could surely appreciate the wonders of such an ambitious logistical challenge.

In other words, in the Early Middle Ages, everyone – from kings and emperors to bishops, abbots or priests – faced the problem of procuring columns, as their production had stopped, and the evidence from buildings all over Europe shows a generalised use of ancient shafts: what made kings and emperors 'special' was that they could obtain them from nearly any possible location, and in so doing they displayed their status. Everybody else had to take into greater account the considerable costs for stone transport, and therefore procured columns from the closest possible sites, and only extremely rarely did embark on long journeys: the monks of Auxerre, for instance, could clearly rely on generous funding from their lay abbot (and brother-in-law of Louis the Pious), when they decided to head to «distant regions» in Southern France, because in their province «there was no

[324] Brenk 1987, 109.

[325] Greenhalgh 2008, 338-339, with literature.

[326] On this point see Greenhalgh 2008, 338-339 and 341.

[327] Russell 2013, 353: Roman emperors imported stone from afar mainly to «ensure a range and quantity of decorative stone that reflected their intended majesty».

[328] Paragraph II.1.2.

abundance of marbles»[329]. On the other hand, it is true that in Early Medieval Gaul, procuring marble from the South was a necessity, for, in comparison to Italy, marble was «in short supply, and usually in the wrong place, since most population expansion was further North»[330]. Even Charlemagne, however, was not always eager to make a statement through the import of ancient stone items from 'symbolic' cities such as Rome and Ravenna, as shown by his 'practical' attitude during the construction of the church of Maguelone: «since he could not get columns and marbles for that building», he procured them from one of the nearest possible locations, the city of Nîmes.

Aesthetics was quite certainly often involved in the choice of using antique stone items for producing new Early Medieval decorated furnishings, as shown by the fact that, in our survey, the majority of items made from *spolia* are in marble: this is the beautiful material *par excellence*, as epitaphs, inscriptions and written record frequently highlight[331]. But then again, this has hardly anything to do with the aesthetics attributed by beat Brenk to the agenda of Constantine – i.e., an entirely new way of decorating buildings –. Rather, aesthetics is implied at a much simpler level, i.e. the plain beauty of the material. The ways in which Early Medieval artisans and their patrons profited from the characteristics of ancient stone, and its beauty, can be revealed through accurate research on the sculpted elements. Thus, analysing the late 8th century fragments from Alba (Piedmont, Italy), originally belonging to a chancel screen, Alberto Crosetto noted that the pillars are always made in white marble from Luni, whereas the plates are made in a beige/pinkish marble from Varaita valley. The makers, therefore, 'played with colours', with the aim of creating a pleasant effect of alternation of white and pinkish[332].

[329] See above, Paragraph II.1.2.

[330] Greenhalgh 2008, 521.

[331] Epitaphs and inscriptions: Ciampoltrini 1991a. – Destefanis 2004, 54, esp. footnote 192. – Written records: see for instance the sources analysed above (Paragraph II.1.2): marble is described as 'gleaming' (Aldhelm, Willelmus Malmesbiriensis, De gestis pontificum Anglorum V, 222) or 'precious' (Monks from Auxerre, Heiricus, Miracula sancti Germani II, 92; Liutprand, In ecclesia beati Anastasii).

[332] Crosetto 2013, 368, also noted that the choice of making the pillars, and not the slabs, in Luni marble might have depended on the available material: Luni marble was considered as more precious than Varaita marble, and in the 6th-8th centuries had been, therefore, spoliated from Roman monuments in much larger quantities than Varaita marble. This could have resulted in a shortage of ancient elements in Luni marble in the immediate surroundings, especially the larger ones, and in the consequent decision of producing the small pillars in Luni marble and the larger slabs in Varaita marble.

Chapter II.5.

Stone transport

Stone is heavy[333].

In every historical period, stone transport has always represented one of the largest expenditure items in building projects involving lithic materials[334]. For instance, for High and Late Medieval England, by comparing copious written documentation to contemporary evidence, Louis Francis Salzman calculated that for distances longer than 20 km between the quarry and the building site, the freight costs were greater than the price of stone[335]. As just another example, it has been estimated that transport figures accounted for about 50% of the total costs of the Baths of Caracalla at Rome[336]. The transport-network played therefore a very important role in the extraction activities, and ancient quarries were located next to waterways or major transport routes[337]. Reconstructing timings and logistics and calculating costs of stone transport in the past can be quite complicated, and for certain periods, such as the Early Middle Ages, archaeological and written evidence on the matter is almost totally lacking. The subject has been better inquired for the Roman than for the Early Medieval period, but a very suitable basis for comparison is also provided by later documentation, for the practical problems connected to stone transport have remained essentially unchanged until at least the 19th century[338].

The self-evident fact that stone is heavy seems to have been seriously taken into consideration in most of studies on stone transport in the Roman period: on the contrary, scholarship on Early Medieval sculpture shows at times little concern for this matter. Thus for instance Eleonora Destefanis was most probably right in dismissing a previous hypothesis,

[333] Russell 2013, 95.

[334] Prigent / Sapin 2004, 120. – Stasolla 2010, 90. – Cagnana 2012, 84. – Russell 2013, 95.

[335] Salzman 1952, 119.

[336] DeLaine 1997, 216-217.

[337] Bessac 2004, 35-36. – Pédini 2013, 127-128. – Russell 2013, 78 and 94-95, with literature.

[338] Rockwell 1993, 168-169. As some 1920-1930 photographs of Carrara attest, however, even after the advent of railroads and heavy-truck the stone was often moved out of the quarry with traditional, ancient transport systems such as sledges and oxen- or horse-drawn carts.

according to which several stone slabs were quarried in the surroundings of Bobbio – where they were destined to –, then brought to Pavia to be carved, and then back to the abbey, for a total of ca. 140 kilometres overland[339]. Obviously, the quantity – and the weight – of ornamental stone needed to produce liturgical furnishings and decorations for an average Early Medieval church are not even remotely comparable to the amounts used in Roman monumental contexts like the baths of Caracalla, let alone the fact that in the Early Middle Ages the decorative materials were locally supplied, and not quarried thousands of kilometres away. Even on smaller projects and short distances, however, moving stone often represented the main expense.

In order to address the matter of logistics of stone transport in the Early Middle Ages, in the first place it would be of some use to estimate the approximate weight of an 'ordinary' chancel screen and its components; this case can be considered as paradigmatic, as the elements that belonged to architectural decoration (e.g. door-posts, window frames, etc.), or to other furnishings (e.g. baldachins, ambos, etc.), had a comparable size to those employed in chancel screens. Let us consider, then, 'typical' slabs measuring 100 x 80 x 10 cm (= 0,08 cubic metres) and pillars measuring 100 x 20 x 20 cm (= 0,04 cubic metres). In this example, the quantity of stone needed to produce 1 slab (0,08 m^3) equals to that needed to produce 2 pillars (0,04 m^3). Given the average weight of a cubic metre of decorative stone (2.600 kg), each of the 25 pillar which could be produced with it weighted 104 kg, and each of the 12,5 slabs weighted 208 kg[340]. The archaeological excavations in St. Tiburtius at Molzbichl (Carinthia, Austria) – where have been found remains of the stone base for the chancel screen – allow to assess that even in a small church a *cancellum* could comprise up to 12 slabs and 14 pillars[341] (see above, **fig. I.10**). Assuming 10 slabs and 12 pillars for our ideal chancel screen, this would result in a total of 1,28 m^3 of stone, weighing 3.328 kg. In a bigger church, when adding other elements – an ambo, a ciborium, window frames, etc. – these quantities could easily double.

As seen above, quarry archaeology shows, for the Early Middle Ages, sporadic traces of extraction; when freshly quarried, slabs and blocks for church stone furnishings were generally cut in the approximate final dimensions of the single component to be manufactured[342]. When the stone was taken from ancient buildings it was often already available in the form of small items or, if

[339] Destefanis 2004, 55.

[340] The specific weight of decorative stone can vary a lot: marble can reach up to 2800 kg/m3, while Costozza limestone, for instance, weighs ca. 2130 kg/m3 (Zara 2015, 652). Among the works on Early Medieval sculpture published in the past few years, Maria Letizia Casati is one of the extremely few authors (if not the only one) who included in her catalogue an estimate of the weight of the best-preserved slabs and pillars: Casati 2014.

[341] Karpf 2001, 31 and 26, with plan and reconstruction.

[342] Paragraph II.3.2.

procured from large elements, it was most likely cut into pieces before moving it[343]. Hence in order to evaluate the possible means of transport, one must consider the single items, rather than a whole block weighing several tonnes. Small blocks were cheaper to transport and easier to handle[344], and for this reason construction and non-decorative lithic materials – of the kind used to erect a wall – were also elements of limited dimensions[345]. However, archaeology has shown that the stone furnishings very often represented just an addition to a pre-existing building, in the context of restoration and refurbishing works in the church[346]. Thus in the case of many projects, the decorative stone for sculpting corresponded to roughly the entire quantity of stone to be transported, as there was no need for construction blocks.

Over medium and long distances, moving stone on waterways has always been the cheapest option[347]. However, as we have seen, in the overwhelming majority of cases the stone used for architectural sculpture in the Early Middle Ages was procured within a very short distance, in a maximum radius of 20-30 kilometres (**graphs II.4-II.7**). In these circumstances, the difference in terms of freight costs was not substantial, and in many cases included in the survey (**Appendix 1**) waterways were anyway unavailable: therefore, we will first consider overland transport.

II.5.1. **Overland**

> The simplest form of moving stone is to pick it up and carry it [348].

In the Roman period, the considerable quantities of stone needed for major building projects, the large size of stone items such as columns and capitals, and the practice to ship them over long distances required a careful planning for the transport. In this context, waterways were more cost-effective and quarries were therefore generally opened nearby sea shores or navigable rivers[349]. Some extremely rare exceptions were mostly connected to the imperial sphere, such as Mons Claudianus, in Egypt, where stone items had to be transported for over 130 kilometres overland

[343] In general, see Utrero Agudo / Sastre de Diego 2012.

[344] Rockwell 1993, 203. – Cagnana 2012, 84.

[345] Not only in our period, but in general in the Middle Ages (and especially until the 11th century), small pieces of stone were preferred: Rockwell 1993, 12 and 202-203, makes a comparison with the much larger blocks of Greek and Roman architecture. – Stalley 1999, 114. – Prigent / Sapin 2004, 125-126.

[346] See Paragraph II.3.2. – See also Dodds 1999, 148-151. – Paroli 2001, 477. – Lomartire 2007, 318.

[347] Parsons 1991, 6. – Prigent / Sapin 2004, 120. – Cagnana 2012, 84. – Russell 2013a, 356.

[348] Rockwell 1993, 12.

[349] Russell 2013, 94-95, with literature.

before getting to Kaine (Qena), where they were shipped over the Nile[350]. Albeit overland carriage was more expensive, it was an acceptable option when short distances were involved, especially with small loads and on flatland; it was of course less dangerous and more reliable than moving stone on waterways, as it was less dependent on the atmospheric conditions and, in case of accident, it was definitely easier to recover the stone from the ground than from the seabed or the bottom of a river[351].

As for the costs, they are nearly completely undocumented until the Late Middle Ages. A rare record from ancient Greece, however, indicates that buying a block of stone weighing about two tonnes costed the same as transporting it for 2-3 kilometres. In this case, though, the final destination – the temple of Apollo at Delphi – lay 600 metres above sea level, and it must be considered that transporting stone uphill was more expensive than on flatland[352]. Written sources from Medieval to Early Modern Europe suggest that buying a certain quantity of stone costed as much as carrying it on flatland for a variable distance between ca. 10 and 30 kilometres[353]. These figures change a little over time, and it might therefore be assumed that, in the Early Middle Ages too, transport by land was cost-effective up to similar distances. When comparing earlier and later documentation to the Early Middle Ages, however, it is important to take into account the nature of the loads of stone. Moving large stone blocks weighing two tonnes or more, as it could occur in Antiquity, required greater economic resources and was logistically more challenging than transporting single, smaller items[354] as those that were employed in our period for architectural sculpture – whose weight generally varied, as seen above, between 100 and 200 kg ca. (**fig. II.11**).

Which were the possible means to move such blocks? Of course, as stated in the quote that opens this Paragraph, the simplest way of moving stone is to take it in the hands and carry it. This method was generally limited to small items and to very short distances within the construction site[355]. A single human porter could carry up to 40-50 kg[356]: for instance, he could move a small capital for a *pergula*, weighing about 20 kg, from one point to another of the church. A number of Medieval illuminations show that two porters in the building site could use a hand barrow to move a few small blocks, as in **fig. II.14**: if the proportions of the elements depicted are to be trusted, the

[350] Hirt 2010, 218-220. – Greenhalgh 2008, 131. – Russell 2013, 80-81.

[351] Greenhalgh 2008, 133. – Russell 2013, 104-105.

[352] Russell 2013, 103-104.

[353] Stalley 1999, 115. – Greenhalgh 2008, 133-134. – Russell 2013, 104. All with literature.

[354] On this points see Cagnana 2012, 82-85, with literature.

[355] Rockwell 1993, 12.

[356] Cagnana 2012, 87.

workmen are carrying a burden of circa 70 / 100 kg. For larger distances than back and forth in the building site, contemporary ethnographic evidence suggests that similar systems are only bearable up to 50-70 kg over no more than one kilometre[357].

As for the loads and distances we are concerned with – blocks and slabs of 100 / 200 kg over 5-30 km ca. – the best way to transport the stone items overland from the extraction point to the church were pack animals. Single donkeys, horses, mules could carry up to 100-120 kg[358] – e.g. a block for a chancel screen pillar – and two of them drawing a two-wheeled cart could pull up to 800 kg[359] – e.g. four slabs (**fig. II.11**). A cart of this type is represented in a late 5th / early 6th century mosaic from the church of Oued R'mel in Tunisia, where two horses are pulling a small column and the additional weight of a man who makes sure that the shaft does not fall to the ground[360] (**fig. II.14**). In his *Liber in Gloria Confessorum*, Gregory relates that the stone for the construction of an *oratorium* near Tours was brought on place with a cart pulled by oxen[361]. Another cart, pulled by a pair of oxen, is mentioned as being used for transporting a tombstone in the *Liber in Gloria Martyrum*[362].

This is surely an appropriate mean for moving an object as such, but the written sources attest cases of quite wrong choices, too. Abbot Aldhelm, for instance, seem to have overestimated the force of the camel that carried the altar stone, as the animal eventually collapsed[363]. Such a stone would have indeed weighted more than a tonne, definitely too much, as noted by William of Malmesbury himself, for a single beast of burden. Thus William, on the one hand, did not fully trust previous sources mentioning the presence of a camel right in the middle of the Alps; but, on the other hand, cannot imagine which other animal could «shoulder such a burden». Camels were actually stronger than other animals, and could pull up to 450 kg ca., but only over short distances[364]. The measurements accurately reported in the text – and therefore the weight of the load of more than a tonne – can hardly be questioned, as they are consistent with the dimensions of well-

[357] Rissell 2013, 97, with literature.

[358] Cagnana 2012, 87.

[359] Rockwell 1993, 168. – Cagnana 2012, 87. – Russell 2013, 97-98.

[360] Yacoub 1970, 20 and 144. – Russell 2013, 98.

[361] Greg. Turonensis, Lib. Confess.18 (Tunc deputatis bubus ad plaustro, lapides congregat). – Weidemann 1982, II, 356.

[362] Greg. Turonensis, Lib. Martyrum 66 ([…] iunctisque ad plaustrum, marmorem exhibe et super sepolturam […] conpone). – Weidemann 1982, II, 356. – Other construction materials, such as timber and wooden beams, were also transported with oxen carts: Greg. Turonensis, Lib. Confess. 30. – Weidemann 1982, II, 356.

[363] See above, Paragraph II.1.2.

[364] Russell 2013, 97.

preserved Late Antique and Early Medieval altar stones. William, then, was probably right in doubting the detail referring to the camel: this was possibly a 'poetic licence' of his chronicler-predecessor (i.e. one of his sources), who opted for an exotic element over an ordinary cart pulled by ordinary beasts. Of course, however, an appropriate mean of carriage did not automatically mean a safe journey, as it is well illustrated by the realistic account of the accident[365]: even the most careful planning could fail in contexts like the Alps, where the harsh weather conditions and the rough paths could exhaust the animals or cause the carts to go off the road.

Charlemagne had more luck than Aldhelm in transporting stone over long distances. Surely, though, he could count on immensely larger resources than the abbot: the account of the Roman columns and marbles donated to St. Riquier[366] explicitly mentions that they were carried by «a great number of strong wagons», i.e. heavy-duty vehicles suitable to the length of the way. For this kind of tasks, oxen were in all likelihood the best option: evidence from Antiquity and Early Modern periods suggests that a single ox could pull as much as two horses, i.e. up to 800 kg, which equals, for instance, to four chancel screen slabs. But besides the strength of the animals, it was their harnessing in pairs, one behind the other, and the structure of the wagon, which increased exponentially the traction capacity (**fig. II.15**). As for timings, at last, it has been estimated that a wagon carrying small loads of 1-2 tonnes could cover an average distance of 11 km per day, on flat terrain[367].

II.5.2. **Waterways**

When the stone had to be procured from more than 20-30 km away, shipping it on waterways was remarkably more cost-effective than transport it overland[368], despite the challenges posed by seafaring and the possible difficulties in navigating both minor and major rivers[369] (**fig. II.16**). In the Edict of Diocletian, promulgated in 301, the price of stone is directly proportional to the distance of the quarry from the sea: even medium distances by land could easily double the

[365] See above, Paragraph II.1.2.

[366] See above, Paragraph II.1.2.

[367] Russell 2013, 98-100, with literature. Simple carts carrying up to 1-2 tonnes seem to have been common in Antiquity, but the written sources attest reinforced wagons and heavy-duty machines specifically created in occasion of special projects. As for timings, they can vary enormously depending by the weight and conditions of terrain.

[368] Rockwell 1993, 168-169. – Cagnana 2012, 84. – Rodà de Llanza 2012. – Russell 2013, 95-96. – Russell 2013a, 356.

[369] Zara 2015, 647-648, with literature.

cost[370]. Albeit documentation for the Early Middle Ages is – as usual – particularly scarce, plenty of examples ranging from Antiquity to the Modern period show how much cheaper, in general, were river and sea transport in comparison to overland transport.

It has been calculated, for instance, that in the 4th century transporting a cargo of stone by land from La Couronne to Saint-Pierre-les-Martigues (5 km) costed as much as shipping it by sea to Marseille (25 km, / 13,5 NM circa; ratio of 1:5)[371]. Another quite interesting, but indirect, example is to be found in Turin. Here, the stone items in marble from Luni are almost totally lacking[372]: yet this material is among the most common ones to find in Roman cities, as these quarries were the major source of white marble in the West up to up to the 2nd century AD[373]. Arguably, this is proof that in the Roman Turin it was easier and cheaper to get marbles over waterways from thousands of kilometres away – i.e. from Greece and Asia Minor, through the Adriatic harbour at Aquileia, and then over the Po river – than overland from Luni, ca. 270 km away[374]. In the 15th century, in the area of Saint-Omer (nowadays Hauts-de-France), transporting stone overland costed four of five times as much as shipping it on waterways[375], and a 16th century document from Cambridge states that moving a given stone cargo 16 kilometers overland cost the same as 130 km by water[376]. Still in 1962, the limestone from the Isle of Portland (England) was cheaper to transport by sea to Dublin (ca. 625 km away), than overland to Birmingham (ca. 210 km away)[377].

The ratio of waterways to land transportation costs, however, depended by the specific circumstances of each single case – volume of the cargo, distance, topography, etc. – and could therefore vary greatly from one place and period to another. For instance, the hundreds-kilometres-long route taken by the 'Costozza stone', quarried near Vicenza – heading East over the Bacchiglione river up to Padua, the Venetian lagoon and the Adriatic sea, to reach locations near the shore (Adria, Altino, etc.), and from there back westwards to the Po valley inland, towards yet other cities and towns – could be cost-effective in the Roman period, when large and bulky cargoes

[370] Greenhalgh 2008, 133. - Pédini 2013, 127. – For a critical discussion on stone in the Price Edict, and the problems its interpretation presents, see: Arnaud 2007. – Russell 2013, 33-36.

[371] Pédini 2013, 127-128.

[372] Frisa Morandini / Gomez Serito 2003.

[373] Walker 1988, 189-92. – Russell 2013, 91. – Russell 2013a, 346-349. – Marano 2014, 414.

[374] Frisa Morandini / Gomez Serito 2003, 211.

[375] Prigent / Sapin 2004, 120.

[376] Russell 2013, 105.

[377] Rockwell 1993, 168-169. – Russell 2013, 96.

needed to be shipped[378]. Vice versa, it seems less probable, as it was surmised in some studies, that practically the same route was taken in the Early Middle Ages for remarkably smaller amounts of stone heading Cisano/Bardolino (Garda lake)[379], which could be more easily moved over much shorter distances following a mixed overland-waterway itinerary[380]. When relatively small stone cargoes had to be transported, moreover, such mixed transportation systems were considered the most appropriate option even in the Early Imperial period[381], and continued to be chosen in subsequent centuries, for example in Merovingian Gaul for sarcophagi[382].

Interestingly, the survey on the provenance of stone has highlighted that whenever distances exceeded 40-50 km, there were often waterways available between the extraction point and the location where the church lay[383]. As seen in the Paragraph II.4.1., it is not always clear whether the stone had been freshly quarried (and so brought on place in the Early Middle Ages) or reused from ancient monuments (and so transported in the first place in the Roman period, and simply reused in the Early Middle Ages). In both cases, though, waterways were most probably the best option. Thus, the dolostone used at Milano, Santa Maria d'Aurona, came from Angera, Lake Maggiore[384], and might have covered most of its way to the city on waterways, over the lake and then the Ticino river[385]. 'Musso marble' could be shipped over the Lake Como and almost reach its destination at Castel San Pietro (8 / 10 km from the shore)[386], or be delivered directly on site at Como (though, in this last case, the marble is probably reused)[387]. Stone from La Couronne quarries reached Marseille by sea since the Antiquity[388], although, as in the case of Como, it is very likely that the Early Medieval sculpted fragments found at Sainte-Marie-Majeure and Saint-Victor were manufactured using *spolia* from the city (0-5 km circa)[389].

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[378] Buonopane 1987, 208-209.

[379] Napione 2002, 333.

[380] One possible option: 35 km ca. overland (and on flatland) up to the Adige river (which was navigable since Antiquity: Russell 2013, 78, footnote 165. – Zara 2015), and then by water almost to destination (ca. 5-10 km away from Bardolino / Cisano, to cover overland).

[381] Buonopane 1987, 208.

[382] Delahaye 1985. – Henrion 2015a, 196.

[383] Paragraph II.1.1.

[384] Dianzani 1989, 25. See **Appendix 1**, Italy, Milano.

[385] The river was navigable since the Antiquity: Greppi / Bugini / Folli 2014, 112.

[386] See **Appendix 1**, Switzerland, Castel San Pietro.

[387] See **Appendix 1**, Italy, Como.

[388] The ancient quarries of the region were established on the coastlines: Pédini 2013, 127-128.

[389] Pédini 2013, 181-182, 224-226. The last stages of continuative and organised exploitation of the quarries must be connected to the production of Merovingian sarcophaguses (late 6th century). See **Appendix 1**,

The transport of stone on waterways varied greatly in terms of time and expense according to a number of variables that remained roughly unchanged from Antiquity to the Late Middle Ages[390]. In general, navigation was highly conditioned by climate and seasonality and, in the case of rivers, timings differed considerably when sailing upstream or downstream: for instance, it has been estimated that, in the year 596, Augustine of England took nearly one month to go over the Rhône from Arles to Lyon – with the help of twenty to forty oxen or horses towing the boat – but just two to five days on the way back[391]. Similar ratios should be assumed for the journey of the abovementioned monks of Auxerre, who went to Arles and Marseille in search of ancient marbles to be used in the construction of the crypt[392].

While the costs of overland transport were more concerned with weights, the costs of river and sea transport were more concerned with volumes: the bulkier the cargo, the higher the freight expenses[393]. Obviously, one of the advantages of transporting goods by water was indeed the larger capacity of a craft: the average wagon for the transport of Merovingian sarcophagi, for example, could carry a maximum of two or three of them, whereas six or seven of them could be easily loaded on a small boat[394]. Shipwrecks from the Roman period show that different kind of vessels were used along rivers to transport the same quantity of stone: two ships from Arles and London, respectively 31 metres and 18 metres long, with beams measuring 3 and 6 metres, were both carrying cargoes weighing around 26-27 tonnes[395]. Other examples from Northern Italy carried up to 17 tonnes, but cargoes of about 90 tonnes have been envisaged in the case of Euganean Hills trachyte[396]. Vessels used for overseas transport normally freighted more than this: Ben Russell has mapped the shipwrecks containing stone cargoes – mainly columns and other items in decorative

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Marseille: the use of spolia is all the more probable when considering that the Early Medieval sculptures from the church are all made in reused marble, except one in La Couronne limestone.

[390] Arnaud 2007, 326, notes that the idea that ancient sailing was faster than medieval, prevailing until the Eighties, has proven to be wrong; moreover, «even to reduce medieval seafaring to coasting because of a technical or cultural constraint seems unwise».

[391] Cook 1926, 386. Augustine (d. 604) was a monk who became the first bishop of Canterbury in the year 597. – As reported by Russell 2013, 107, an 18th century document from England attests that the haulage capacity of a single horse could increase up to 250 times along canals or gentle rivers.

[392] See above, Paragraph II.1.2. and Chapter II.4.

[393] Arnaud 2007, 325.

[394] Henrion 2015a, 196, with literature.

[395] Russell 2013, 107-110.

[396] Zara 2015, 652, with literature.

stone – with reconstructable weights in the Mediterranean, with the result that the majority of them were carrying 100 to more than 200 tonnes[397].

However, as seen above, one of the typical situations that, in the Early Middle Ages, required the shipment of stone – the renewal of the furnishings and architectural decoration of a pre-existing church – implied much smaller stone cargoes (of about 1 to 2 / 3 tonnes), and it must be also considered that the cargo could be delivered in more than one shipment. For this kind of load, very frequent throughout the Middle Ages – especially on medium to short distances – smaller boats would do, as it is still clearly suggested by Late Medieval representations (**fig. II.16**). A logboat – of the kind which has been plentifully attested in European rivers and lakes[398], including some examples precisely dated to the 8th and 9th centuries[399] – would also serve the purpose, at least in gentle waters or minor rivers, if not also on major ones, as some evidence seems to suggest[400]. A craft of such type measuring 16 metres, for instance, could carry up to 3-4 tonnes[401], although the average length of riverine specimens was ca. 9 metres, more rarely up to 14 metres.

[397] Russell 2013, 119 and fig. 4.8.

[398] In general see Barbaglio 2005-2006 (with the first thorough gathering and mapping of Italian finds).

[399] Barbaglio 2007. – Martinelli / Cherkinsky 2009. – Ravasi / Barbaglio 2008. All with literature.

[400] On this point see Gelichi 2019, 75.

[401] Barbaglio 2005-2006, 54.

PART III.

MAKERS

One of the peculiarities of the Early Medieval sculpture is the homogeneity of decoration across very distant European regions. This homogeneity can range from general similarities in the choice of the decorative patterns – the most common being interlaces and plant-scrolls – to substantially identical specimens, coinciding not only in the precise shape and association of the ornaments, but also in the size and technique used to carve them. This aspect – that characterises a part of the Roman and Byzantine sculptural production, too – has of course always been in the spotlight of many studies, that explained it in different ways. In the same way as the procurement of raw materials, seen in Part II., this phenomenon is also a central one for the understanding of the sculpted items production system. As we shall see in this Part III., the makers of decorated stone elements and their mobility had a prominent role in the diffusion of sculptural fashions over long distances. However, sculptors cannot be taken out of their context and studied separately from other building craftsmen. Thus a focus on carvers and stoneworkers provides a valuable insight into the underlying mechanisms and the economic background not only of production of architectural sculpture, but also, in general, on Early Medieval building activities.

Chapter III.1.

Sculptures production: theories and facts

Some interpretations have been accepted for so long that they have acquired the semblance and status of historical fact[1].

The main notions about sculptures' production in the Early Middle Ages can be clustered in four groups, all entailing an explanation for the diffusion of decorative fashions over long distances. A first group refers, rather generically, to the 'circulation of decorative fashions' and 'influences', often in absence of detailed clarifications on the agents responsible for this sort of artistic domino effect. In the other three groups, the movement of things or human beings is presented as the key-factor explaining the dissemination of sculptural forms and styles, respectively: circulation of books with depictions of motifs; circulation of stone elements; and circulation of artisans. Among these, the first idea appears to rest on the assumption that sculptures made in local stone were made by local, permanent workshops 'copying' from books, and the second implies the existence of an actual trade in stone elements, large enough to be responsible for the spread of sculptural fashions: probably, these are concepts directly deriving from the studies on Roman stone products. As for the third idea, some scholarly descriptions of the circulation of the Early Medieval craftsmen appear to derive from the somewhat 'Romantic' idea of the Late Medieval permanent wanderer.

Among the first scholars who introduced in the studies on Early Medieval sculpture the notion of 'books of models' and the hypothesis on the movement of stone elements were respectively Karl Ginhart in the Fifties and Jean Hubert in the Sixties[2]. These theories turned out to be particularly popular in the following decades, being taken as a reference in umpteenth subsequent studies: yet, despite their success, they were never revised analysing all their implications. Also, these theories were expressed in just a few lines, against a comparably colossal amount of literature[3] available to Romanists and Byzantinists. As seen in Part I., the scientific

[1] Kidson 2004, 715, on Early Medieval architecture.

[2] Ginhart 1954, 217. – Hubert 1968, 29. Some similar considerations were expressed in Hubert 1964.

[3] See Part II.

literature on Early Middle Ages largely consists of *corpora*, i.e. simple catalogues of objects coming from a given region, find-spot, or Museum[4]. Being their main aim the presentation of unpublished sculpted fragments (or, at most, the reconstruction of the original liturgical furnishings), the question of craftsmen and manufacturing process was often treated, again, in just a few lines. This way, thus, Ginhart's and Hubert's models built their fortune in the scholarship, but were also taken for granted without a systematic quest for proofs. Moreover, all the models implying movement – travelling books, travelling stone, travelling artisans – have been frequently presented as equally plausible and/or coexisting options[5].

However, scholars today have at their disposal large amounts of data unavailable to Ginhart and Hubert in the Fifties and in the Sixties. When properly analysed – over the *longue durée*, and in reference to the broader economic context – these data indicate that Ginhart's and Hubert's hypotheses on the main means of propagation of motifs and fashions in sculpture are rather unconvincing. In this Chapter, the first three of the abovementioned four groups of studies will be presented, starting from one of the most 'classic', but equivocal, concepts in art history and archaeology.

III.1.1. 'Influence': a curse of art history (and archaeology)

'Influence' is a curse of art criticism[6].

Archaeologists and art historians often explain the striking resemblances among Early Medieval sculptures in distant European areas with the rather abstract concepts of 'circulation of models' or 'artistic influences'. In his most prominent *Patterns of intention*, Michael Baxandall labelled the notion of 'influence' as a real curse for art history, but one might add that it in some cases this is also true for archaeology. 'Influence' is indeed a very vague concept, that often oversimplifies the debate on past artistic and artisanal relations: 'X influenced Y'. Also, the idea of 'influence' can give the false impression of satisfactorily closing a debate on a given issue, when in

[4] See Part I.

[5] Among many, see for instance: Colecchia 2001-2002 (mobility of craftsmen, trade in finished sculpted items and cartoons circulating among different ateliers). – Lusuardi Siena / Piva 2002, 305-306 (mobility of craftsmen and circulating books of models / cartoons) – Crosetto 2013, 365 (mobility of craftsmen and cartoons circulating among different ateliers). – Porta 2013, 42 (mobility of craftsmen and books of models / cartoons circulating among different ateliers).

[6] Baxandall 1985, 58.

fact very little has been explained[7], the concept being: "this object – it does not really matter if we are speaking of a Renaissance painting or of an ancient artefact – is made here in such-and-such way because there has been an influence from the objects made there". But how did these influences concretely occur and work, how did they spread, which were the concrete means of diffusion of specific styles and artistic fashions? As for the subject we are concerned with, in which ways did sculptors 'materially' come into contact with the objects or persons *influencing* their art? To what extent the patron *influenced* the choice of the single motifs and subjects, of decorative patterns, of the overall appearance of stone furnishings? These are just a few examples of questions that are usually neglected when solving archaeological or art historical problems with this ambiguous concept.

An actual case might be useful to illustrate the problems that can derive when applying this idea to architecture. Drawing the conclusions of a conference on *Asturias between Visigoths and Mozarabs*, Chris Wickham argued that, in general, any hypothesis about influences not including a explanation on how concretely that influence moved and was transferred, will be unconvincing for external observers. In the specific instance of Early Medieval Asturian art and architecture, have been suggested influences from Armenia – though direct communications that could have brought Armenian artistic models to northern Spain are quite implausible – and from Byzantium – though no contacts at all are documented between Asturias and the Byzantine empire. Instead, contacts with the Southern part of the peninsula – a third area indicated in the studies as 'influencing' the North – are abundantly attested. Despite coming from a 'hostile territory', Andalusian products amply circulated in Asturias; also, it must be considered that building craftsmen tended to move towards economically prospering areas: these actors, then, could have directly brought the new architectural tendencies from the rich Muslim South to the Northern parts of the Iberian peninsula. Thus in this case – and differently from the cases of Armenia and Byzantium – an influence moving from a region to another can be backed up with concrete archaeological and historical evidence[8].

Over the decades, the concept of 'influences' has also dominated the scientific debate on Early Medieval sculpture[9]. Among others, Saverio Lomartire has expressed opinions parallel to Wickham's, wondering whether the distribution over a broad area of very similar sculpted elements really depends on the rather abstract idea of 'circulation of fashions / artistic influences' or, way

[7] Baxandall 1985, 58-62.

[8] Wickham 2012, 477.

[9] See Part I.

more concretely, on the movement of stone-workers from a building site to another[10]. Actually, as seen in Part I., the origins of the decorative patterns on Western sculptures have been variously located in the Byzantine empire, the Coptic Egypt, the Germanic world, and so forth[11]. But precisely the explanation of their diffusion in generic terms of 'influences' or 'transfer of cultural models' was the factor that allowed to spend just a few words on, or to completely sidestep, the concrete means of propagation of these sculptural fashions.

III.1.2. **A world of local craftsmen and travelling books? *Musterbücher* ('books of models') and cartoons**

The idea that an Early Medieval sculpted fragment made of local stone corresponds to a local carver (coming from nearby and operating at a close range) originates probably from the stone production models described in the literature dealing with the Roman period. In the 1st-3rd centuries, as seen in Part II., the stone products were often worked in the quarries and then transported in a roughed-out or near-finished state to their final destination – both far away and nearby. This means, for example, that if a Roman capital is not made of imported marble, but in a regional variety of stone, it was most likely manufactured in a quarry workshop not far from the find-spot. This idea was taken up in the literature about the Early Middle Ages: thus in some works, the local stone appears to be 'automatically' associated to local, permanent sculpting ateliers.

Some examples of this involve very renowned Early Medieval pieces of work, for instance the ciborium at Sant'Ambrogio di Valpolicella (parish church of S. Giorgio, years 712-744, most probably 712-736), about which Pierpaolo Brugnoli claimed a production from a local workshop on the basis that the ciborium is made of local stone[12] (**fig. III.1**). In her study on the sculpted fragments from Sesto al Reghena (including the famous so-called 'urn of Saint Anastasia'), Chiara Lambert divided them in two groups, one dated to the second half of the 8th century, the other to the end of the same century / beginning of the 9th[13]. The grouping is based both on typological remarks on the decorative patterns, and on the stone employed: precious re-used marble in the first case, and local varieties of limestone in the second. These characteristics were then used to not only propose different chronologies and, therefore, different workshops, but also to suggest that the second group of sculptures – of a lower quality, according to the author – made of regional stone,

[10] Lomartire 2009, 205-206.

[11] See Chapter I.2.

[12] Brugnoli 1999, 110. – Brugnoli / Cortellazzo 2011-2012, 31.

[13] Lambert 1999.

could have been manufactured by local craftsmen[14]. Some sculptures from Terni (Umbria) were also grouped in a similar way: those made in local limestone were dated to the late 8th / early 9th century, while those made of re-used Luni marble were dated to the second quarter of the 9th century. The use of local stone was then presented as proof for the existence of local workshops around the end of the 8th century, whereas the employ of marble – considered by the author as more challenging to work – was attributed to some masters from the city of Spoleto[15].

These are just a few examples over a number that it would be possible to mention: therefore, if one took an overall perspective – beyond the single find-spots – one should conclude that in a myriad of locations, even relatively far from the most important centres, existed permanent, stable sculpting workshops that served a limited area in the surroundings. This is a point in common with the abovementioned theory of Karl Ginhart. As seen, in his work on Carinthian *Flechtwerksteine*, he devoted a few lines to the matter of the production of architectural sculpture in the Carolingian period. According to the scholar, the interlace decoration on stone had its origins in Rome and had, then, spread throughout the other European territories. Their remarkable sameness in very distant areas, however, was not explainable with the movement «heavy sculpted elements [manufactured in Rome and transported] to Southern France, Upper Bavaria, Croatia or Dalmatia». He thought instead that the ornaments' mean of diffusion must have been the *Musterbücher*, i.e. 'books of models', containing depictions of decorative patterns and motifs. These were supposedly forwarded from a place to another and faithfully reproduced on stone by local craftsmen in each location[16].

Ginhart's passage has the great value to have considered the question from an overall perspective, trying to propose an explanatory model in a period, the Fifties, when scholars could count on little more than a handful of data on Early Medieval architectural sculpture in Europe. Since his theory was expressed in just a couple of lines, in a paper with an entirely different scope – i.e., cataloguing the Carinthian sculptures – it seems natural that investigating the matter in detail, or providing evidence for it, was not on top of his agenda. Yet, as seen above, the '*Musterbücher* theory' enjoyed a good fortune in the literature to come, eventually becoming a sort of *topos* of many prominent studies, including some dealing with production techniques[17].

From about the Seventies, another suppositional tool guiding the sculptors in their work, similar to the books of models, appeared in the scientific literature: the cartoon, i.e. a full-scale

[14] Lambert 1999, 92.

[15] Angelelli 1999, 370-371.

[16] Ginhart 1954, 217-218.

[17] See for instance: Colecchia 2001-2002. – Lusuardi Siena / Piva 2002, 305-306. – Crosetto 2013, 365. – Porta 2013, 42.

drawing (opposed to the smaller drawings contained in the books of models) with punched lines, through which some charcoal dust would be pressed in order to transfer the design on the stone[18]. All the scholars speaking of cartoons (also called *cartoni*) seem to refer to substantially the same technique used by Renaissance frescoes painters[19].

Cartoons and *Musterbücher* would have freely circulated among different workshops, thus promoting – and explaining – the propagation of nearly identical decorative patterns over long distances. Cartoons, *Musterbücher*, and at times even 'ordinary' illuminated manuscripts[20], have been referred to as means of dissemination of sculptural fashions on both a general level (e.g. for explaining the increasingly common interlace motifs in the Carolingian period) and on a more individual plane (e.g. for explaining the presence of substantially identical specimens in two or more churches)[21].

However, a few relevant arguments strongly oppose these assumptions. Firstly, there is the economic context. Parallel to what has been observed earlier in this Paragraph about the equation 'local stone = local craftsmen', the '*Musterbücher* theory' also entails a system of permanent ateliers, that diligently copied on stone the drawings circulating in the form of books or cartoons. This 'corollary' to the theory – that seem not to have received much scholarly attention – implies, in turn, a market for stone products vast enough to sustain the existence of a dense network of sculpting workshops, all over the European territory. From all possible angles, this is inconsistent with the evidence on the Early Medieval market for stone: the sharp and constant contraction in the demand for stone products, occurred in the West from the 4th century onwards, had an impact not only on quarrying activities and on the quantities of stone items produced – as seen in Part II. – but also, obviously, on the nature and extent of workforce operating in the field of stone production. Already Constantine the Great was experiencing the first difficulties in fetching the skilled

[18] Cagiano di Avezedo 1959. – Macchiarella 1976, esp. 283-286. – Lusuardi Siena / Piva 2002, 305-306. – Napione 2002, 332 and 335, footnote 48. – Crosetto 2013, 365. – Crosetto 2013a, 194.

[19] On this point see Casartelli Novelli 1992, 554. – In the fresco technique, these cartoons were transferred on the fresh plaster (also called intonaco) with this procedure: the main lines of the drawing were pricked with holes using a point. Then the paper was held against the wall, and gently bumped with a bag of soot (charcoal dust, called *spolvero*). Passing through the holes, the soot produced black dots on the plaster, along the lines of the drawing.

[20] As Rosemary Cramp proved several decades ago, precise correspondences between illuminations and stones in the typology of the interlaces only exist in the British Isles, while for Continental Europe the resemblances do not go farer than simple plaits (Cramp 1986, esp. 135 and 312-313), which are also ubiquitous in Roman and Late Antique mosaics. A derivation from architecture, then, is no doubt the *lectio facilior* (on this point, see also Part I.).

[21] See previous footnotes.

professionals he needed for his projects. Soon after his death, an edict issued in his name tried to solve the problem:

> Artisans who live in each city and who practise the skills included in the appended list [i.e. architects, stone-cutters, stone-masons, painters, sculptors, statue-makers, mosaicists, and marble-workers] shall be free from all compulsory public services, since indeed their leisure should be spent in learning these skills whereby they may desire the more to become more proficient themselves and to instruct their children[22].

As noted, among others, by Chris Wickham and Paolo Delogu, in the Early Middle Ages the demand for their services was simply insufficient to support the existence of building craftspeople – and consequently, we might add, stone workers and sculptors' workshops – in every one location[23] as both the equation 'local stone = local workshop', and the '*Musterbücher* theory', imply.

A second point that raises doubts about the '*Musterbücher* / cartoon theory' derives from the entailed understanding of the social context of the craftsmen and their professional relation with their patrons. A number of studies seem to be based on the premise that Early Medieval sculptors were little more than mere makers, who followed the clients' instructions and hardly put any personal contribution to the items they were carving, with the obvious consequence of an enhancement of the role of the patron to the detriment of that of the artisan. Sculptors are still generally considered, as Ettore Napione puts it, as almost servants, technicians who were only able to copy not to invent, while their clients are given all the credit for the conception of the iconography[24]. A clear example of this, rather popular in the latest scholarship, is the assumption that the new Frankish clergy, arrived in Italy soon after Charles' conquest in 774, was practically the sole responsible for the renewal and the change in the sculptural style in comparison to the Lombard period[25]. Thus, alleged books of models and cartoons delivered to the sculptors by their clients would not only entail the abovementioned (non-existent) dense network of local workshops, but also convey a rather demeaning picture of the craftsmen against a sort of 'omniscient' patron who directed them to the smallest detail of anything they were asked to craft: in other fields of

[22] Codex Theodosianus 13.5.1. – Russell 2013, 359-360. – See also Utrero / Sartre 2012, 322.

[23] Wickham 2005, 650. – Delogu 2010, 40-41, 55, 83-84, 100-103.

[24] Napione 2002, 332.

[25] e.g. Ibsen 2007, 305 (with literature): «After the year 774, Frankish bishops and abbots gradually *imposed* new figural repertoires, primarily the interlaced decorative patterns» (original in Italian).

Medieval studies, such image is long perceived as obsolete[26]. As it has been remarked about metal workers, the notion probably derived from the – very contemporary – assumption that there was a «dichotomy between the design and manufacture of an object, with an educated, talented or inspired individual» who designed it, «while a craftsman separately carried out the work»[27]: a picture probably originating from the 19th-century idea that the 'mediocre' products of Medieval art were manufactured by likewise humble and anonymous craftsmen[28]. Discussing Byzantine architecture, Robert Ousterhout recently observed that artisanal production was the result of «negotiations and compromises, and not simply the single-minded vision of an omniscient patron», and was based on «on specialised knowledge that could only be transmitted through the active participation in a workshop». In architecture, «technology was passed on through a program of apprenticeship, of 'learning by doing', and disseminated by travelling masons»[29], but this statement applies to many other fields of artisanal production. Craftsmen, then, only mastered and proposed to the patron a limited and well-defined – if at times broad – decorative repertoire and range of techniques (the two elements being deeply interdependent)[30]. Careful agreements must have been taken beforehand, with proposals from both parts: but while the artisans certainly tried their best to satisfy the wishes of the patron, patrons could not move too far away from the fund of technical and decorative possibilities specific to each workshop.

This mechanism is well attested already in the Roman period. Discussing the Attic and Asiatic sarcophagi, Ben Russell noted that despite «there was room for adaptation and individualisation», the uniformity of the «respective types [of sarcophagi] demonstrates that their decorative form was established by a limited core of sculptors trained in a defined artistic tradition. Purchasers [could select] from a relatively limited range of decorative schemes»[31]. Something similar, as Patrick Périn stressed, occurred in the case of Merovingian plaster sarcophagi produced in Paris: as shown by some location-specific decorations, the workshops were situated in the vicinity of graveyards, made the coffins in advance (because their complete drying needed a few weeks), stockpiled them, and always had a certain amount ready for sale. Varied assortment for the buyers was ensured by different combinations of the ornaments, but the choice was limited to the

[26] Among others, see: Leclercq-Marx 2001. – Murray 2013. – Ashby 2015. – Beghelli / De Marchi 2017. – La Salvia 2017. – Pinar 2017, all with history of studies and literature.

[27] Murray 2013, 162.

[28] Leclercq-Marx 2001, esp. 1. On this point, see also Stalley 1999, 107-108.

[29] Ousterhout 2019, 526-528.

[30] See below, Chapter III.4. – Already in the early 19th century, this point was stressed by scholars like Gottfried Semper and Giovanni Morelli: see Francovich / Manacorda 2017, s.v. Stile.

[31] Russell 2013, 285.

definite range of decorated moulds used by each atelier[32]. Finally, as Bente Kiilerich wrote about Late Antique art, the commissioner could not precisely determine the «visual characteristics of a given work, [because] styles were tied to workshop traditions and conventions»[33] (see below, **fig. III.31**). It was thanks to these bi-directional dynamics that one model could 'prevail' over another: rather than through detailed, unidirectional instructions on the design (e.g. through books of models), patrons exercised their influence through the selection of the workshops, thus allowing, in the long run, the diffusion of new architectural and sculptural fashions[34].

All this considered, the image of mere makers who only copied from ready-made models, and yet were able to master any possible technique in order to reproduce any possible decorative pattern in any possible style, seems even more implausible.

III.1.3. *Musterbücher* and cartoons faced with sculpting techniques, Occam's razor, and Russell's teapot

In 1989 Peter Rockwell, a scholar expert in ancient sculpting methods and a professional sculptor, published a thorough book on sculpting techniques from Antiquity to the present day. Openly addressed to restorers, art historians, and archaeologists, his work was a real mine of information and soon became a sort of holy bible of the sector[35]. To date, it remains almost the only comprehensive monograph which is *both* focused on sculpting techniques from an historical viewpoint, *and* is written by someone who masters such techniques, having direct (and long) experience in stonecarving.

Therefore, in the following pages, Rockwell's book will be treated as an actual direct source, quoting in full some passages of it which are relevant for the matters we are concerned with. Among many others points, the scholar-sculptor also addressed the question of the dichotomy between design and execution: from the 'first-hand information' the author provides, relevant conclusions will emerge about Early Medieval sculpture and the '*Musterbücher* / cartoons theory'. Firstly, as a general principle, one should be aware that

> It is probably the division established in the last three hundred years between design and execution, between the designer who has ideas and the maker who executes them, that has divorced us from pictorial process thinking. The designer is a social superior to the maker and

[32] Périn 1990.

[33] Kiilerich 2018, 1.

[34] On this point, see also Paragraph III.2.5.

[35] A few years later the book was translated from Italian into English: Rockwell 1993.

> functions in a world where the verbal intellect is the essential tool. Now the maker, the carver or stoneworker must confine his or her thinking to how to execute already existing ideas. [...] I am not working up to a sermon on the need to go back to some Romantically ideal past, but only attempting to point out the difficulty of comprehending verbally a culture that does not value words as highly as our own. Stoneworking was and still is to a great extent part of a pre-modern culture. Its methods of working are based on ways of thinking that are alien to most of us. If we wish to understand the working of stone, we have to learn to understand and respect the thinking behind it. [...] Stoneworking is the product of training that leads to a method of thinking not simply a method of doing. This way of thinking underlies what they do and the way they do it. We cannot thoroughly understand the product without respecting and trying to understand the thinking[36].

Thus the neat division between design and execution, and the consequent picture of the sculptor as a simple maker who copied models given by the patron – both implied, as seen, in the '*Musterbücher* theory' – appear much of a modern prejudice than a realistic description of the Medieval artisanal procedures. On the other hand, the scholars who spoke about suppositional cartoons seem to entail that the stoneworkers made themselves the designs for the carvings. The references to cartoons often come together with the abovementioned rather vague notion of their 'circulation among different workshops', in order to explain the presence of very similar sculptures in different – at times distant – locations. Yet, one might wonder why the carvers had no interest in the success of their business, nor for profit, and would have let their original designs to freely circulate, or had even willingly shared them with their competitors. As we shall see in the next Chapters, Early Medieval stoneworkers, and especially the most talented ones, were all but 'passive agents' of the market: they could be well organised in actual enterprises, were sought-after by the elites, were generally well paid and could be even seen as a sort of status symbol by the patrons succeeding in hiring the best ones. In this context, an amicable exchange of cartoons among different ateliers seems, at best, improbable[37].

There are however further arguments of a technical character against the '*Musterbücher* theory' and its variants. For one thing, the role of the design in the Medieval sculptural process has been overestimated in the scholarship. Secondly, cartoons – meant as preparatory drawings,

[36] Rockwell 1993, 253.

[37] An interesting parallel phenomenon is attested among the Parisian producers of plaster-sarcophagi, who, in the Merovingian period, probably worked near the cemeteries: as noted by Patrick Périn, a number of decorations are specific of just one cemetery, meaning that the ateliers certainly did not exchange the moulds among each other (Périn 1990, 15).

possibly full-scale, to be transferred on stone – are documented in the field of painting, but appear first in the 14th c., and reach a certain popularity only in the 16th c.[38]. Yet, they seem simply *not to exist* in the stoneworking practice. As for the first point,

> the viewpoint that sculptors must somehow carve from more or less precise designs in the form of drawings if not models is very prevalent in the literature, primarily, I believe, because that is modem practice. The more I study Roman monuments, the less convinced I am that they proceeded from finished models. I have also watched carvers in Carrara produce figures 2 m high from photographs only 10 cm high. When finished, these figures seem to be virtual duplicates of others of the same type, yet the carver made few if any measurements[39].

If this is true for three-dimensional sculpture in the round, it seems all the more unconvincing that Early Medieval sculptors would have needed precise preparatory drawings for their low-reliefs, simpler in the technique than a Roman statue or a Carrara's *Madonna*. Our 'direct source' on stoneworking states indeed that

> It is quite clear that neither models nor scale drawings were used in medieval practice[40].

When one extends one's sights on the sculpting techniques over the *longue durée*, one realises that precise models were hardly used in low-relief until recently. There are various methods to transfer the design on stone, the most rigorous being the of use measured drawings. This is also the closest technique to the idea of books of models described in the scholarship – because the motifs depicted in these books were allegedly copied in a quite accurate way by the Early Medieval carvers. Measured drawings are preparatory drawings which contain already all the elements and details that will be carved on stone. A grid on the drawing which can be reproduced, enlarged, on the stone surface, can be used to help the sculptor to take the measurements in a more exact way. However, not only it seems that this method is not attested in the Middle Ages – as we have just seen – but also, it is hardly attested in any other historical period. With the sole exception of Ancient Egypt, it was never commonly used before Modern architecture[41].

[38] Cordaro 1991, with literature.

[39] Rockwell 1993, 122.

[40] Rockwell 1993, 122.

[41] Rockwell 1993, 107-108, 135-136. – Before they started to carve, Egyptian sculptors generally drew a detailed design, using chalk, directly on the stone: at times, the initial draft and the refinement lines had different

Most frequently, from the Antiquity to the Late Middle Ages, the role of the preparatory drawing – as a physically existing medium – in the sculpting process could range from having a moderate relevance to virtually none. Contrary to our contemporary expectations, many major reliefs were executed from a sketch or non-measured drawing:

> The studies made possible by the scaffolding of the major monuments in Rome have shown that many of these carvings were executed using sketches only. The Column of Trajan is an example. [...] Unfinished sarcophagi from the second through the fifth centuries also show a method based on very sketchy designs. The carver drew his design onto the surface of the stone as a basis for very rough outlining with the point chisel. Then he worked his way inward, adding and changing details as he went. The looseness and freedom of the work as it evolved shows that if the carver had a sketch to refer to, it was only a very rough one. The medieval drawings for sculptures with which I am familiar, such as the drawing of a pulpit preserved in the archives of Orvieto Cathedral, could not have been used as more than rough guides. For experienced carvers who are trained first as carvers and later become sculptors, as they were in Roman and medieval times, carving by eye is both natural and considerably more rapid than taking measurements. It is when the designer, as in modern times, is not a carver familiar with his own tradition that it becomes important to execute carvings from measurements. Because to the modern observer it usually seems so difficult or unnatural to carve easily by eye, we have tended to discount what may be the most normal method in other periods of transferring a design to stone. A simple drawing on the stone or on a piece of wood, referred to by eye, is both the most natural and by far the most economical method for executing many sculptural carvings[42].

This method was also the most commonly used in architecture, as shown by the example of triumphal arches: though a large amount of detailing was designed by an architect, sculptures seem in many cases be designed on the spot by the carvers, basing only on very sketchy drawings[43]. In other instances, the role of preparatory drawings was even less important. A case in point are the abovementioned 20th century statues sculptors in Carrara, who were used to repeat a set of traditional shapes over and over and therefore needed little more than a glimpse to a photograph to

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colours. For both low-reliefs and three-dimensional sculpture, they could also use measured drawings prepared beforehand. In any case, «Egypt is an exception to many rules of thumb in ancient stoneworking».

[42] Rockwell 1993, 134-135.

[43] Rockwell 1993, 132.

be able to reproduce it in stone. There are various parallel cases in the past, among which the makers of architectural decoration in the Roman period:

> In the traditional method a carver is trained to repeat certain forms. His working knowledge is such that all orders submitted to him involve carving these forms. A mason need only be told to cut a block to such-and-such dimensions for him to be able to do it. There is no need under traditional practices to submit any further design. More complicated forms can be treated the same way. Given a moulding cut to the right shape and told to carve an egg-and-dart motif, a decorative carver will need no further direction so long as the proportions of such a motif are established by tradition[44].

Something similar happened in other periods, too. Early Medieval sculpture had also an established set of geometrical and vegetal patterns, but this was subject to a great number of variations that could visibly differ from a church to another.

> This method involves traditional designs but expects the carver to be able to improvise on them. The flower carver in Carrara, cutting bouquet after bouquet of flowers for the *Madonnas*, is a good example. The basic design is traditional, but the carver varies it according to the particular pose of the Madonna he is working on. The low-relief marble sanctuary railings carved in Rome in the early Middle Ages are an example from a different era. In the church of San Clemente, the sanctuary is delineated by a low wall of large marble slabs with carved low-relief patterns, traditional designs that developed out of the late antique. There is a sense of change in the patterns and in the combinations that implies a certain amount of individual development by the carvers. They are not simply rote work, but are variations on a traditional theme[45].

Further in his text, Peter Rockwell refers directly to the '*Musterbücher* theory' in the Early Middle Ages, showing a rather decided scepticism towards it:

> It is possible that traditional carvers had catalogues or sample books of drawings of their designs which they and their clients could refer to. Yet my experience of carving workshops and carvers makes me believe that this is unlikely, given their normal working conditions. Stoneworking is a ground-floor operation, shown in many medieval illustrations in dirt-floored

[44] Rockwell 1993, 133-134.

[45] Rockwell 1993, 134.

> sheds set against the side of the building being constructed. Modern workshops are often little better. The conditions are simply not very favorable for the preservation of drawings[46].

A few early medievalists showed the same scepticism, noticing the disproportionate importance of cartoons and books of models in the scholarly literature against the absence of real evidence attesting their use[47], and pointing out – in the same way as Peter Rockwell – that sculptures were made freehand, not by transferring the design on the stone with the intermediation of 'external' media[48].

Actually, another interesting question – but largely neglected in the literature – about the alleged use of cartoons in the Early Middle Ages would be on what material exactly these designs would have been made. The first attestations of paper production in Europe date to the 12th century[49]. Very unlikely are also full-scale parchments – which were anyway far too expensive – with the size of an altar front or of a chancel screen slab. Unless, of course, we imagined Early Medieval sculptors moving from a job to another charged with dozens of delicate 'modular' parchment scrolls, to be carefully laid down one next to another, in the right order, on the stone surface. But then again this appears strongly implausible in the light of the examination of sculpting techniques:

> One should also note that, until modern times, paper was not a cheap, everyday material, and anything else that a design could be preserved on would be too cumbersome for itinerant workmen, as carvers frequently were, to carry from job to job. Watching the extent to which even modern stoneworkers will work from memorized design patterns simply increases my impression that, in a society where the designs were traditionally based, and where cheap paper and easy reproduction did not exist, the carver probably kept more in his head than in any more tangible form[50].

In other words, what seems to emerge from an overall look on the '*Musterbücher* theory', is that the more one investigates practical, technical, and generally speaking economic implications of it, the more it seems unconvincing. Also, it must be stressed that preparatory drawings, books of

[46] Rockwell 1993, 134.

[47] Casartelli Novelli 1992, 554 – Zanette 1999, 32.

[48] Melucco Vaccaro 2001, 415.

[49] Levi et al. 1931.

[50] Rockwell 1993, 134.

models, and cartoons have a special relevance only in the studies on the Early Medieval period, and nowhere else in the literature dealing with sculpture[51]. It is probably not a coincidence that Rockwell mentioned catalogues and sample books only when discussing Early Medieval sculpture.

However, as mentioned in the former Paragraph, previous agreements with the patron on what the sculptor would carve must always have existed. If *Musterbücher* and cartoons were neither the main mean of propagation of sculptural fashions, nor the instrument used to choose (or «impose»!) the decorative patterns, one could wonder what concrete medium was employed by the sculptors to show their proposals to their clients. At this planning stage of the work, one must assume that the patrons could examine different options in the form of sketchy drawings like those repeatedly mentioned in the previous pages. As we have seen, differently from today, past practices did not entail a project defined to the last, inch-perfect, detail:

> The difference between a Gothic cathedral and a designed building such as a modern skyscraper was the builders' acceptance that the design would take shape along with the building. The same can be said of sculpture[52].

In general, in the Middle Ages, the sketches prepared before the execution of any kind of work of art were usually made on scraps or recycled materials. Motifs used in jewellery, for instance, could be engraved on bones, a practice abundantly attested in Ireland. As seen above, Rockwell mentioned pieces of wood as a medium for preparatory sketches for sculpture: these wooden tablets could have worked well to show to an Early Medieval commissioner a project for a chancel screen or a ciborium. However, other media commonly employed in the Middle Ages could also have been used for this purpose, like wax tablets or imperfect small pieces of parchment discarded by the *scriptoria*[53]. Wax tablets were indeed an excellent instrument, for they were cheap, resistant and easy to transport, they allowed corrections and could be used several times. Scraps of parchment, on the other hand, must have been easily accessible and available in fair amounts in monasteries – at least in those provided with a *scriptorium* –, and monasteries were one of the most common workplaces for Early Medieval sculptors.

Concerning specifically the sculpting techniques used in the Early Middle Ages, they can be directly observed on finished and unfinished sculptures, confirming the data seen so far. The most typical motifs – interlaces, plant-scrolls and various geometrical patterns – were created starting

[51] On this point see Casartelli Novelli 1992, 554.

[52] Rockwell 1993, 131. – On the same point, see also Ousterhout 2008, 86.

[53] Manzari 1994, with literature.

from thin lines and marks, engraved directly on the stone with a tool called point, after taking just a few measurements. It is possible that, especially in the most complicated compositions, some lines were drawn on the stone with, for instance, charcoal: in theory, at least in certain soil conditions, small traces of such lines might have been preserved; so far, however, it seems that archaeologists never detected them on Early Medieval sculpted fragments. Besides a ruler or measuring stick to carve straight lines[54], sculptors also used compasses (with a point) to carve circles: these were used as a base, for instance, for patterns of knotted rings (**fig. III.2**). As can be seen from the marks on the stone, plaits of two, three or more strands, and related types of interlaces, were made using a technique similar to that used in illuminated manuscripts – which is basically the only possible one to obtain a regular interlace. The starting point was a very simple grid of points regularly spaced. Each point represented a break (i.e. the 'space') between the strands of the plait to be carved. Thus with a sort of negative technique, the sculptors begun to engrave the lines of the plait around these brakes[55]. All these procedures are confirmed by experimental archaeology – although these attempts are still uncommon – when a traditional carver reproduces an Early Medieval sculpted element[56].

For the reasons discussed at the beginning of this Paragraph, Peter Rockwell has been treated as a direct source on sculpting techniques. Quotations from his work have therefore 'monopolised' the previous pages, mainly because this is almost the only thorough book on sculpting techniques with an overall historical approach. However, this does not mean that there are no other sources of this kind. Unfortunately, professional sculptors able to work in the same way as their Medieval colleagues are much of a rarity these days, and they tend to spend their time doing their fascinating job rather than in describing it with written words. Nevertheless, I was lucky enough to personally speak with a few sculptors or 'long term' eyewitnesses, asking them specifically about Early Medieval techniques: they all confirmed the same data. Two persons were particularly patient with my questions: Markus Wittköpper[57], a sculptor and a professional restorer, and Michael Brennan[58], whose father was one of the last carvers of high crosses in Ireland in the late 20th century. I have no literature to quote, because the technical data were orally related to me;

[54] In the 8th-early 9th centuries materials from the Iberian peninsula, Caballero Zoreda / Utrero Agudo 2013, 134, notice a generalised use of only the ruler, and not the mitre square, to cut stone blocks and to manufacture sculpture. The same feature seems to characterise architectural elements from other European areas.

[55] In general, on these points, see: Sennhauser 1998 (esp. 13-14 for the technique for drawing and sculpting interlaces and plaits). – Lomartire 1984. – Beghelli 2013. – Beghelli 2014. – Pfanner 2015 (esp. 308 and 310-311 for the absence of preparatory drawings, or drawings on the stone). – Pfanner 2015a.

[56] See for instance: Crochat 2015, 117-125. – Pfanner 2015. – Pfanner 2015a.

[57] Römisch-Germanisches Zentralmuseum, Mainz, Mainz.

[58] University College Dublin.

however, the persons I talked to said that it would be relatively easy to reproduce the most common Early Medieval motifs starting from a few dots and lines engraved directly on the stone, with a point, after taking a few measurements, thus corroborating the just mentioned observations of the scholars who studied the sculpting methods basing on the sculpted fragments[59]. As well as Peter Rockwell, no sculptor I talked to ever mentioned cartoons of the type used in Renaissance frescoes – in fact, when told about the 'cartoon theory', they found it quite surprising. Again in the same way as Peter Rockwell, all the consulted sculptors insisted on the importance of 'carving by eye' and on the importance of that peculiar type of 'knowledge of the hands' that makes sculptors so confident when carving motifs familiar to them. Assuming something different than that definitely means to belittle their artisanal, artistic and technical know-how.

In sum, there are marked inconsistencies in the '*Musterbücher* / cartoons theory'. The examination of the economic context of the 7th-9th centuries hinders to think to these suppositional books as the *main* mean of propagation of sculptural fashions – a vision possibly influenced by the knowledge of Roman stoneworking, when a larger market could sustain the existence of large numbers of workshops. Also, the theory implies a carver's rigid dependence on drawings, which, as seen, almost never existed before the Modern Age. In all likelihood, this assumption was influenced by the knowledge of Modern and Contemporary sculpting procedures – especially, but not only, in architecture – and based on the analogy with Renaissance painting, when both cartoons and books of models first gained a certain popularity[60].

Last but not least, it is important to highlight again that, to this day, there is no convincing evidence of whatsoever kind for the use of books of models or cartoons in Early Medieval sculpture. Hundreds of Early Medieval manuscripts and documents have survived to this day, but no catalogue of samples or collection of models was found so far. As shall be seen further in this work, the circulation of *Musterbücher* and cartoons seems also never be mentioned in the written sources. Similarly, among the many methods used by the sculptors in any historical period, cartoons are never attested as a medium to transfer the design on stone[61]. The unfinished sculptures survived

[59] See previous footnotes.

[60] On the contrary, the traces of sinopias found on Late Antique and Early Medieval wall paintings are not detailed but correspond – in parallel, one could say, to the first passages of the sculptural technique described above – to the main lines of the drawing, which was then completed in later stages, and sometimes extensively finished-off when the painting was already dry (on these points, see Cordaro 1991). It is also crucial to point out that the books of models (some of which of very dubious interpretation) and the cartoons used in the Late Middle Ages and the Renaissance period in the field of miniature and wall painting were *tools internal to the workshop*. The artists might show them to clients, and not vice versa, as the studies on early medieval sculpture assumed. In general, see: Scheller 1995. – Quintavalle 2002. – Borlée / Terrier Aliferis 2018. I sincerely thank Gianluca Del Monaco (University of Bologna) for the useful exchange of ideas on this matter.

[61] See above and, in general, Rockwell 1993, 127-141.

to this day show instead gentle guide lines carved with a point: archaeologists never detected traces of detailed drawings on the stone, and even less transferred on it with the method of the *spolvero* typical of the cartoons used in the fresco technique. This confirms the remarks on the sculpting techniques made by Peter Rockwell, other authors[62], and the oral testimonies (**fig. III.2**). In the domain of Early Medieval sculpture, cartoons and books of models are therefore a pure hypothesis. Since sculptors have always counted on preparatory drawings to a much lesser extent than the scholars generally believe, one could say that there is simply no need to hypothesise the existence of detailed books of models or cartoons. After all, a whole branch of Epistemology – some principles of which became common knowledge, from Medieval Occam's razor to aphorisms like Theodore Woodward's «when you hear hoofbeats, think of horses not zebras» – has insisted on the idea of ontological parsimony, which encourages us not to postulate what there is no need to postulate, and reminds us that the simplest explanation is usually the right one[63].

Yet personal experience – especially in occasion of workshops and conferences – shows that one of the most popular arguments used to 'keep the door open' to the possibility that *Musterbücher* and cartoons could have existed and be commonly employed in the 7th-9th centuries, is: «one *cannot* prove that they were *not* used at all»; or, more often, variations on the theme like «the evidence shows that the main ways of diffusion of decorative fashions were others, but one cannot prove that *Musterbücher* and cartoons were *never* used, not once in the whole Early Middle Ages». This, no doubt, sounds as a common-sense statement[64] and, perhaps, considerations as such were the grounds for the 'cautious attitude' of some authors, who admitted very different explanations for the phenomenon without arguing in favour of one in particular[65]. Similar positions constantly emerge in the debate, expressed by both non-specialists and specialists in Early Medieval sculpture. Besides sample catalogues and cartoons, any kind of media is proposed as an agent for the propagation of sculptural fashions: textiles, jewellery, decorations on leather items[66], thus multiplying, as Occam would say, the 'entities' responsible for the phenomenon, without really needing to look for evidence. I personally even heard someone speaking of real interlaces made with real ropes – «in the same way as sailors do» – kept in the sculptors' pockets, to prevent them to

[62] See above.

[63] As observed by Zanette 1999, 32, for now the use of *Musterbücher* and cartoons in Early Medieval Sculpture remains more suppositional than proven.

[64] To the point that even the present author, when she was younger, considered cartoons and books of models as possible tools used by Early Medieval sculpture, though strongly privileging artisanal mobility as an explanation for the propagation of sculptural motifs and patterns: Beghelli 2013. – Beghelli 2014.

[65] See above.

[66] See Part I.

forget how to carve a plaitwork[67]. Once the way of «this is theoretically possible» is open, the sky is the limit. Two aspects must be stressed.

Firstly, the aim of any study on whatever historical or artistic general phenomenon should be to describe it and explain it starting from *existing* evidence: in our case, the techniques attested over the centuries, the working traces on unfinished Early Medieval sculptures, and, as shall be seen, the agents the written sources indicate as main responsible for the diffusion of certain forms and styles in sculpture. Postulates like «books of models and cartoons may have existed, because you cannot prove the opposite», which rely on the impossibility to invalidate them, are essentially an epistemological fallacy of the kind – one might provocatively say – of statements like «ghosts must exist, because nobody has ever been able to prove that they don't exist»[68], and of the kind described in the famous 'Bertrand Russell's teapot', an analogy used by the philosopher to illustrate that it is the persons who make assumptions that have the burden of proof, and it is not their opponents who must bear the burden of disproof[69].

Secondly, and most importantly: of course, for the matter we are concerned with, the point is *not* to state categorically that this or that *never* occurred, in any location, along three hundred years. The point is to identify a *general* model that can reasonably explain a *general* phenomenon, in *general* terms. Exceptions to the rule, as seen in Part II., are always possible: they contribute to show us the complexity of past practices, but are hardly useful when trying to assess the 'ordinary' functioning of a given production system. And the evidence at our disposal clearly indicates that *Musterbücher* and the like, if they were ever used, were certainly not the *main* medium of propagation of sculptural fashions.

III.1.4. **Made in the quarry and then shipped away?**

As seen at the beginning of this Chapter, Jean Hubert put forward another most quoted hypothesis on sculpture production processes[70], consisting – in the same way as Karl Ginhart's one – of a few lines in the context of a study that was focused on other matters than the manufacturing

[67] Debate during a conference in Metz, 27th-29th April 2017 («Le chancel de Saint-Pierre-aux-Nonnains de Metz, problématique complexe pour un ensemble exceptionnel»).

[68] Walton 1996, 2.

[69] «If I were to suggest that between the Earth and Mars there is a China teapot revolving about the sun in an elliptical orbit, nobody would be able to disprove my assertion provided I were careful to add that the teapot is too small to be revealed even by our most powerful telescopes. But if I were to go on to say that, since my assertion cannot be disproved, it is intolerable presumption on the part of human reason to doubt it, I should rightly be thought to be talking nonsense». Russell 1952, 547-548.

[70] Hubert 1968, 29. – See also Hubert 1964a.

system or the artisanal background[71]. As well as the Austrian scholar, Hubert also aimed at explaining the presence of extremely similar sculptures on a European-wide scale. Their opinions, though, diverged on the type of 'medium' that moved: while according to Ginhart it was the books of models which circulated, triggering the diffusion of the same sculptural fashions in different territories, Hubert assumed that the sculptures themselves were transported in a finished form from single production centres to several locations in the Continent. The French scholar's starting point was the distribution of the Early Medieval sculptures known in the Fifties-Sixties. At that time, this kind of artefacts seemed to cluster in Northern and Central Italy, Gaul, Switzerland, Istria, Austria and Southern Germany. Among these, the regions characterised by the higher density were the ones around the Alps, i.e. next to the Alpine quarries: here, Hubert concluded, lied the production centres and workshops, and from here, in continuation with the Roman practices, the architectural elements were exported in a finished form on waterways – the main rivers – and overland. Once arrived at destination, these architectural elements were imitated and copied by local ateliers. In this way, in Hubert's opinion, the interlace- and plant-scroll decoration spread all over Europe, leaving archaeological evidence in remarkably distant locations[72]. As well as Ginhart's one, this theory also had and still has followers, especially in Italy and France. Among many, one can quote a few examples.

Nicolò Rasmo, who studied the Carolingian sculpture in Trentino-Alto Adige / Südtirol, was a quite convinced supporter of Hubert[73]. Not only he embraced the idea of a production in the quarries and distribution of finished stone products, but asserted that they arrived as far as Rome, being the Alps the point of origin of the diffusion of the *Flechtwerksteine*[74]. Wladimiro Dorigo also believed in the phenomenon of the long-distance trade of finished sculpted elements: in Venice, he distinguished a group of sculptures made by a 'venetian chisel' from others surely imported, in his opinion, from the Byzantine empire[75], assuming that this earlier trade – attested for instance by items imported in the 6th century at Treviso, Grado, Marzamemi[76] – had continued, unchanged, throughout the 7th, 8th and 9th centuries. As seen above, a local manufacturing of the renowned ciborium at Sant'Ambrogio di Valpolicella was claimed basing on the local stone it is made from; however, in the same study, the author goes further in his interpretation, arguing that the same

[71] i.e. a survey on 8th-9th century sculpture in Europe.

[72] Hubert 1968, 29. – Distribution map in Hubert 1964a.

[73] Rasmo 1981, 10.

[74] Rasmo 1976, 148-149.

[75] Dorigo 1983, 648.

[76] Melucco Vaccaro 2001, 397-398.

atelier could have sent its products to churches nearby Verona, at Gazzo, Cisano, Garda, and so forth[77]. Though favouring the hypothesis of the mobility of craftsmen over the displacement of sculpted items, Ettore Napione admitted, for his 'Berico-Benacense workshop', the possibility of a fixed production facility nearby the quarries, from which the finished products could have been distributed over riverine transport routes[78].

As for France, Jacques Thirion reckoned that late 8th-early 9th centuries decorated elements for chancel screens and ambos, manufactured in a 'quasi-industrial way' in the quarries around Como lake, had been exported throughout South-Eastern Gaul and beyond, in places like Cimiez, Fréjus, Limans, Avignon, Vienne. Soon, local workshops would begin to imitate the 'Lombard' style, which makes difficult, for contemporary scholars, to distinguish between locally produced and imported stone items[79]. Similarly, according to Daniel Drocourt, some sculptures produced in Italy in the late 8th century could have been imported in Marseille, despite the use of lithic materials of local provenance – including the limestone and marble recycled from ancient monuments – suggested, for some items, a production *in situ*[80]. As said, moreover, other and more recent studies contemplated the export of sculpted items as an equally plausible practice alongside other possibilities[81].

This brief overview highlights which aspects of the Roman and Early Byzantine economic systems were 'transferred' to the Early Middle Ages, namely the existence of a widespread network of permanent stoneworking ateliers, the trade in finished stone products, and the manufacturing at or nearby the quarries[82].

Had the stone items been traded over long distances, one would obviously expect very similar or nearly identical sculptures to be made in the same type of stone, even far away from their – supposedly Alpine – quarries of origin[83]. When Hubert and his first followers published their studies in the Sixties and in the Seventies, there were nearly no data available on the stone types used for sculpture in the Early Middle Ages. Today, the dataset on lithotypes is comparably much larger: but, probably, the lack of an overall analysis on the production of stone items, and its

[77] Brugnoli 1999, 110.

[78] Napione 2001, 115. – Napione 2002, 331-333.

[79] Thirion 1970, 13.

[80] Drocourt 1973.

[81] See above, Paragraph III.1.2.

[82] This last assumption, as seen in the previous Paragraphs, was shared by Ginhart too, albeit Hubert reckoned that it was the stone to travel and spread the sculpting fashions, rather than books with decorative patterns.

[83] In the same way as it occurred with some Roman and Early Byzantine sculpted elements: for an overview, see Russell 2013. – Marsili 20190 Both with iterature.

economic background, is precisely the reason why even recent works still consider such a large-scale trade in sculpted elements as credible option. In fact, the statistical survey on stone types over a broad territory, seen in Part II., shows that locally procured, and not imported, stone – either newly quarried or taken from ancient monuments nearby – was the material overwhelmingly employed for the manufacture of Early Medieval sculptures, and an identical trend characterises, in general, the European and Mediterranean regions. This overall approach to the available evidence confirms indeed that a well-established trade in finished sculpted items was substantially non-existing in the 7th-9th centuries, and even less a long-distance trade. Rare exceptions concerning long-distance transport of stone items, attested by archaeological and written sources, are related to reused elements, both because of necessity – as in the case of large load-bearing columns – or because of their prestige or symbolic and religious significance – as in the case of actual 'relics of stone' like the altar transported all the way from Rome to England by abbot Aldhelm[84].

In Part II. we have also seen that large amounts of Roman and Early Byzantine unfinished and near-finished stone products, discovered in the quarry sites, indicate that they were made at the extraction points (a practice that coexisted with carving nearby the building site, and carving within 'actual' workshops, i.e. specific facilities, in urban context[85]). Yet, as seen in Paragraph II.3.2, unfinished and near-finished architectural stone items are completely absent in the later layers. Carving within the extraction centres, thus, is an entirely unattested practice in the Early Medieval West: to our knowledge and to this day, not a single architectural sculpted element dating to the 7th-9th centuries was recovered in a quarry, or in its close proximity, in the form of discarded or leftover material.

The unfinished, discarded sculptures 'migrate' to the churches, showing that their manufacturing took place in the vicinity of the construction sites[86]. At Rome, where the amount of Early Medieval sculptures brought to light is indeed impressive, one can find both the unfinished and the finished versions of the same decorative patterns: cases in point are two fragments respectively from St. Peter[87] and from SS. Silvestro e Martino ai Monti[88], or another pair of fragments respectively in the Collections of the Imperial Fora (SS. Cosma e Damiano?) and

[84] See Part II.

[85] On these points see Marsili 2019, with literature.

[86] In general, see Beghelli 2014, with literature. – For the same phenomenon in the East, see: Pitarakis 2007, 70. – Ivison 2008, esp. 498-500. – Ousterhout 2019, 259, 435. – Vanderheyde 2020, 108. All with literature. – For the Iberian peninsula, see for instance the prominent example of Guarrazar: Rojas Rodríguez-Malo / Vicente Navarro / Eger 2018, 76.

[87] Galassi 1953, 490.

[88] Zito 1976, 73.

immured in a wall of the gateway of the Palazzo del Governo Vecchio[89]. Among other examples of incomplete sculptures found in churches, one can quote the abovementioned piece from Bardolino near Verona (S. Severo)[90], and those found at Como (S. Abbondio)[91] and at Cividale del Friuli (S. Maria in Valle / S. Giovanni)[92]. A remarkable number of Medieval illuminated manuscripts bear the images of construction sites, often representing the erection of a church or biblical episodes like the construction of the tower of Babel or the construction of the Temple. Sculptors and stonemasons frequently appear in these illuminations, and are represented while working – refining blocks or carving architectural decoration – in the construction site, just outside the building. This suggest that this was the normal practice throughout the Middle Ages[93], although Early Medieval representations of this subject are extremely rare[94]. Almost all the illuminations depicting construction sites are not older than the 11th century: however, the *Vergilius Vaticanus* provides at least one 'ancient' testimony dating to the 5th century[95] (**fig. III.3**). Another type of evidence that can indicate the manufacture of sculptures nearby the building site are lithic flakes, i.e. the carvers' production waste. These, however, are very difficult to detect during an archaeological excavation. Fortunate examples come from the East – from the churches of Skripou (873-874), Amorium, and Dereağzı (both late 9th / early 10th c.)[96] – but the very complex stratigraphy of churches often corresponds to centuries of human activities insisting on the same spot: constructions, reconstructions, repairs; excavations, reopening or translations of graves; and so forth[97]. Small lithic flakes are therefore likely to be scattered, thus becoming hardly recognisable as the result of an anthropic action, and easily mistaken for simple rock fragments of natural origin or pieces of coarse gravel. Also, mortar was needed in almost every construction site, and marble or limestone flakes had very good chances to end up in a firing limekiln[98]. In any case, the absence of unfinished

[89] Kautzsch 1939, 8-9.

[90] Verona e il suo territorio 1964, 537.

[91] Lomartire 1984, 234.

[92] Tagliaferri 1981, 253-255, nos 378-380. – Lusuardi Siena / Piva 2001. – Beghelli 2014, 16 and 20.

[93] See Binding 2010, with a large collection of colour figures.

[94] Murphy's laws might have a role in this. For instance, one of the very rare 9th century manuscripts containing images of this type (Bibliothèque National de France, Grec 510, f. 360r) has a large portion of the page cut away precisely where the depiction of the construction of the Tower of Babel was.

[95] Biblioteca Apostolica, Vat. lat. 3225, f. 13r.

[96] Ivison 2008, esp. 498-500. – Ousterhout 2019, 259, 435. – Vanderheyde 2020, 108. All with literature. – See also Pitarakis 2007, 70.

[97] In general, on archaeology of churches, see Chavarría Arnau 2009.

[98] For some remarks on the production of lime and mortar see below, Chapter IV.2.

sculptures at the quarries, their presence in the churches, and the iconographic documentation are very convincing evidence that the manufacture of Early Medieval architectural sculpture normally took place nearby the construction site, not at the stone extractions points[99].

In sum, these and other data collected earlier in this work show that both the premises of the model envisaged by Jean Hubert and his supporters – long-distance trade of sculpted elements, and their production at or nearby the quarries – are inconsistent with the available archaeological, written and iconographic evidence. Another explanation for the presence of similar and nearly identical sculptures in distant European regions – yet made in different stone types – seems, as shall be seen in the next Chapters, much more persuasive.

[99] All over Europe, an impressive number of 7th-9th workshops of any kind have been detected in rural and urban areas (for the production of items in metal, glass, pottery, etc.), but to this day it seems that none of them turned out to be a stoneworking atelier. In general see: Salin 1957. – Roth 1986. – Beghelli / De Marchi 2014. – Beghelli / De Marchi 2017. – Beghelli / De Marchi 2018.

Chapter III.2.

The travelling craftsmen and the transfer of forms, types, and fashions in sculpture

If the circulation of objects – books, cartoons, or stone elements – is to be ruled out as a primary mean of diffusion of sculptural fashions, there are not many options left, but the circulation of persons. As briefly mentioned at the beginning of the previous Chapter, the key-role of mobility within a variety of crafts was highlighted in a number of studies[100]: some of them focused in particular on sculptors, stonemasons, and architectural sculpture, basing upon the analysis of both the material remains, and the written sources[101]. However, scholarly investigation on this matter has a relatively recent history, and most of the studies have a regional, or at most macro-regional, character.

As shall be seen in this and the next Chapters, addressing the question from a broader perspective will lead to substantial and consistent results. We shall start from the written documentation, which will provide the contextual framework to the subsequent examination of the sculpted materials, and will allow not only to appreciate the relevance of mobility in the professional life of sculptors and other construction workers, but also to inquire into a number of significant issues related to the social sphere and daily life of these artisans[102].

[100] For an overview, with literature, see Beghelli 2022.

[101] Starting from the Fifties and the Sixties, Croatian scholars gave a very important contribution to this field of research. For a history of studies, see: Petricioli 1985. – Jurković 2000. – Jurković 2016. – Outside Croatia, among the first ones who addressed the issue of the mobility of sculptors and stonemasons and / or their activity area, see: Verzone 1945. – Fossard 1965. – More recently: Buis 1976, 240. – Casartelli Novelli 1978. – Sapin 1986, 160-164, 186-191, 226, 249-250. – Jurković 1995. – Jakšić 1997. – Lambert 1999. – Stalley 1999, 109. – Lusuardi Siena 2000. – Lusuardi Siena / Piva 2001. – Lusuardi Siena / Piva 2002. – Napione 2002. – Binding 2005. – Matejčić 2006. – Schulze-Dörrlamm 2007. – Sennhauser / Roth-Rubi 2009. – Basić / Jurković 2011. – Caballero Zoreda 2012. – Crosetto 2013. – Ducci 2013, 35-68, 48-50. – Beghelli 2014. – Roth-Rubi 2015. – Josipović 2016. – Villa del Castillo 2016. – Beghelli / Dalba 2019. – Schiavone 2019. – Villa del Castillo 2021.

[102] As in the other parts of this work, the written sources will be quoted in their English translation. The Latin texts are collected in the **Appendix 2.**

III.2.1. **In need for craftsmen from abroad**

The mobility of builders and stonecarvers was surely not a new practice in the Early Middle Ages, but had a long tradition going back to the Archaic and Classical, then Roman, Late Antique, and Early Byzantine periods. In the scholarship dealing with these periods, the analysis of the transport of stone items over long distances has usually a prominent role: despite this trade concerned only a fraction of the total amount of stone used in these centuries – as the bulk of the lithic materials were locally procured[103] – it represented a defining aspect of the market for stone products and, at the same time, an impressive logistic undertaking. Probably less impressive and emphasised, but nonetheless extremely relevant in the larger economic framework, was the movement of sculptors and stonemasons. Ever since Antiquity, their displacement had played a major role in the transfer of stylistic models and working techniques[104]. Craftsmen normally operating in stationary stoneworking workshops – near quarries and marble yards – were occasionally summoned elsewhere, and, in this case, they often brought with them cargoes of lithic materials or half-finished products (e.g. architectural elements and sarcophagi) and finished the items once arrived at destination. Some of these ateliers, with their mobile artisans, boasted a very long duration, lasting from the Early Imperial period to the 5th-6th centuries, for instance that of Aphrodisias[105], or that of Docimium[106]. The written and epigraphic record (including the masons' marks[107]), and the decorative typology of the artifacts (when nearly identical specimens appear across great distances, but are carved in local varieties of stone) represent the main sources to identify Late Antique and Early Byzantine mobile stonecarving workshops, whose displacement was often prompted by eminent political and ecclesiastical characters[108]. In the 7th-9th c., these important sources disappear, and inscriptions conveying information on the craftsmen decidedly rarefy. Nevertheless, literary sources and accurate typological studies of the sculpted items allow one to continue to 'follow' the mobility of the makers. As shall be seen in the next Paragraphs and Chapters, however, Early Medieval builders and stonecarvers no longer travelled together with

[103] Ousterhout 2008, 136-140. – Russell 2013, 141-200, 352-359, and *passim*. – Ousterhout 2019, 88-90, 395-396. – Niewöhner 2021, 171. – See also above, Chapter II.2.

[104] Pensabene 2003, 367. – Adornato 2010. – Pensabene 2011, 37-61. – Kristensen / Poulsen 2012. – For some examples of mobile mosaicists, see: Guidobaldi 2016. – Kiilerich 2018.

[105] Pensabene 2006, 41-58.

[106] Robert 1962, 41-43. – Niewöhner 2007, 119-134. – Niewöhner 2010, 420-421. – Pensabene 2010, 93-94. – Borgia 2012, 60. – Niewöhner 2013, 226-228. – Niewöhner 2014, 259-263, 414-423.

[107] See Paragraph II.3.1.

[108] For a number of examples and corresponding literature, see: Marsili 2019. – Beghelli / Marsili forthcoming.

stone cargoes, but usually worked the locally available lithic materials, procured from the vicinity of the construction site[109].

During the period we are concerned with, one of the earliest sources on mobile artisans dates to the mid 7th century. In 657 / 658, Wilfrid of York came back to Northumbria from his journey in Rome and in Lyon, having spent three years in Gaul. Since he wanted to build stone churches to replace the existing wooden ones,

> after fulfilling episcopal duties in various places, returned to his own land with the singers Aedde and Aeona, and with masons and artisans of almost every kind[110].

During the outward journey, Wilfrid was accompanied by Benedict Biscop. Their paths split on the way back, when Wilfrid decided to stop in Lyon, whereas Benedict went directly back to Northumbria; upon his return, Benedict also brought back masons and glass-makers from Gaul[111]. The churches of Hexham and Ripon and the monasteries of Wearmouth and Jarrow, overall founded by the two clergymen through the work of these craftsmen, still preserve parts of the 7th century original structures and fragments of the architectonic stone sculpture which decorated them[112]. In Ripon, with the help of the masons from Gaul (from Lyon?), in the years 671-678 Wilfrid

> completed from the foundations in the earth up to the roof, a church of dressed stone, supported by various columns and side aisles[113].

In 672-678, seemingly attracted by the by the job opportunities, some stonemasons from the Papal See also went to Northumbria. Much of the church in Hexham

> was the product of his own judgement, but he also learned from stonemasons who had been lured from Rome by hope of generous reward[114].

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[109] On this point, see Part II.

[110] Eddius Stephanus, Vita Wilfridi XIV. Translation: Colgrave 1927 [1985], 31. – See also: Levison 1913, 168. – Parsons 1991, 6. – Farr 1997. Saint Wilfrid, Enc. Brit. – Wood 2005, 763-764.

[111] Colgrave 1927 [1985], 161. – Parsons 1991, 6. – Stalley 1999, 109. – Wood 2005, 763-764. – See below.

[112] Farr 1997 – Cramp 1984a. – Wood 2005, 763-764, 766.

[113] Eddius Stephanus, Vita Wilfridi XVII. Translation: Colgrave 1927 [1985], 37.

[114] Willelmus Malmesbiriensis, De gestis pontificum Anglorum III, 117. Translation: Winterbottom / Thompson 2007, 389.

Eventually, according to the chronicler, the temple was erected in a style so similar to that of the regions south of the Alps, that travellers from Rome who saw it immediately remembered their homeland [115].

In 674, Benedict Biscop founded the monastery of Wearmouth, established a community of monks, and a year later he started to build an ecclesia *iuxta Romanorum morem*[116]. The information regarding Benedict and the Gallic stonemasons provided by the Frankish abbot Torthelm (a character otherwise unknown), is reported in an anonymous *Vita*[117]:

> In the second year after the foundation of the monastery, Benedict crossed the sea and sought builders from Abbot Torthelm, who had long been joined to him in friendship, so that with their instruction and practical assistance he could build a basilica in stone; he received them, and brought them across to Britain from Gaul[118].

The most famous passage, however, is authored by Bede. The account contains a few interesting points, so that it is worth quoting in full:

> He crossed the sea into Gaul, and no sooner asked than he obtained and carried back with him some masons to build him a church in the Roman style, which he had always admired. So much zeal did he show from his love to Saint Peter, in whose honour he was building it, that within a year from the time of laying the foundation, you might have seen the roof on and the solemnity of the mass celebrated therein. When the work was drawing to completion, he sent messenger to Gaul to fetch makers of glass (more properly artificers), who were at this time unknown in Britain, that they might glaze the windows of his church, with the cloisters and dining rooms. This was done, and they came, and not only finished the work required, but taught the English nation their handicraft[119], which was well adapted for enclosing the lanterns of the church, and for the vessels required for various uses. All other things necessary for the

[115] Willelmus Malmesbiriensis, De gestis pontificum Anglorum III, 117. – See Stalley 1999, 34 and 109. – Similar considerations in Wood 2005, 764-765; at Ripon, Hexham, Wearmouth and Jarrow, the building materials include reused Roman masonry.

[116] Beda, Vita abbatum Wiremuthensis 5; 6. – For some remarks on this notion, see Heitz 1987, 171-177.

[117] See Wood 2005, 763-764.

[118] Vita Ceolfridi 7. Translation: Grocock / Wood (Vita Ceolfridi, 87).

[119] As noted by Grocock / Wood 2013, 33, footnote 48, they appear to have lost the skill relatively soon, as shown by a letter from Cuthbert abbot of Wearmouth and Jarrow, to Archbishop Lull of Mainz, requesting the dispatch of a craftsman qui vitrea vasa bene possit facere: the passage is quoted in full below, Paragraph III.2.5.

> service of the church and the altar, the sacred vessels, and the vestments, because they could not be procured in England, he took especial care to buy and bring from foreign parts [*years 674-675*]. Some decorations and muniments there were which he could not be procured even in Gaul, and these the pious founder determined to fetch from Rome; for which purpose, after he had formed the rule for his monastery, he made his fourth voyage to Rome, and returned loaded with more abundant spiritual merchandise than before. In the first place, he brought back a large quantity of books of all kind; secondly, a great number of relics of Christ's Apostles and martyrs, all likely to bring a blessing on many an English church; thirdly, he introduced the Roman mode of chanting, singing, and ministering in the church, by obtaining permission from pope Agatho to take back with him John, the archchanter of the church of St. Peter, and abbot of the monastery of St. Martin, to teach the English. [...] Fifthly, he brought back with him pictures of sacred representations, to adorn the church of St. Peter, which he had built; namely, a likeness of the Virgin Mary and of the twelve Apostles, with which he intended to adorn the central nave, on boarding placed from one wall to the other; also some figures from ecclesiastical history for the south wall, and others from the Revelation of St. John for the north wall; so that everyone who entered the church, even if they could not read, wherever they turned their eyes, might have before the amiable countenance of Christ and his saints [*year 678*] [...][120].

Bede's narrative conveys an extraordinarily vivid portrait of how to build a church from its foundation to the very last item needed to complete it. Masons and glaziers from abroad made it possible, for they mastered the construction techniques that were lacking in Britain. In this regard, Roger Stalley remarked that «to the Anglo-Saxon, whose natural building material was timber, the very use of stone was regarded as a Roman custom. While their modest churches might seem far removed from the Christian buildings of Italy, the mere fact that they were built of masonry was itself a huge symbolic link»[121]. As Ian Wood noticed, this impression must have been strengthened by the use of *spolia* from ancient buildings: «In Britain traditions of stone-building seem to have failed in the course of the 5th century, and thereafter both Britons and incoming Irishmen built in timber. The Germanic incomers too were used to traditions of timber-building. To build in stone, therefore, was a deliberate act, and it was one which involved the reuse of material from Roman buildings. Stone buildings in seventh-century England thus came to imply an adherence to Rome, or to the Roman church: Benedict Biscop's buildings at Wearmouth and Jarrow, built of Roman stone,

[120] Beda, Vita abbatum Wiremuthensis 5; 6. Translation: Giles 1843, vol. IV, 366-369. A similar list of objects, brought back from another journey to Rome, can be read in PL XCIV, 720. In 685 the same builders and craftsmen who had come from Gaul built the twin foundation at Jarrow: Farr 1997.

[121] Stalley 1999, 34.

signalled the patron's ideological connections»[122]. However, although stone building itself must have been the most obvious testimony of this adherence to Rome and the Roman Church, surely the innumerable items that Benedict Biscop brought from Gaul and from the Papal See contributed to the picture. One can figure the wonder of the contemporaries in admiring the interior of the beautiful stone construction, crowded with exotic works of art such as «vessels, vestments, books, reliquaries, pictures of sacred representations»: and all this while hearing likewise exotic chants taught by the Roman singers.

In the subsequent century, churches 'in the Roman manner' had not lost their appeal: in the year 710,

> Nechtan, king of the Picts, inhabiting the Northern parts of Britain, taught by frequent meditation on the ecclesiastical writings, renounced the error which he and his nation had till then been under, in relation to the observance of Easter [...] For performing this with the more ease and greater authority, he sought assistance from the English [...] Accordingly he sent messengers to the venerable Ceolfrid, abbot of the monastery of the blessed apostles, Peter and Paul, which stands at the mouth of the river Were, and near the river Tyne, at the place called Jarrow, which he gloriously governed after Benedict [...] He also prayed to have architects sent him to build a church in his nation after the Roman manner, promising to dedicate the same in honour of St. Peter, the prince of the apostles, and that he and all his people would always follow the custom of the Roman Apostolic Church, as far as their remoteness from the Roman language and nation would allow. The reverend abbot Ceolfrid, complying with his desires and request, sent the architects he desired, and the following letter [...][123].

According to written sources seen so far, in 7th-8th centuries Britain, the main reason for summoning craftsmen from afar was the lack of specialised artisanal knowledge related to stone building – and especially in *more romano* church building. At about the same time (630-655), Didier bishop of Cahors wrote to his counterpart in Clermont-Ferrand (ca. 250 km away) to ask for professionals who could build an underground wooden-pipe system, in order to bring water to the city[124]: this case falls in the domain of engineering rather than building, and implied a much shorter displacement of makers, but this movement of workforce, just like in the 'British instances', was spurred by the lack of professionals in the patron's region.

[122] Wood 2005, 764.

[123] Beda, Hist. Eccl. Gentis Anglorum V, 21. Translation: Giles 1843, vol. III, 257-259.

[124] Ep. Desiderii I, 13. – See: Bréhier 1930, 84. – Lebecq 1996.

The masters mentioned in Bede's, William of Malmesbury's, and the other texts quoted above are masons, glaziers and architects. Sculptors are not explicitly mentioned but, as the very presence of decorated stone elements might suggest, they could have either been comprised under the general term of 'master masons', or included in the likewise general expression 'artisans of almost every kind'. In any case, the craftsmen's long journeys were worth making, and their services were surely well paid, as indicated by the passage of William of Malmesbury about the stonemasons from Rome who expected a 'rich reward'. As shall be seen in the next Paragraphs, the mobility of craftsmen did not always entail travelling over such long distances. However, the abundance of written evidence on both short and long-distance movement of artisans is consistent with the economic background seen in Part II: a reduced market for building and stone products simply could not – as Chris Wickham and Paolo Delogu argued in their abovementioned works[125] – sustain the existence of construction enterprises and sculpting workshops in every location. Hence the necessity of travelling.

III.2.2. **Travelling together, travelling alone: selection and organisation of craftsmen (and corporations?)**

Of course, the movement of building craftsmen was not limited to 7th-8th century Britain. At the very beginning of the 8th century, Aigilbert, bishop of Le Mans, sent skilled workers to Ricmer, who had founded a religious community at nowadays Saint-Rimay (Centre-Val de Loire):

> When he [Ricmer] had found and cleaned that place, he moved there with the advice and the help of the aforesaid bishop [Aigilbert]. The bishop gave to him craftsmen and masters of every kind so that they built there a church dedicated to the Apostles and a monastery for the monks[126].

Later on, Charlemagne and Louis the Pious also proved to give considerable impulse to the movement of builders and craftsmen. The first document dates to 779 / 780, when pope Hadrian I wrote a letter to Charles, *rex Francorum et Langobardorum, atque patricius Romanorum*. The pope

[125] Wickham 2005, 650, and Delogu 2010, 40-41, 55, 83-84, 100-103 (see Paragraph III.1.2). – See also Wickham 2012, 477 (and Paragraph III.1.1).

[126] Vita Ricmiri I, 7. Translation: M. Beghelli. – See: Pesche / Desportes 1828, XVI-XVII. – Abbé Simon 1835, 303-308. – Le Maître 1976.

was giving the king a 'reminder' about some wooden beams he had promised to send for the restoration of St. Peter[127], but this was not the only thing needed:

> For the restoration of the ceiling panels of St. Peter we ask you to send a *magister*, who can fetch the right timber. And we ask this magister to be sent to the territory of Spoleto to take the right timber to fix the ceiling panels, as in the Roman territory there is no such timber. In this way our brother Wilcharius, the archbishop [of Sens], will not need to tire himself in coming while the wood is drying out, as it cannot be used while still green[128].

A decade later, in the year 790, Charles's friend

> Angilbert [...], having asked Charles the permission to fulfil a vow [...] and restore the church of St. Riquier, obtained bountiful positive answer from this king, who promised him that his assistance and his protection would never cease. The king ordered to open his great treasures and urged his beloved [Angilbert] to take what and how much he needed to carry out his project. [...] Shortly after, the position of abbot became vacant, and Angilbert, distinguished among all monks for his temperance and his humbleness, took this place on his brothers' request and by order of the king. After this, his majesty [Charles] sent to Angilbert the most skilful craftsmen in working wood and stone [i.e. stonemasons], glass and marble [i.e. sculptors][129].

What exactly these sculptors made (a *ciborium* and a chancel screen) is explained shortly afterwards, both in an account of a miracle and in a description of the ecclesiastical complex as it was when completed (**fig. III.4**):

> As said earlier, king Charles gave him, from his own treasury, such an immense amount of money to carry out this grand building project, that it might have been easier to run out of craftsmen than to run out of money to pay them. One day, while the marble columns of the ciborium [*buticum*] were erected, a worker dropped one of them, and the column broke in two.

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[127] On the rare cases of movement of building materials see above, Paragraph II.1.2.

[128] Codex Carolinus 65, 592-593. Translation: M. Beghelli. – Before being archbishop of Sens, Wilcharius could have been bishop of Mentana, next to Rome (Lib. Pont. 94, XXIII). The text seems to suggest that Wilcharius would be in charge for the works (together with the magister?) once the wood would be ready: see Davis 2007, 60, footnote 45. See also Melucco Vaccaro / Paroli 1995, 57-58).

[129] Hariulfus, Chron. Centulense II, 6. Translation: M. Beghelli. The work was composed in 1088 basing on older texts, among them a *Libellus* written by Angilbert himself. Entire parts of this *Libellus* are transcribed by Hariulfus in his *Chronicon*: Lot 1894, X-XI, XVI-XXXIX. – Bernard 1978, 241.

> [...] But an angel of the Lord, coming [at night] and touching the crack with his finger, fixed it, and [the column] became again as it was before. [...] On the eastern side, this church has a huge tower behind the sanctuary [*cancellum*] and, on the western side, another tower like the first one, being separated from it by the vestibule. [...] The Eastern tower is consecrated to St. Riquier, with its chancel screen [*cancellum*] and its ciborium [*buticum*]; and the Western tower is consecrated to the Saviour[130].

Around the year 804, William of Aquitaine, duke of Toulouse, abandoned the secular life and founded an abbey at Gellone (nowadays Saint-Guilhem-le-Désert):

> He called the masters whom he had brought with him and [some other] wise men from his *comitatus* [i.e. from Aquitaine] and without delay he traced the plan of the following buildings [of the monastery]: the church and the cloister, the refectory and the dormitory, and also the infirmary and the cells for the novices, the narthex for the pilgrims, the xenodochium for the poor, the bakery with its oven and its mill. After having arranged the buildings in this way and having designed them properly and according to the rules, the Duke [William] set to work, distributed [the tasks among] the workers [*operarii*], and set above them the master craftsmen / architects [*artifices*][131].

Fortunatus II, patriarch of Grado (803-826 circa), also obtained master craftsmen to restore the church of S. Giovanni Evangelista, probably sent during Charlemagne's rule[132]. In his testament we read that, during his patriarchate

> The church of S. John the Evangelist and [its] porch [or school] were completely burnt out, in a state of decay [...]. I summoned, then, masters from France [*Francia*], and I had thirty beams placed there[133].

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[130] Hariulfus, Chron. Centulense II, 7. Translation: M. Beghelli. – For similar cases of miracles involving the repair of stone items see above, Paragraph II.1.2.

[131] Vita Willelmi, 9. – See: Thomassy 1823, 312-314. – Soutou 1984, 203. – Schlosser 1896, 219, nr. 686. – Vita Willelmi, Introduction, 11, 25-27 and 46-47. – In general, on William and on the boundaries of Early Medieval Aquitaine, see: Bührer-Thierry 2015, 139-142 (with map, after Rouche 1979).

[132] Fortunatus was a controversial character who played a relevant political role in the first quarter of the 9th century. He was an upholder of the pope and Charlemagne's side, who were competing against the Byzantines for power over some Northern Adriatic territories. His political support and personal friendship were precious to Charles, and vice versa. During the reign of Louis the Pious, though, Fortunatus shifted towards the Byzantine side: it is, therefore, more probable that the sending of craftsmen from «Francia» occurred during Charlemagne's rule, when the good relations could have facilitated it. On Fortunatus see: Krahwinkler 1992, 199-243. – Menis 1988. – Rando 1997. – Krahwinkler 2005.

Some years later, Louis the Pious probably withdrew the political support which Charles had previously granted to Fortunatus, not without consequences: in 821, the patriarch was accused to have helped Ljudevit, duke of Pannonian Croatia, in his rebellion against the Frankish domination[134]. The account of his treachery conveys another evidence of the movement of construction-craftspeople in the Early Middle Ages. Yet, in this case, they travelled from Grado to Sisak (nowadays Central Croatia) for a much less holy undertaking than building a church[135]:

> Fortunatus, patriarch of Grado, was accused before the emperor by the priest Tiberius of encouraging Ljudevit to persist in his treacherous revolt, and of helping him construct castles by supplying craftsmen and builders[136].

If Charlemagne could send artisans to different parts of the empire, all the more he could summon them from different parts of the empire for his own building projects. The most renowned account of the construction of the Palatine Chapel at Aachen[137] tells us that, around the year 800, the emperor

> took pleasure in building in his own land and on his own plan a basilica finer by far than the works of the ancient Romans. And once he started, he saw his wish fulfilled in short order. He summoned for the project, from all lands lying on this side of the sea, masters and builders who were skilled in every relevant art. He set above them an abbot who was the most skilled of all in completing such work [...][138]. [...] Charles ordered any magnates established nearby to take care to support the workers he had appointed and to provide everything they needed for the job. Those who came from a long way away he commended to Liutfrid, the prefect of his

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[133] Will of Fortunatus II. Translation: M. Beghelli. On the testament see: Menis 1988. – Rando 1997. – Krahwinkler 2005, 73.

[134] Rando 1997, with literature.

[135] Krahwinkler 2005, 71-72.

[136] Annales regni Francorum, a. 821. Translation: Scholz / Rogers 1972, 109.

[137] One of the most recent overviews on the church, connected to an international research project, is Ristow 2014, with literature. Dendrochronological analysis on the pickets below the pillar-basis of the Marienkirche's octagon have given as a result the year 798 ± 5, whereas the timbering of the dome (at a height of 25,9 meters) is dated 803 ± 10. The construction went on, then, around 20 years: Ristow 2014, 104.

[138] Notker Balbulus, Gesta Karoli Magni I, 28. Translation: Noble 2009, 83, with minor changes (cismarinus: *lying on this side of the sea* (opposite to transmarinus, *lying on the other side of the sea; across the sea*): see Binding 2005, who also translated in this way.

> house, who was to feed and clothe them at public expense and always to supply them diligently with everything that pertained to that construction project[139].

Owing to its fame, this passage deserves a few additional remarks. Mostly, the critical editions of Notker Balbulus do not seem to doubt about the information contained in it, yet a few art historians and archaeologists were not fully convinced of its reliability. In particular, Notker's account was suspected to correspond to a fictional *topos* when stating the provenance of the craftsmen 'from all lands lying on this side of the sea'[140]. However, some arguments exist to suggest its historical accuracy.

Firstly, the sentence is surely meant to excite admiration, yet it avoids exaggerations: it avoids, precisely, topical clichés such as Procopius' 'craftsmen from the whole world' working at the reconstruction of Hagia Sophia[141]. Notker indicates, instead, a precise, if large, territory – *cismarinus*: *only* the regions *on this side* of the sea[142]. Grand architectural projects have always required large numbers of workers, more than most areas could provide[143]. When relating of enterprises as such, the chroniclers surely tended to emphasise the size of the workforce involved: yet, if on the one hand the hyperbolic character of passages like Procopius' has rightly been noticed[144], on the other hand, a minimum of 142 artisanal units has been recognised at Hagia Sophia, and these figures refer to stoneworkers only[145]. Procopius' (and other authors') description, then, might be a little closer to reality than one might expect.

A second argument suggesting the historical accuracy of Notker's passage is the acknowledgement that, if the information on the artisans *de omnibus cismarinis regionibus* was fictional, it would correspond to a quite elaborate lie. Notker would take the trouble to invent not only these craftsmen from distant lands, but also practical details like their precise treatment (e.g. contractual clauses, such as their right to get clothes), the source of the money used to pay them ('at public expense'), their difference in status in comparison to all the other (probably local) workers

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[139] Notker Balbulus, Gesta Karoli Magni I, 31. Translation: Noble 2009, 85.

[140] e.g. Greenhalgh 2008, 339, with literature.

[141] See Ousterhout 2008, 56, with literature.

[142] Clearly, Notker did not want the reader to believe that artisans came to Aachen from every single land existing in this territory, but just wanted to suggest the long distances they covered to reach the construction site of the Palatine Chapel.

[143] Rockwell 1993, 3.

[144] Ousterhout 1999, 56. The wording of this kind of records is often shaped on Biblical passages like the construction of the Temple (2 Chron. 2:6.).

[145] Marsili 2019, 131-138.

(generically described as being entrusted to the 'local magnates'), and the particular person responsible for them, even specifying his name and rank (Liutfrid, the prefect). All in all, this seems too much an effort just to fabricate a plausible fictional *topos*.

Thirdly, Charlemagne was the emperor, the individual at the very top of the political and social hierarchy: should we really doubt that he had the means to summon the best masters from the empire, to work at a project that was particularly important to him? The Palatine Chapel still stands in Aachen, for all to see how perfectly it was constructed – from the fabric to the last detail, like the bronze railings.

Fourthly, the scholars hardly question Einhard's account of the *spolia* brought to Aachen from Italy[146], the arguments being precisely that Charlemagne had surely the possibility to organise such a long-distance transport of marble elements, even if it was a very challenging undertaking; and that other records exist to confirm this practice from the part of the sovereign. In the same way, why should one rule out much an easier logistical task, as summoning artisans from comparable, or shorter, distances? Furthermore, as well as in the case of the *spolia*, Notker's text is not the only one mentioning craftsmen moving by will of Charles, but belongs to a group of records all attesting the same practice from the part of the Frankish ruler. In sum, the suspicion towards Notker's account might depend on a rather 'modern' *topos* of scholarly interpretation, i.e. the assumption that Early Medieval people tended to travel little distances, or not to travel at all. On the contrary, as shall be seen, when exhaustive research is done to inquire the subject, the results prove quite the opposite[147].

The written sources seen so far allow some remarks on the movement of craftsmen in the Early Middle Ages. In the first place, one might wonder whether the artisans travelled in groups or alone, and in the in the first case, did they belong to the same enterprise or was the group gathered on occasion of specific projects? Almost always, the Latin texts use the plural form to refer to the workers to be dispatched. For instance, Nechtan gets not just one, but many architects from Ceolfrid, Ricmer gets craftsmen, Fortunatus gets masters, and so forth. This seems to be a constant feature of the accounts of travelling workforce, that we will continue to find in the sources presented in the next Chapters of this work.

Early Medieval laws and regulations issued in different parts of Europe refer to the artisanal activity as being organised in workshops composed of a master and employees / apprentices – often, but not always, belonging to the same family[148]. The early Irish law even states that if a craftsman

[146] See Paragraphs II.1.2. and II.4.2. – See also Greenhalgh 2008, 333-344.

[147] McCormick 2001. – Peyer 2009. See below, Chapter III.5.

[148] In general, see: Mac Lean 1995. – Lomartire 2009, esp. 168-169, who also highlight the legal status of free men of these craftsmen. – Murray 2013. – Beghelli 2014. – Beghelli / De Marchi 2017, all with literature.

had no son, his daughter could be trained in his profession, and female constructors in wood and stone (*bansáer*) are actually attested[149]. The same laws, and precisely the 8th-century *Uraicecht Becc*, describe a craftsman as a client of his patron, but also as a patron himself for his employees. Some later glosses to the text specify that the master provided instruction, food and clothes to the apprentices, but had the right to keep for himself the incomes of his apprentices' work for as long as they belonged to his workshop, to claim their first earnings once they had left the workshop, and to get assistance from them in his old age[150]. Perhaps not exactly the same, but at least similar *do ut des* practices might be envisaged in other areas of Early Medieval Europe, too. In any case, such 'family businesses' are attested in the domain of sculpture, as shown by a number of inscriptions. To quote just three examples from different chronologies within our time-span, a 7th century funerary slab from Santa Vittoria d'Alba (Piedmont) was made by *magister Kalmarus with his apprentice John*[151]. During the reign of king Liutprand (and most probably in the years 712-736), a master *Ursus, with his apprentices Iuvintinus and Iuvianus*, manufactured the abovementioned ciborium from Sant'Ambrogio di Valpolicella (Veneto)[152] (**fig. III.1**). *Master John and his apprentices* carved a *pergula* at Amelia (Umbria) in the first half of the 9th century[153].

Thus, it is reasonable to assume that the masters called to work away from their places of residence would tend to travel together with their apprentices and employees, which could also explain the plural form used by the chroniclers. However, records like the letter sent by pope Hadrian I to Charlemagne speak of one single master to be sent for carrying out a given task. Presumably, the choice between travelling alone or with the assistants depended on the kind and extent of workforce that could be expected to be found on the spot. Crafts like masonry or sculpture usually require years of training, and a master carver or mason was probably more at his ease with the team of employees he (or she!) had trained and instructed. Also, in the specific context of the Early Medieval market for stone products[154], these professions were rarer than others (like for

[149] Murray 2013, 164, with literature. – The word *sáer* (female: *bansáer*) is often translated as 'wright'; its original meaning refers to those who worked mostly wood, but also stone: Mac Lean 1995, 128, with literature.

[150] Mac Lean 1995, 130.

[151] Crosetto 2013, 364. – Crosetto 2009, 12-13, observes that while the inscription and the slab were made in the 7th century, the decoration might have been carved later.

[152] On the inscriptions see Brugnoli / Cortellazzo 2011-2012.

[153] Guerrini / Tedeschi 2008. – In the last decades, scholars have repeatedly stressed that trying to link Latin or German names to a suppositional Latin or German ethnical identity of builders and sculptors is a pointless operation. Among others, see: Lomartire 2009. – Jarnut 2009.

[154] See Part II.

instance carpentry)[155]. The master carpenter needed by Hadrian was almost a 'consultant', though a top-level one. According to the text, he was 'only' supposed to offer his authoritative know-how in order to choose the appropriate timber for the ceiling panels – perhaps, he also supervised the operations of cutting it. In other words, the sought-for factors were this individual's particular knowledge and experience, as it is to be assumed that woodcutters and carpenters, in general, were not lacking in the papal domains. On the other hand, it must have been relatively easy to find local unskilled workers – or local carpenters – who were able, if correctly instructed by the foreign master, to cut the timber or to install the ceiling panels. Hence in this case, a single experienced craftsman could be enough for the necessities of the planned work. Whether he concretely made the journey alone – or accompanied by an apprentice, an assistant, a servant, etc. – is a detail of the kind sources are never generous enough to provide us with. In any case, as a rule, the professionals from abroad represented a minority of the total: as Notker's passage and other records also suggest[156], additional unskilled (or less skilled) workforce was often hired on place, in the vicinity of the construction site, whereas only the most skilled artisans – and, at times, their teams – were travelling for work.

The fact that the mobility of craftsmen – and especially the long-distance movement – in the Early Middle Ages concerned almost exclusively the best masters, and not *any* construction worker[157], is a relevant point to stress. The just mentioned letter of pope Hadrian provides a particularly clear example, but the same applies to other records seen in this Paragraph, and to many more in the next ones. Whereas, in the case of Britain, one of the main reasons to summon artisans from afar was the lack of certain skills within the island's borders, this was certainly not the case of the Papal See. One can rest assured that the Rome of Hadrian I and the Church domains, in the late 8th century, were not lacking in craftsmen, including good carpenters: throughout the Early Middle Ages, restorations of roofs are plentifully documented by the *Liber Pontificalis*[158]. Owing to his own political influence and to the direct contact with Charlemagne, however, the pope could fetch the very best masters, in every art, from virtually every corner of Europe.

Thus while some Early Medieval patrons had no other choice than summoning artisans from abroad – because their own territory lacked the needed professional skills – some other patrons did so 'just' because they were in the position to cherry-pick the very first rate craftsmen, over a large

[155] On these points, see the previous Paragraph. – See also Lomartire 2009, 160, with literature.

[156] See below in this Part III., and Part IV.

[157] On this point, see for instance Rockwell 1993, 3.

[158] On this point, see the next Paragraph.

area[159]. Anyway, this does not mean that those who called labour force from abroad out of necessity must be content with whatever team of workers. Benedict Biscop, for instance, had royal support, and it is therefore likely that the Gallic builders who worked for him in Northumbria were among the best available on the market[160].

The examples mentioned so far mostly referred to groups pertaining to a single craft, composed by artisans belonging to the same workshop. However, the Early Medieval chroniclers often used formulas as 'craftsmen of every kind', sometimes going into further detail: at St. Riquier, for instance, Angilbert gets stonemasons, sculptors, carpenters and glaziers, being the difference between the first and the second ones shown by the use of the word 'stone' (building material), opposed to 'marble' (decorative material, to be carved)[161]. Should one assume that these records always refer to groups that came separately or was it possible that makers with different skills belonged to the same 'corporation'? In all likelihood, both solutions were possible. The largest and most ambitious building projects could count on generous financial support, and required a considerable amount of labour supply. The patrons of this kind of projects were influential individuals, whose personal contact network allowed to fetch the best craftsmen teams in every field, even from different regions[162]. A case in point is the Palatine Chapel[163], but also, perhaps, the abbey of St. Riquier, for we do not know whether the craftsmen came from just one or more locations: in any case, Charles had the means to reach workers from different areas, who could then be employed in his or someone else's projects. In other occasions the sources imply, or precisely state, just one location of provenance of the craftsmen. For instance, artisans from Rome are said to have worked at Hexham, and the letters sent to Ceolfrid and Aigilbert imply that the artisans – sent respectively to Pictland and to Saint-Rimay – came respectively from Jarrow and Le Mans, or surroundings[164]. In these and similar cases, the written records don't specify the mutual professional relations of the travelling craftsmen. Therefore, it is possible that the labour force was drawn from separate workshops – of sculptors, carpenters, glaziers, etc. – operating in a given location.

However, Early Medieval sources also attest another possible scenario. The *Memoratorium de mercedibus commacinorum* is a price list, probably written during the reign of Liutprand (712-

[159] On this point see Part IV.

[160] Wood 2005, 763.

[161] Already in the Roman period, the word *marmor* designated any stone suitable to be sculpted and/or polished: Lusuardi Siena 1997, 155, with literature.

[162] On this issue, see Paragraph III.2.5 and Part IV.

[163] For instance, on the bronze workers see: Braunfels 1965. – Braunfels 1991.

[164] On the locations of provenance of the craftsmen see Paragraph III.2.3.

744), that refers to different types of construction workers and the costs for their services[165]. These all – masons, marble carvers, carpenters, etc. – fall under the category of what the document calls '*magistri commacini*', an expression perhaps derived from *machinae*, i.e. the machinery used in the building sites[166]. The *commacini* masters are also mentioned in the Edict of Rothari (643), which, interestingly, calls the members of the group *collegantes* and *consortes*. These terms seem to represent a quite clear reference to a sort of corporation – similar to the Roman *collegia* – where professionals with different skills were united in association[167]. Also, it has been highlighted that, in all likelihood, the *commacini* masters were often travelling for work, and were for sure concerned by king Liutprand's laws on mobility of merchants and specialised craftsmen[168]. Thus, masters in disparate crafts and their apprentices could join forces and present themselves to the patrons – whether locally or elsewhere – as a sort of all-inclusive enterprise, able to take care of every step and detail of a building project. Guilds of building craftsmen and stoneworkers are documented in the Early Byzantine East[169], and are documented again in the 10th-c. *Book of the Eparch*, with a possible continuity throughout the Transitional period[170]. In the West, similar professional associations are attested not only during the Roman and Early Medieval periods, but also later, in the High to Late Middle Ages[171]: in the Early Middle Ages, though, these corporations appear to have had a simpler structure and juridical framework than before and after[172]. Such system, anyway, could be envisaged for the Early Medieval travelling craftsmen recorded in the abovementioned written sources: the 'masons, sculptors, glaziers and carpenters' or the 'artisans of every kind' could no doubt have been gathered from single ateliers, but could also have belonged to one of these sorts of *collegia*.

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[165] Memorat. Merc. Comm. – See: Lomartire 2009. – Jarnut 2009, both with literature. For the chronology of the document see above, Chapter I.1. – On the Memoratorium see also below, Paragraph III.2.7.

[166] The Germanic **makjō* gave origin to words such as *maçon* or mason in modern French and English. – Other interpretations linked 'commacinus' to the area of Como. Lomartire 2009, 161-162, noted that the adjective could originally have had a geographical connotation; in the late 7th century, however, the word could already have 'crystallised' in an antonomastic form, to mean generally 'building contractors'. In the same way, in some areas of Italy, the term *norcino* (i.e. from the town of Norcia) designated, in general, butchers. As for architecture, the name of the renowned 'Antelami master builders' had also a geographical origin, attested in the 10th century: in the XII-XIV centuries, however, this geographical connotation seems completely forgotten. – On the debate about the origin of the word see: Salmi 1971. – Maestrelli 2009. – Cantino Wataghin 2013. – See also Lomartire 2009, with extensive history of studies.

[167] Roth. (year 643). – Mor 1971, 206-207. – Lomartire 2009, 168-169 and 171, with literature.

[168] Azzara 2009, 30. – Delogu 2010, 103. Both with literature. – On Liutprand's law see the next Paragraph.

[169] Laiou / Morrisson 2007, 32. – Marsili 2019, 77, with literature and sources.

[170] Ousterhout 1999, 49-50. – Bouras 2002, 540 and 554. – Ousterhout 2019, 381.

[171] Cracco Ruggini 1971. – Chiellini 1994. – Diosono 2007.

[172] Mor 1971, 206-207. – Lomartire 2009, 168-169.

The number and types of craftsmen who were moving depended, logically, from the nature and extent of the task to be carried out: in a given moment, Benedict summoned only glaziers from Gaul for, at that stage of the works, he needed just glaziers. Likewise, the workshops possibly affiliated in professional corporations were not always *all* needed in a building site: *ad hoc* alliances, on temporary basis, could be established depending on the work to be done[173]. However, even relatively simple projects could require more than just one type of professionals. A case in point are stone furnishings. These entailed at least two different kinds of skills – carving the stone elements and placing them steadily in the correct position –, and it is probable that not always the sculptors had also the masons' artisanal knowledge necessary to install a chancel screen, an altar or a ciborium[174]. In these instances, one of the advantages of belonging to a *collegium* might have been precisely the possibility to work with well-known colleagues / *collegantes*, which could ease and speed up the operation.

Once arrived at destination, the foreign craftsmen needed to be organised and taken care of. At Aachen, as seen above, an abbot supervised their work in the building site and the prefect Liutfrid was in charge of clothing and feeding them. Early Medieval sources hardly provide explicit hints on the accommodation of the skilled artisans, but later records dating to the 14th-15th centuries attest quite respectable 'collective housing', with about a dozen of beds and a number of attached comforts, including a cook or a governess, beds with their bedlinen, towels and tableware[175]. In the Early Middle Ages, food supply was often regulated by contract – as in the case of the Lombard laws about the *Commacini* master builders – and was owed not only to the foreigner workmen, but also to the local ones[176].

Thus the fact that the skilled craftsmen from afar, at Aachen, were additionally given clothes, indicates not only their higher status, but gives also the opportunity to make a last suggestion. The right to clothing possibly represents just one among many contractual provisions. But it might also be taken as a small clue that most of the artisans were not accompanied by their wives, as in the Early Middle Ages the textile production for everyday use was frequently a female household activity. For sure and for now, this must remain a simple hypothesis, as it must be recognised that, if only a little is known about the artisans' private and daily life, even less is known about their wives. However, travelling without family would be consequent both with the attested

[173] See previous footnote.

[174] See above, Chapter I.1.

[175] Bernardi 2014, 54, with literature.

[176] Lomartire 2009, 177. – See below, Paragraph IV.3.2.

temporary mobility of the craftsmen – opposed to a suppositional permanent wandering[177] – and with the information inferable from other Early Medieval written sources, such as a law of Liutprand of the year 720: this law established the rights of the master's wife and children in the case he had been away for work for more than three years – that is, it established the rights of those who remained at home[178].

III.2.3. **The travelling craftsmen and their residence. Rome, Constantinople, Aachen, and other prominent cities**

Some records on the travelling craftsmen mention – or refer quite clearly – to the locations of provenance of the artisans. This group of sources, thus, are particularly useful to study the context in which they generally lived. As shall be seen in this Paragraph, building craftspeople tended to reside in urban areas[179]. Rome is one of the most prominent examples, and its artisans are already mentioned in the earliest records as long-distance travellers[180]. Indeed, a significant market for different crafts must have existed in the Papal See throughout the Early Middle Ages. According to the *Liber Pontificalis*, in the Roman churches, during the 8th to the first half of 9th century, the renewals of liturgical furnishings alone (excluding, then, the countless restorations, new buildings, mosaics, frescoes, marble floors or panelling, etc.[181]) amount to nearly 65, involving as raw materials stone, wood, precious and non-precious metals, gems, and glass, i.e. involving sculptors, stonemasons, carpenters, goldsmiths, metalworkers, gem cutters and glaziers[182]. To this calculation one could add the truly innumerable richly decorated textiles and altar-cloths[183], and the artisans who made them. The presence of a well-established system of varied production activities has been, indeed, repeatedly attested by the archaeological evidence. The most renowned instances are the Crypta Balbi and the Roman Forums, where the excavations have provided abundant documentation of different Early Medieval crafts (metal-, glass-, pottery-making, limekilns, etc.)[184].

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[177] On this point, in general, see Beghelli 2022, and Paragraph III.2.4. – On the idea of mobility as opposed to migration see Quast 2009. – On the idea of mobility as opposed to permanent wandering see Ashby 2015.

[178] Leges Liut. 18. This source will be discussed in the next Paragraph.

[179] In general, on skilled craftsmen residing in urban areas, see Delogu 2010, 100-103.

[180] See Paragraph III.2.1, construction of Hexham.

[181] For a detailed overview of this type of building projects, see Delogu 2010, 259-287.

[182] See **Appendix 2**, with written sources.

[183] Lib. Pont.

[184] Arena et al. 2001, esp. Meneghini / Paroli / Santangeli Valenzani 2001. A conference specifically devoted to the topic, still unpublished, has taken place in Rome: *L'archeologia della produzione a Roma: secoli V-XV* (Università di Roma Tor Vergata / Università Roma Tre / École française de Rome, 27-29 March 2014).

It is not surprising, then, that specialised construction craftsmen from Rome were requested elsewhere; and if they seem to be attested thousands of kilometres away, in Northumbria, they must have worked closer to Rome, too. From the 8th to the mid 9th century, a number of restorations of churches in Northern and Central Italy are recorded in the *Liber Pontificalis*. Since it was the pope who commissioned them, he might have also sent artisans: the work of some Roman stone-carvers, for instance, has been recognised at the dome of Ferentino (near Frosinone, Lazio), where an inscription relates the very refined liturgical furnishings to some renewals commissioned by pope Paschal I (817-824)[185].

At least in one case, that of Ravenna[186], the mention of a restoration in the *Liber Pontificalis* is confirmed by another written record: Andreas Agnellus tells us that in the year 814 Leo III,

> bishop of the Roman church and city, sent his chamberlain Crisafus and other stonemasons, restored the roofs of St. Apollinaris and all of the beams and ceiling-panels made with fir-wood, and all that martyr's roofing; together with his own expenditure all the suburban cities came [and contributed, bringing] all the beams and roof-tile supports and all fir beams and whatever else was necessary, with the Ravennate citizens working in turns [in corvée labour] with ropes and other devices. The stonemasons set the beams on the walls and all was completed[187].

Again, the unskilled workforce is hired on place, and only the skilled professionals are those who travel. The *Liber Pontificalis* does not explicitly state that craftsmen were sent from Rome, but this is most likely due to the viewpoint of the chronicler, who might have given it for granted (especially if one considers the kind of source the *Liber Pontificalis* is: a monumental book literally overflowing with lists of works, restorations, gifts, all 'made' by the pontiff). Indeed, the words employed in the Latin text (*restauravit*, *fecit*, etc.) nearly always refer directly to the pope, whereas expressions like 'he ordered to restore…' are far rarer[188]. In the case of St. Apollinaris at Ravenna, too,

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[185] De donis D(e)i et s[ancti / ae] [...] tempo[ribus] Pascali[s] [...] pap(a)e [Pas]calis episcopu[s] f(ecit). – Ramieri 1983, 52-54, nr. 16-17. – Melucco Vaccaro / D'Achille 1999, 102. The inscription can be read on a *pergula*'s beam: many other sculpted fragments found in the church must be ascribed to the same original liturgical furnishings.

[186] Lib. Pont. 98, CVI.

[187] Agnellus, Lib. pont. eccl. Rav. 168. Translation: Delyiannis 2004, 296-297 and Davis 2007, 224, footnote 191, with minor changes.

[188] On this aspect, which concerns not only the *Liber Pontificalis* but the Early Medieval sources in general, see Binding 2005, 20. – As Dominic Janes puts it, the lack of direct explanations on some phenomena in the written

> through his expert and farsighted care, he [the pope] freshly and solidly restored and improved all that church's roofing and its square colonnade [*quadriporticus*][189].

It is obvious that the pope did not restore the churches himself, nor the writer wants us to believe it: he rather omits, because it is self-evident, that the pope and his inner circle hired some craftsmen to do the work. On the other hand, the fact that the pontiff himself was sending artisans to other locations was surely more impressive from the viewpoint of those who received them. This probably explains why, in the case of Ravenna, the record only appears in Agnellus' text. The *Liber Pontificalis*, however, does not neglect to document when the workforce is incoming to Rome (and not outgoing):

> The Claudian aqueduct, which used to provide the water for washing at the Lateran bath and used to run to the baptistery of the Saviour our Lord Jesus Christ's church and to many churches on holy Easter day, had been demolished for a period of years [...]. And so [...] [Hadrian I] gathered a crowd of people from the districts of Campania and he personally came to take his turn in building and restoring this aqueduct. He put great care and concern into this aqueduct's building, in that he renewed and restored it afresh from its foundations[190].

This is the only occasion of incoming labour force attested by the *Liber Pontificalis* in the 8th to mid 9th centuries and, significantly, this 'crowd of people' from Campania (*multitudo populi*) appears not to be composed of professionals, but of unskilled workers, whose reason to travel to Rome is the urgent need of hundreds of men[191]. The fact is considered worth mentioning by the compiler: the massive movement of persons is perceived – and presented – as a remarkable achievement of the pope[192]. This also applies to the biography of Leo IV, who in the mid-9th century recruited a great number of labourers for the construction of Leopolis-Cencelle:

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sources often depends on the fact that they were «so ingrained in contemporary expectations that they were either taken for granted or their full implications were not then explored» (Janes 1998, 3).

[189] Lib. Pont. 98, CVI. Translation: Davis 2007, 224.

[190] Lib. Pont. 97, LXII. Translation: Davis 2007, 151.

[191] Campania does not correspond to the current Italian region, but to an area lying South-East of Rome between the Ernici and the Lepini Mountains, from the source of the river Sacco to the middle course of the river Liri: Ramieri 1983, 8.

[192] The writer, then, stresses his laudatory aptitude and makes even the pontiff himself working: although it is unlikely that this ever happened, it is probable that the pope visited the building site from time to time: see below, Part IV.

> Then they all decided that [the pope] should get men in general to turn up in shifts from the individual cities and all the estates, whether public or belonging to monasteries; and so it was done. So in the second year of his prelacy this city began to be built; and in the sixth year of his consecration, with all its great and wonderful constructions the whole city was finished on every side[193].

These workers are also attested by two inscriptions on stone survived to these days, which show that the workforce was organised according to the place of origin: the *militia Capracorum* (nowadays Campagnano, province of Rome) constructed a tower and a segment of wall under the supervision of Agatho, whereas the *militia Saltisine* (otherwise unknown) built other two towers and another segment of wall[194].

Leaving now the unskilled labour force, and returning to the subject of the professional travelling craftsmen, some documents attest that the New Rome also used to share its artisans with the rest of the world. Mostly, the records refer to exchanges within the Byzantine Eastern area of influence or with the Caliphate: but there is at least one noteworthy case of movement of craftspeople from the Byzantine empire towards the West, precisely to Venice. In 1581, the Italian historian and man of letters Francesco Sansovino published his «*Venetia città nobilissima et singolare, descritta in XIIII. libri*». His account on the foundation of the church and monastery of S. Zaccaria[195] includes a translation into Italian of an early medieval document authored by the doge Giustiniano Partecipazio, which Sansovino had at hand[196]. The church started to be built at the instance of emperor Leo V (i.e. before 820, year of his death), who provided financial support for the construction and sent to Venice workmen and masters craftsmen:

> Because of the revelation of Our Almighty Lord, and by order of His Serene Highness Leo, emperor and keeper of peace in the whole world, after many other benefices He bestowed, I

[193] Lib. Pont. 105, LXX. Translation: Davis 1995, 140, who explains that the «public estates seem to be both the papal *domuscultae*, and former imperial Byzantine lands in the Roman duchy. The farm workers were the *familia* of St. Peter, organized into military units, and administered by their own officials, not under the jurisdiction of neighbouring cities. The monasteries mentioned are those whose property was otherwise juridically exempt; they are probably [...] St. Saviour's (Rieti), St. Mary's (Farfa), and St. Andrew's near Mount Soracte».

[194] Davis 1995, 140-141. The inscriptions are both now mounted on the arch through which Via di Porta Angelica passes. In general, on Leopolis-Cencelle, see: Leopoli-Cencelle 1996. – Ermini Pani 2007. – Stasolla 2012. – Moppi 2013-2014. – Ermini Pani / Somma / Stasolla 2014. – See also Part IV.

[195] Sansovino, Venetia 1581, Lib. I. (Sestriere di Castello), 26-29.

[196] The reliability of the source (and accuracy of the translation from Latin into Italian) is not questioned by the scholarship: Frothingham 1894, 36. – Rosemann 2001, 12-13. – Ousterhout 2008, 55-56, with literature.

> [Giustiniano Partecipazio] made this monastery of virgins in Venice; [and I made it] according to what He [the emperor] prescribed to be built from His own Imperial Chamber. And He immediately (according to what He had decided) ordered that gold and silver, and other necessary things, were given to me. Moreover, He provided, in order to consecrate this Holy Church, the relics of St. Zechariah the Prophet, and of the True Cross, of the Veil of the Virgin Mary, of the clothes of the Saviour, together with other holy relics. He also sent some things which were needed, and master craftsmen, so that the work could be quickly finished[197].

Most probably completed within the year 827, S. Zaccaria has been entirely reconstructed starting from 1458[198], but some evidence remains of the Early Medieval building: among other archaeological features, a front panel of a sarcophagus with arches and crosses dates to the 9th century, though its 'Western' style hardly allows to relate it to the Byzantine masters[199]. However, in other parts of Venice were found a number of 9th-10th century architectural elements, carved in the typical fashion of the Byzantine empire[200]. These sculptures, very rare elsewhere, no doubt attest the contacts between Constantinople and La Serenissima[201]. Yet contrary to what Wladimiro Dorigo reckoned – and according to the practice attested at least from the one, just mentioned, written record – it seems likely that these exchanges occurred by means of movement of men, rather than movement of stone[202]. Moreover, it is well-known that, in general, Byzantine imperial patronage often included the provision of workforce, in addition to the materials[203].

The documents on Rome and Constantinople, and other written sources seen above, indicate that much as they could move, the travelling craftsmen had a place of origin they went back to – or were supposed to –, i.e. they were not permanently moving[204] and their change of residence was only temporary[205]. In this respect, a relevant testimony is the abovementioned law of king Liutprand, promulgated in the year 720:

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[197] Sansovino, Venetia 1581, Lib. I. (Sestriere di Castello), 26-29. The translation into English has been done trying to stay as close as possible to the original XVI century version.

[198] Rosemann 2001, 15. – In general on S. Zaccaria, see Agazzi 2016.

[199] Dorigo 1983, 667.

[200] Zuliani 1970, 94-125.

[201] Zuliani 1970, 94.

[202] As seen above (Paragraph III.1.4), Dorigo 1983, 648 assumed the sculpted elements to have been made in Constantinople and then exported to Venice.

[203] Ousterhout 2008, 56.

[204] which is defined as 'true itinerancy' by Steven P. Ashby in the case study of comb-makers: Ashby 2015.

[205] which is the definition of 'mobility': on these points see Quast 2009, 1. – On these points see Beghelli 2022.

> On merchants and master craftsmen. If anyone travels within the country or outside the country for the purpose of carrying on any business or any craft whatever, if he does not return within three years because some illness has befallen him, he should make it known to his judge or his agent. If he neglects to do this and he leaves children behind him, they [the children] shall have his property in their legal possession [...]. *And if he does not even have near relatives, after these three years his property shall pass to the king's treasury*. If the man has a wife and he does not return within the established three-year period, she shall come to the king's palace, whoever is king at the time, and it shall be done thus: according as the king gives her the privilege of remarrying or as he orders or establishes concerning her affairs, it shall be done. But she shall not presume to take another husband without the king's permission [...][206].

Firstly, it should be noticed that, whereas the law is addressed to merchants in general (*negotiatores*), in the case of artisans it is specifically addressed to the master craftsmen (*magistri*), confirming that those who had more chance to travel for work were the most skilful ones. Secondly, and most importantly, the fact itself that this law was promulgated implies that cases like these – craftspeople away for entire years and, probably, far from their place of origin – were quite common: otherwise, such regulation would have been unnecessary. Thirdly, it also implies that these *magistri* were not, as said, in perpetual movement, as they were normally supposed to come back home[207].

A 'natural' corollary of Jean Hubert's theories on the sculptures' production in the quarries and their export as finished elements, was the assumption that, as it could happen in the Roman period, the sculptors worked and lived in close vicinity of the major quarries, representing a sort of 'independent unit' separated from other construction crafts[208]. Yet as we have seen, the written record refers to entirely different types of locations: once the intensive quarrying and the ancient system of stone items production at the extraction points had disappeared[209], there was no reason for sculptors, stonemasons and stonecutters to leave near the quarries. Thus, Early Medieval building craftspeople tended to cluster not around the quarries, but around the locations where the market was broader and the potential patrons abounded, i.e. the most prominent urban areas. The demand

[206] Leges Liut. 18. Translation: Fischer Drew 1973, 152-153. I have translated the lines in italics, which were omitted in Fischer Drew's text.

[207] On these aspects, see: Beghelli 2013, 226. – Beghelli 2014, 23. – See also the next Paragraph.

[208] See above, Paragraph III.1.4.

[209] See Part II.

was indeed insufficient to support construction contractors in every (rural and urban) location[210]. Rome or Constantinople were surely places where a craftsman had more chance to work, and they provided a suitable market even for the most skilled (and expensive) ones – who could possibly be summoned elsewhere. In all likelihood, the Carolingian Aachen became also a city of this kind, and could also 'export' its artisans. From the Imperial See, around the year 820, Louis the Pious sent to Ebbo, archbishop of Reims, the talented smith (or craftsman) Rumaldus to work at the restoration of the cathedral of Reims[211]:

> On the archbishop of Reims' plea, [the emperor] also gave him his smith [or craftsman], named Rumaldus, so that [in Reims] he could take chance of the talent which the Lord had given to him for the rest of his life. This donation was also confirmed [in the same way as for the others] by the imperial seal and ring[212].

Next to the Capitals and the Papal see, however, further important cities are mentioned by the written sources as the craftsmen's places of origin, especially archbishops' and bishops' sees. The artisans in charge of building the monastery at Saint-Rimay, for instance, were sent by the bishop of Le Mans[213]. From the archbishop's see of Reims, moreover, some craftspeople were sent to Aachen during Louis the Pious' time, around 827:

> There was also another young man, by the name Gerlaicus from the city of Reims. He was one of those men who had been commanded to come from that city [to Aachen] in order to erect the buildings of the palace[214].

At last, one can quote the archbishop of Salzburg Liupram who, around the year 850, sent to the prince Priwina, in Mosaburg/Zalavár (see above, **fig. I.2**), a group of masters with different skills:

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[210] Wickham 2005, 650. – Delogu 2010, 40-41, 55, 83-84, 100-103. On this point see above, Paragraphs III.1.2. and III.1.3.

[211] On this point, see Binding 2005, 17.

[212] Flodoardus Remensis, Hist. Remensis eccl. II, 19. Translation: M. Beghelli. Written between 948-952, the *Historia* is highly reputed by the scholars owing to its reliability. Flodoardus was in charge for the episcopal archives, and he often reproduced in full the documents he used for his narration: Remy 1909. Although, in the passage, the word *faber* possibly means 'smith', it can also mean, in general, 'craftsman'.

[213] See above, Paragraph III.2.2.

[214] Einhard, Translatio IV, 2. Translation: Dutton 1998, 112.

> Later on, at the instance of Priwina, the archbishop Liupram also sent master-craftsmen from Salzburg, stonemasons and painters, smiths and carpenters; these [masters] built a notable church within the walls of the city of Priwina [Mosaburg/Zalavár]; [this church] has been built on the initiative of Liupram [...][215].

Of course, this does not mean that *all* the construction workers had necessarily their residences in the most important cities. Some of them must have surely lived in smaller towns and in the rural areas too. But, at least for the most skilled masters (those who had more chance to travel for work), a major city was probably the best option: locations like Rome, with its fervid and continuous building and renewal activities, could offer an incomparably larger market.

A last remark must be made concerning the 'identity' of the travelling craftsmen. It is important to keep in mind that the issue of their *provenance* is completely different from the issue of their *cultural belonging*, or their *ethnicity*[216]. The sources collected here only attest the cities the artisans came from. This corresponds to a purely geographical, not cultural, matter. In no way one should understand that a craftsman summoned, for example, from Rome, was necessarily a Latin, Italic worker as opposed to a 'Barbaric' / Lombard one – as, on the contrary, some scholars reckoned, when matching well-done sculptures with the heirs of the antique grandeur, or when suggesting that the Latin sculptors' names engraved in the stone corresponded to persons of non-Germanic ethnos[217]. Since a long while, the archaeologists dealing with grave goods and personal garments are very sceptical about simplistic and automatic links between objects and ethnical identity: because of the very public nature of architecture, this is all the more true for buildings and their sculptures, whose ethnical labelling appears indeed «senseless»[218]. The circulation of people, and the presence of groups of foreigners and migrants in the Early Medieval European cities, towns and rural areas is on the other hand widely attested by the archaeological and written evidence[219]. In this regard, one can mention a text of Einhard that has been quoted in the previous pages, i.e. his beautiful *Translatio*, densely interspersed with mentions of foreign persons, different languages, various habits and cultures coexisting in the same territory[220].

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[215] Conversio Bagoariorum et Carantanorum 11. Translation: M. Beghelli. – On the archaeological excavations in Mosaburg/Zalavár see Szőke 2007, with further literature, and Szőke 2014, 51-91.

[216] The literature on the matter of identity, ethnicity and culture in the past is immense. For a detailed introduction to the subject as regards Early Medieval Europe see Pohl 2000.

[217] See Chapter I.1.

[218] Lomartire 2009, 206.

[219] An exhaustive collection of studies on the subject can be found in Quast 2009a.

[220] Einhard, Translatio.

III.2.4. **Excursus. Migration, mobility, and the almost mythical perpetual itinerancy: builders, stonecarvers, and other craftsmen in the West and East**

Despite being very different phenomena, craftsmen's mobility and migration have often been confused, the terms being assumed to be equivalent[221]. Migration entails a permanent change of residence and was always possible: just as for many other people in Early Medieval Europe, artisans could move from one place of living to another. Migration could be completely unrelated to the manufacturing process and the type of goods produced: both craftsmen working a completely sedentary craft and others for whom frequent mobility was essential to the profession could change their place of residence at a certain point in their lives, for the most diverse reasons.

Tracing craft migration from an archaeological viewpoint is not an easy task. Since analytical techniques on human remains have greatly developed in the last years, laboratory tests, at least in theory, could securely tell whether or not a given craftsman was an immigrant. Even more interestingly, such tests could enable scholars to ascertain possible migration-flows of manufacturers in certain areas and periods. Yet to this day, carrying out a comprehensive study of this kind would be quite problematic, because the graves surely ascribable to craftsmen are rare, and among them many categories of professionals are almost entirely unattested – for instance, stoneworkers and sculptors[222].

On the other hand, although the written sources rarely concern the 'humblest' productions or 'ordinary' artisans, they can still provide some significant information about the skilled masters: along with their temporary mobility, the written record also attests some cases of permanent change of residence. For instance, an early 9th century account of a miracle – mentioned earlier in this work[223] – speaks of the somewhat 'forced' change of residence of the blacksmith Anglemarus, comparable, in a way, to the abovementioned case of Rumaldus[224]. The account states that master Anglemarus became blind, and then recovered his eyesight following a visit to the abbey of Saint-Hubert – nowadays in Belgium – thanks to the Saint's intercession. Anglemarus' gift of two bars of

[221] On this point, see: Pinar Gil 2017. – Beghelli 2022. Both with literature. – On mobility vs. migration see Quast 2009.

[222] The profession of the deceased is usually identifiable through the tools deposited in the grave, but, as said, craftsmen's' graves are extremely rare (for some examples see Roth 1986). Very few sarcophagi belonging to stonemasons / sculptors, or architects are known, in all cases void of human remains: Cattaneo 1888, 57. – Coutil 1930, 64. – Roth 1986.

[223] Paragraph II.1.2.

[224] i.e. the artisan 'donated' from Louis the Pious to archbishop Ebbo: the chronicler states that he was not supposed to come back, and would stay in Reims 'for the rest of his life'. Rumaldus, was ordered by the emperor to go to Reims, so, despite this is actually a case of permanent change of residence, it was hardly a case of voluntary migration.

iron as a sign of gratitude did not seem enough to the abbot, who asked the blacksmith to permanently move to the monastery and work there[225]. One finds examples of (most probably) 'forced' migration also in the East, such as the marble workers listed among the most luxury 'goods' imported from the Byzantine Empire in the caliphal capital Baghdad around 850[226], or those imported from China (!) to Iraq according to a 9th century account[227]. To come back to the West, among the 'voluntary' cases of migration, the most renowned is probably that of the goldsmith Eligius, who, born in Chaptelat, moved to nearby Limoges, where he served his apprenticeship so brilliantly that a few years later he moved to Paris to work first at the court of Chlothar II (613-629), then at that of Dagobert I (629-634). There he was even appointed chief councillor, before becoming bishop of Noyon-Tournai, and finally being declared a saint[228].

Particularly interesting are a number of records, dating to the 8th-9th centuries, that allow to follow the movements of different individuals within the Italian territory. Basing on previous work of Fedor Schneider, Cinzio Violante collected all the official acts and documents regarding people who moved from Northern to Central Italy, and precisely to Tuscia and Sabina, regions which included parts of nowadays Tuscany, Umbria and Lazio[229]. Following the Carolingian conquest of Tuscany, the gradual settlement of Franks, Alamanni and Baiuvarii is attested, these peoples being so designated – i.e. together with their provenance – in the documentation. At times, their profession is mentioned: we find for instance some coppersmiths (*calderarii*), and one of the Frank immigrants was a goldsmith[230]. Some masters builders are mentioned, too: in particular, a group of documents offers the fascinating opportunity to follow the story of two brothers, coming from 'North of the river Po', along a couple of decades. In September 787, Natalis and Appulo, *magistri casarii* (i.e. master builders specialised in farmsteads) *transpadani* (i.e. from North of the Po river) bought for 60 *solidi* a house in Vicopelago, just outside Lucca. Business must have gone well, because only one year later they bought for 80 *solidi* a vineyard with its enclosure and an allotment of forest land to procure timber (to be used for work?). More than 15 years later, in 805, we find the

[225] Mignot 2015, 5-6. The blacksmith came from Marloie, 22 km away: in this area, several mineral outcrops of iron, haematite and limonite, have been documented; these were mined as early as the Roman period, as shown by a number of smelting and forging furnaces found in nearby villas.

[226] «From the Byzantines' country [we import]: gold- and silverware, dinars of pure gold, medicinal plants, gold-woven textiles, abrūn [?] silk brocade, spirited horses, female slaves, rare copperware, unpickable locks, lyres, hydraulic engineers, agrarian experts, marble workers and eunuchs»: McCormick 2001, 591.

[227] Greenhalgh 2008, 101.

[228] Vita Eligii. – Vierck 1974. – Lafaurie 1977, esp. 114-115. – Vierck 1985. – Beghelli 2017, 252-255. – Pinar 2017, 11. – On Eligius see also Paragraph III.2.7.

[229] Schneider 1914, 178-182. – Violante 1987. The documentation comes from ecclesiastical archives.

[230] Violante 1987, 437-438.

same Natalis in another document: we thus find out that, in the meantime, he had constructed a church, and was now donating to it all his possessions and making arrangements to be the rector and the administrator of this church for the rest of his life[231]. At the beginning of the act, he is designated again as a master builder from 'North of the river Po':

> In the name of the Father and of the Son and of the Holy Ghost. Charles His Serene Highness crowned by God [...] on November the 13th 805. I, Natalis, master builder from North of the Po river, made a church in honour of God, and Mary always virgin, and the blessed Peter prince of the apostles, in that city and in that plot of land which I had obtained from the venerable Jacob bishop [in the surroundings of Lucca] [...][232].

In this and other documents, those who are called '*transpadani*' are persons of recent immigration, belonging to the first generation that settled down in the new land. Usually, individuals in the official acts were designated by their patronymic, e.g. 'X son of Y'. This was however not possible – or would have been useless – for the newcomers, whose fathers' names were unknown to the local administrators[233]. Much more practical was to use the place of origin instead, a datum known to all, that allowed to immediately identify the person in question. When further documentation is available about the sons of these first immigrants, though, they lose the designation of '*transpadanus*' and they gain their proper patronymic. The fathers' names of the second generations were, by then, known and recognisable – and, probably, these individuals were no longer perceived as foreigners[234].

What the cases presented so far have in common – whatever the reasons for the migration and the distance from place of origin – is a movement towards central places: Lucca was an important city, the former capital of the Lombard duchy of Tuscany and an episcopal see; the abbey of Saint-Hubert, founded in the 7th century, was a renowned centre in the Carolingian period, hosting pilgrims and attracting merchants to the associated market place; finally, and needless to say, the locations in which Eligius worked followed one another in a crescendo of prominence. If major urban centres were almost the only possible choice for craftsmen closely linked to the

[231] Violante 1987, 408-413, with literature. – Wickham 2005, 389-390. – Similar arrangements existed in the East: «Throughout the Byzantine period, a patron could be granted the legal status of *ktetor* as founder or re-founder of a religious establishment, along with which came certain proprietary rights: care in old age, a privileged place of burial, and prayers on behalf of one's soul» (Ousterhout 2019, 83-84).

[232] Archives archbishopric of Lucca I.34. Translation: M. Beghelli. See Violante 1987, 409-410.

[233] Violante 1987, 425.

[234] Violante 1987, 439. An interesting datum: on the contrary, Franks, Bajuvarians and Alamans usually kept their area of origin as a surname for two or three generations.

political power structure – for instance some Lombard, Merovingian, and Carolingian *aurifices*, *argentarii* and *monetarii*, or some Northern European goldsmiths – they also attracted all other kinds of skilled artisans, for a number of reasons: they provided a market for their services and products which was broader than elsewhere; they could act as excellent distribution points for the goods; and they gave the masters the opportunity to get closer to the secular and ecclesiastical elites, in the way Eligius is attested to have done[235]. Such characteristics made these locations ideal places of residence for sedentary and mobile craftsmen alike.

Prominent cities, as seen in the previous Paragraph, were also the best option for master builders. As for our Natalis and Appulo – who, as well as many of their colleagues, ran a 'family enterprise'[236] – we do not know why exactly they moved away from their places of origin, but they probably must have thought that Lucca would offer better professional opportunities[237]. In the new land, they seem indeed to have prospered, judging by the proprieties that they could afford. Documents like the ones concerning the brothers stonemasons are extremely precious, for they allow a glimpse into the real life of Early Medieval craftsmen, providing data on their social status and financial situation, even informing us on details like how they invested their money[238]. As Cinzio Violante noticed, good possibilities of work for Natalis and Appulo could have been offered by monasteries with extensive possessions and estates, like not only S. Salvatore (Lucca), but also Monte Amiata (near Tuscania) and Farfa (near Viterbo)[239], thus possibly qualifying the brothers as mobile masters.

If, as seen above, a diachronic overview shows that the (temporary) mobility of builders and stonecarvers was certainly not new, but had a long history before the Early Middle Ages[240], a synchronic survey highlights two relevant aspects: firstly, artisanal mobility was not exclusive to building craftspeople, but concerned other types of professionals, too; secondly, it was far from being a Western phenomenon, as it is well attested in other areas[241]. As for the first point, the available written sources seem to confirm that mobility, and especially long-distance journeys, often concerned the most skilled artisans. A significant example is provided not only by the goldsmith

[235] Delogu 2010, 100-103. – Pinar 2017, 10-12. – Coatsworth / Pinder 2022, 22. All with literature

[236] See Paragraph III.2.2.

[237] For the sculptural, architectural and artistic production of this period see Ducci 2013, esp. 44-45.

[238] On these aspects, see also Paragraph III.2.7.

[239] Violante 1987, 436, 453-454. – Relations with the Church are indeed attested by the document of the year 805.

[240] See Paragraph III.2.1.

[241] On both these points see: Laiou / Morrisson 2007, 33. – Guidobaldi 2016. – Marsili 2019. – Beghelli 2022. – Beghelli / Marsili forthcoming. All with literature.

Eligius – a 'migrant-mobile' master who, besides residing in different centres in the course of his life, sometimes temporarily left his place of residence to work elsewhere[242] – but also by the shipwrights sent in the early 7th century by the Lombard king Agilulf to the king of the Avars[243]. As for the second point, we have already seen the case of the Byzantine master craftsmen sent to Venice by emperor Leo V[244]. The skilled stonemasons from Constantinople must have also very frequently travelled within the borders of the empire, for the capital was one of the few locations where architectural workshops continued to exist during the Transitional Period[245]. On the occasion of major projects, though, additional workforce – both skilled and unskilled – might be needed even in Constantinople: for the building site of Valens' aqueduct in the second half of the 8th century, for instance, Constantine V is said to have summoned hundreds of masons, plasterers, clay-workers, labourers and brickmakers[246]. Another example from the Byzantine empire concerns the mobile sculptors operating at Skripou and other places in Boeotia in the second half of the 9th century[247].

What, instead, written and archaeological documentation hardly attests, are artisans who were permanently wandering: earlier in this work we have seen that this (somewhat Romantic) concept is rather unconvincing in the case of Early Medieval builders and stonemasons[248], but the same model has been proposed for other crafts. Yet the problem with these assumptions is that they were often made in the absence of real evidence, merely resulting from the approach of specific authors, or from the explanatory model favoured in each archaeological period[249]. Thus, the movement of either the craftsmen or the objects has been indifferently used to explain the propagation of items of identical typology, typically clothing accessories. In the majority of cases, the archaeological evidence is rather clear, and allows ascribing the movement of such easily portable items to the mobility of their owners, or to that of merchants[250]. However, the fact that the manufacturing of these objects could theoretically occur both on a sedentary and on a mobile basis

[242] Pinar Gil 2017, 11, with literature. – See also Paragraph III.2.7.

[243] Hist. Lang. IV, 20.

[244] See Paragraph III.2.3.

[245] Ousterhout 2019, 56, 353.

[246] Whittow 2009, 485. – Ousterhout 1999, 56, who remarks that the depopulation of Constantinople was one of the factors which caused the need of labour force from outside the capital. – Whittow 2009, 485.

[247] Megaw 1966. – Vanderheyde 2020, 109.

[248] See Paragraph III.2.3.

[249] Quast 2009, 1. – Ashby 2015, esp. 11-15, 18-19.

[250] Quast 2009, esp. 13, 17. – Wars and raids were of course other ways by which objects (especially the most valuable ones) could be moved from a place to another.

has led some scholars to hypothesise the existence of itinerant artisans who would have constantly travelled, and thus disseminated their products over micro- or macro-regions.

For instance, the Early Medieval producers of bone and antler combs who lived in rural or peripheral areas were often part-time community craftsmen, otherwise employed in agriculture; these may have frequently travelled short distances to reach clients and markets in nearby settlements, either back-and-forth from the home-base, or cyclically, according to a seasonal pattern from one place to another, before returning home to dedicate themselves to a different task[251]. The mobility of these comb makers – inferred from the distribution of the objects – is plausible but remains speculative and, in any case, their condition of part-time craftsmen, with their small scale production and movements, would designate individuals who were well rooted in local societies and landscape. This makes it inappropriate to refer to them as 'true itinerants' (i.e., according to Steven Ashby's definition, craftsmen in perpetual movement, lacking a fixed workplace or workshop[252]. The same, for different reasons, applies to skilled goldsmiths, often (and, likewise, without solid evidence) referred to in literature as 'itinerant', and considered as essentially nomadic characters. Even one of the most quoted examples, Eligius, was in fact 'just' a migrant, who resided in increasingly large cities and reached more exclusive social *milieux* as the fame of his talent spread. As seen above, the occasional journeys to different locations should be described as 'mobility' rather than '(true) itinerancy': normally, his work took place on a sedentary basis, just like that of his colleagues goldsmiths and minters. Also very far from the Romantic myth of the permanently wandering metalworkers, were some oft-quoted – and not Early Medieval, yet worth mentioning – Southern Scandinavian goldsmiths. As suggested by some 2nd-3rd century deposits containing both weapons and jeweller's tools, these craftsmen moved around with armies, at times over long distances[253]. Yet one is not facing a case of 'true itinerancy', as the goldsmiths' movement was only temporary, being limited to the duration of the military campaign. Moreover, the emphasis on mobility *per se* is probably misplaced; the behaviour of the Scandinavian masters should be interpreted as a manifestation of a much more general phenomenon, stretching over a long period of time: the very best goldsmiths stayed close to the elites. Eligius spent part of his life, physically present, at the king's court; the *aurifices*, *argentarii* and *monetarii* generally resided in prominent political centres, and so – it seems – did the master jewellers in the British Isles; and after all, as archaeological evidence shows, even in Scandinavia the goldsmiths normally exercised their craft

[251] Ashby 2015, 20, 22-23.

[252] Ashby 2015, 19-20, 24-25.

[253] Quast 2009, 5-7. – Ashby 2015, 13-14. – Pinar Gil 2017, 15-18.

on a sedentary basis within central places. Thus, rather than a fundamental, intrinsic element of their working life, the temporary itinerancy of the 2nd-3rd century Scandinavian goldsmiths was simply a way to remain near the patrons: the military aristocracies probably wanted their finely decorated weapons to be repaired in case of damage, and needed golden *insignia* to be made for the most valiant warriors[254].

These few examples allow to highlight a last point: labels such as 'mobile' or 'sedentary' cannot be applied to entire fields of craftsmanship, since the actions of craftsmen depended on the circumstances[255]. Once more, what is usually conclusive is the analysis of the context, and in particular the amount and/or quality of the manufactured goods and the extent of the related market. Returning to the combs: while those made in rural areas might have required their makers to travel to nearby markets – at least in some cases and in certain periods of the year –, their more sophisticated counterparts manufactured in substantial quantities in large workshops at central places – for instance, the one at Crypta Balbi in Rome – could immediately find their buyers or their way to the trade networks, with no need for the artisans to move[256].

III.2.5. **Elite-networks, mobility of craftsmen, and the artisanal knowledge**

The starting point of this Part III. has been the question of the diffusion of sculptural fashions in Europe, and the investigation of their concrete means of propagation. The written records seen so far strongly suggest that the transfer of not only sculptural, but also architectural models occurred first and foremost by movement of persons rather than by movement of objects (i.e. *Musterbücher*, cartoons, or stone items)[257]. The transfer of fashions implied a transfer of artisanal knowledge, as every artistic style rests, ultimately, on the specific techniques used to create it. These cannot be learnt by simply copying, but are the results of years of practice in the workshop[258]. And yet, as seen above, this does not mean that the patrons had no role in the diffusion of architectural styles. Quite the opposite: in selecting a certain team of artisans instead of another, the patrons functioned as a sort of 'filter' of artistic fashions: the result of their choices over three

[254] Coatsworth, Pinder 2022, 22. – Pinar Gil 2017, 15-18.

[255] Compare the remarks made by Ashby 2015, 18.

[256] Wickham 2005, 699-700. – De Marchi 2014a, 69. – Ashby 2015, esp. 19, 23.

[257] One of the first scholars who discussed the issue 'movement of things VS. movement of persons' in Archaeology was Joachim Werner, whose studies and methodological approach still remain of paramount importance: among many, see Werner 1970.

[258] See Chapter III.1., in particular the second half of Paragraph III.1.2, Paragraph III.1.3, and Paragraph III.4.11. – These points were emphasised already in the early 19th century by scholars like Gottfried Semper and Giovanni Morelli: see Francovich / Manacorda 2017, s.v. Stile.

centuries is precisely the Early Medieval sculptural and architectural heritage survived to this day[259].

The ecclesiastical and secular elites that commissioned the construction and decoration of churches and monasteries were the main driving force for the mobility of skilled craftsmen, and political alliances played a most relevant role in the 'exchange' of artisans. At times, especially in presence of conflicts, it was preferable to summon makers from afar, but sent from 'friendly factions', rather than from closer – but possibly not so friendly – regions: a case in point are the abovementioned builders sent by Fortunatus of Grado to Ljudevit[260]. The written evidence clearly shows that the movement of skilled masters virtually always occurred as a consequence of a previous contact between high-ranked individuals, thus dispelling, again, the Romantic 'myth' of the permanently wandering artisan[261]. The makers moved in occasion of specific projects, and stayed away for limited – if at times prolonged – periods[262]. Thus the immaterial elite-networks traced, in this way, the material routes along which the skilled masters moved: contrary to some previous hypotheses, they frequently travelled across political and diocesan boundaries, their movements mirroring the 'transnational' and 'trans-diocesan' relations between elites members. The one who was in need of workforce could either trust his counterpart's judgment in selecting the (best) artisans, or, having already seen the work of a certain team of craftsmen (e.g. during a journey), could contact the specific individual who could fetch that specific team. Either way, this is not so dissimilar to our contemporary – if much more ordinary – practices, when we ask advice to a friend or a neighbour before hiring a plumber, a tiler, or an architect, to work in our house.

A very significant passage on how these contacts worked in the Early Middle Ages – yet concerning glassmakers not stonemasons – comes from a letter sent by Cuthbert abbot of Wearmouth-Jarrow to archbishop Lull of Mainz in 764:

> If you have in your district a man who knows how to make glass vessels, I beg you to send him to me when the time is right. Or, if such a man should be found outside your spiritual district, in the district of another [bishop], I beg you to use your influence to spend with

[259] On these points see Paragraph III.1.2. and Part IV. – See also Utrero Agudo 2012, esp. 140-141.

[260] See Paragraph III.2.2.

[261] See Paragraphs III.2.3 and III.2.4.

[262] On this point see Paragraph III.2.3.

said [bishop] to let me have a glazier; for we all here [in England] are unacquainted with and unskilled in this art[263].

Apart from being a good example of the 'trans-diocesan' / 'trans-national' character of elite-networks (well-known to historians), about this letter one should also note that the sender (Cuthbert) takes care to specify that, in case the receiver (Lull) had no direct contact to skilled glassmakers, he should ask around, to other 'network nodes'. Thus the artisans did not always arrived to destination through just one direct passage between two nodes of elite-networks, but at times – and, one might assume, more often in the case of 'middle-ranked elites' – further contacts were necessary in order to find the suitable makers[264].

Among the written records about building craftsmen seen so far, the letters between Hadrian I and Charlemagne probably attest the contact at the highest rank, but almost all 'types' of secular and ecclesiastical elites – abbots, bishops, noblemen, etc. – are represented as senders and receivers of teams of specialised construction craftworkers and stonemasons[265]. All this shows how oversimplified were some traditional scholarly interpretations, that pictured the Middle Ages as populated by (quite inept) artisans, who wandered aimlessly in search for a construction site and a new job[266].

The role of the elites-networks in the transfer and diffusion of artisanal knowledge and artistic fashions is of course not peculiar to the Early Middle Ages, nor is limited to architecture and sculpture. According to a model proposed by Dieter Quast, from the Roman Iron Age to the Viking period, foreign objects and foreign features could arrive in a given territory by means of transfer of goods, transfer of ideas, transfer of persons, and transfer of technology – these four possibilities being, however, hardly conceivable as strictly separate processes (**fig. III.5**). Elite-communication is clearly reflected in the archaeological record, that attests for instance the homogeneity of status symbols over large distances and the use of similar, very refined, goldsmith techniques[267]. Quast's model was mainly based on small finds and funerary archaeology, yet many of its points apply to Early Medieval architectural sculpture, too. In high quality jewellery and in sculpture alike, elite-communication was the driving force behind the diffusion of similar fashions over large territories.

[263] Sancti Bonifatii et Lulli ep. 116. – See Roth 1986, 116. – Translation: M. Beghelli. – On Lull and Cuthbert see also: Rollason 2010, 196-197. – Westgard 2010, 204-205.

[264] See Part IV.

[265] On these points see Part IV, and especially Paragraph IV.3.1.

[266] On this point see Leclercq-Marx 2001, 1-2, with literature. – See also Paragraphs III.1.2-III.2.4 and III.2.7.

[267] Quast 2009. – See also Quast 2012, esp. 111-112, with literature.

In the case we are concerned with, 'transfer of persons' (craftsmen), 'transfer of technologies' (sculpting techniques) and 'transfer of ideas' (sculptural fashions) are deeply linked, as the mobility of artisans was the main factor that brought innovation ('foreign features') in a given area. A difference lies in the role of movement of objects, as the factor 'transfer of goods' (i.e. long distance trade in finished, decorated stone elements) is not attested and does not apply to Early Medieval sculpture: it applies, instead, to part of the Roman and Early Byzantine sculptural production[268]. At the highest political levels, are attested rare cases of Early Medieval long-distance movement of ancient stone items, i.e. Roman or Late Antique *spolia* that were at times presented as a gift[269]. Yet, in these cases, what the contemporaries probably perceived as the main feature of these stone items coming from afar was not their 'foreign' nature, but their venerable antiquity or their symbolic value. In other words, because in the early Middle Ages the sporadic long-distance movement of stone coincided with movement of *spolia*, it hardly acted as a mean of propagation of new sculptural fashions and 'foreign features'. On the contrary, this process is attested in the Roman and Early Byzantine periods (**fig. III.5**).

III.2.6. **Mobility of craftsmen and diffusion of architectural and sculptural models: mainstream fashions VS. individual interpretations**

In order to better understand the mechanisms of diffusion of architectural and sculptural fashions in the Early Middle Ages, it is necessary to focus again on the concrete artisanal practices. A number of recurrent questions in archaeology and art history can find satisfying answers in the concrete ways of functioning and organisation of a workshop. Among the many that could be quoted, the most appropriate voice to address this subject seems once again to be that of a sculptor – one of the few voices that has been put in writing. Stoneworking, Peter Rockwell says, is a conservative craft, is a technique passed if not from father to son at least from master to assistant[270]:

> Stone working has always been a craft or 'art' in the old sense of the word. This means that it is something that has been taught by example. A young person was apprenticed to a master. [...] You were in the workshop and you were expected to watch what was going on. [...] Training therefore had a component of observation about it. The apprentice was

[268] See Part II. – On this point see also: Russell 2013, 208-211, 241-247, 294 (Roman period). – Sodini, Barsanti, Guiglia Guidobaldi 1998, 318 (Byzantine period).

[269] See Paragraph II.1.2.

[270] Rockwell 1993, 3. On this point see also, for instance: Ortolani 1989. – Ousterhout 2008, 12, 38. – Beghelli 2014. – Neri 2014. – Ousterhout 2019, 528. – Vanderheyde 2020.

> expected to learn by watching the more advanced workers while doing the more menial tasks. Instruction as such happened when the apprentice needed to know, that is when the knowledge was necessary to the work required. Obviously an apprentice who learned more by watching and with less need for instruction not only moved on faster but was more valuable to the master worker. [...] Learning by watching the masters work means also watching the step-by-step nature of the processes. Learning by doing means directly absorbing the necessary sensitivity to stones and tools. Both of these are practical rather than theoretical. An apprentice working in a workshop only learns theory as it is necessary. The structure that controls the process of education is the practical one of getting through the jobs that are there to be done. [...] This is almost the opposite of modern education in which a theoretical background is considered vital to practice. Because a knowledge of geometry is necessary to laying out stone working, stonecarvers have a considerable practical knowledge of the subject. One can see this in some of the laying out lines that are still visible on Roman and Medieval stoneworking. It cannot be said therefore that theory is non-existent, only that it is dependent on practice[271].

What the masters taught to the apprentices was not *any* way to do a *anything*, but a specific way to do specific things – with no significant differences in this respect from the time of the *magistri Kalmarus* and *Ursus*[272] to at least the Modern Age. The branch of Archaeology called 'Archaeology of production' significantly grew in the last decades, providing abundant evidence that essentially every craft, ever since the Neolithic, has functioned in this way[273]. In general, a workshop can be defined as the institution where a certain production process was developed and passed from a generation to the next. In this context, a production process must be understood as a precise sequence of operations (or actions) which are learnt by practice and are therefore difficult – or even risky – to alter, modify or innovate[274]. In this way, each workshop of sculptors formed a *repertoire* which certainly could be subject to gradual change over time, but that was peculiar to one and only group of craftsmen[275]. Of course, this repertoire was generally in line with the taste of the period, and thus interdependent with the patrons' expectations. Analysing the relations among

[271] Rockwell 1993, 250-251. – Peter Rockwell is the only contemporary author treated as an actual source in this work: for the reasons of this choice see above, Paragraph III.1.3.

[272] See above, Paragraph III.2.2.

[273] Mannoni / Giannichedda 2017 [1996].

[274] Ousterhout 2008, 12, 38. – Mannoni / Giannichedda 2017 [1996], esp. 12-18. – Utrero / Caballero 2012, 428. – Villa del Castillo 2016, 173. – On metal workshops, see also: Beghelli / De Marchi 2017. – Pinar Gil 2017, both with literature.

[275] On this point for Early Middle Ages see: Rockwell 1993, 134. – Jurković 2000.

repeated designs, sculpting techniques and the customers' «demand for objects in repetitive forms, whether architectural elements or statuary» in the Roman period, Ben Russell observed that «these repetitive forms were not a result of […] attempts to simplify forms and increase efficiency, but rather part of an established visual repertoire which individual commissioners bought into. Part-finished objects show that carvers tackled these forms in the same way again and again»[276]. Differences with the Early Middle Ages apart – like the extent of the demand and the existence or not of a long-distance trade in stone products – these remarks on the visual repertoire are fully applicable to the period we are concerned with. While in the Roman period the upper-class commissioner of a sarcophagus could have easily opted for a narrative scene with human characters, an Early Medieval patron for a chancel screen in a church probably expected interlace and vegetal patterns on it.

In other words: on the one hand, we have the specific forms and designs of one specific sculpting workshop; on the other, since these forms belonged to the general taste of the period, they are, to some extent, similar from one workshop to another (see below, **fig. III.31**). Against this background, how should one interpret the material remains, i.e. the Early Medieval sculptures survived to this day? And in which ways can one relate the material remains from concrete find-spots with the mobility of craftsmen so abundantly attested by the written record? These are rather relevant questions, as it seems that the mix-up between the two levels – specific forms and general taste – created a number of misunderstandings within the scholarly debate on the diffusion of artistic models, as the discussion on the *Musterbücher* and the like well exemplifies[277]. As shall be seen, the very same questions and debate have concerned not only Early Medieval sculpture, but also, in general, the architecture of the same period. Therefore, some distinctions are necessary.

As said, on the one hand, there is what one could call 'mainstream fashions'. On the other, there are the individual interpretations of it (**fig. III.31**). The diffusion of mainstream fashions in sculpture and architecture is a process that occurs over the *longue durée*, can be based to a certain extent on imitation, and ultimately contributes to shape the visual culture of a given period.

As it is well-known to art historians – who thoroughly addressed the subject – the visual culture changed between Late Antiquity and the Early Middle Ages[278], most prominently in architectural sculpture, but also in other features of buildings' decoration, like floor mosaics. Gradually, narrative subjects and human figures were abandoned, and interlaces, plant scrolls and

[276] Russell 2013, 358.

[277] See Paragraphs III.1.2 and III.1.3.

[278] Literature on this point is immense. A classic: Bianchi Bandinelli 2002 [1970]. – See also Part I.

geometrical patterns, from a marginal position, gained space, passed from the frames to the central part of the compositions, and became the main subjects. Eventually, animals were almost always 'confined' to the corners of ciboriums' panels, or to the role of small filling motifs in interlaced patterns, and human representations turned very rare[279].

Between Late Antiquity and the Early Middle Ages, elites had slowly changed their taste, or sculptors had started to propose new decorative patterns, or, probably, both – though a detailed art historical discussion of this issue clearly lies outside the scope of this work. The fact is, that this gradual change in taste had resulted in an Early Medieval architecture overflowing with low-relief interlaces and floral motifs. As the written record attests, from the earlier phases of the development of this new fashion in the 7th century, mobility of craftsmen, fostered by the elites, must have been determinant in the diffusion of the new taste. At this 'general' level, imitation has a role, but only in a broad sense. For instance, an artisan could have seen in some place one of the first buildings decorated with the new fashion of plant scrolls and interlaces, and might have decided to incorporate some of the motifs in his own repertoire – thus producing, of course, his own particular variants of them. So, in a broad sense, and over the *longue durée*, both the travelling craftsmen and the elites who fetched them contributed to the diffusion of this peculiar Early Medieval 'mainstream fashion'. The result are sculptures characterised by overall similarities, or buildings that look the same in their general shape or plan: but a closer look usually reveals significant differences.

Another thing entirely is the diffusion of the very same forms and techniques[280]. This occurs on (relatively) short term, cannot be explained with a slavish copying of someone else's work – or of someone else's drawings – and results in substantially identical sculptures in different locations, or in buildings showing the very same range of construction methods and technical procedures.

These correspond to specific, *individual* interpretations – among innumerable possibilities – of the sets of shapes and techniques pertaining to the visual culture (mainstream fashion) of the period[281]. The issue of Medieval patrons' expectations has been briefly addressed above, the main difference in comparison to present-day being the commissioner's acceptance that the design would take shape along with the building, or with the sculptural process[282]. A hypothetical Early Medieval patron might well have said to a hypothetical team of Frankish workers: «I want a building like this one» while pointing at a fifty-years-old church erected by Roman artisans. But he probably did not

[279] Napione 2010. – Jurković 2000, 226. – Vanderheyde 2007, 78.

[280] Many examples will be given in Chapters III.3 and III.4.

[281] On this point see: Jakšić 1997. – Jurković 2000, 227, with literature.

[282] See Paragraph III.1.3, esp. the remarks of Peter Rockwell (quoted in full) and Robert Ousterhout 2008, 86.

expect that the new building and decorations would have looked *exactly* the same, or would have been constructed with the very same methods, for the simple reason that construction techniques cannot be replicated by simply casting a glance to an older wall. This point has been stressed in a number of thorough archaeological studies, and especially in the last two decades in the works of Giovanna Bianchi, Luis Caballero Zoreda and María de los Ángeles Utrero Agudo[283]. According to these scholars, architectural sculpture, and the buildings that contained it, belonged to the same whole, and must therefore be studied using the same archaeological methods: the tendency to leave sculpture to the sole domain of art history, the consequent discrepancy of methodological approaches, and the lack of communication between these academic disciplines has at times created inconsistencies in the interpretation of Early Medieval architecture. In the just mentioned studies, a central role is played by the notions of 'typological sameness', 'production niches' (also called 'production milieux'), and 'technical horizon'. Types / typologies consist of groups of sculptures characterised by the very same technical features and selection of motifs. Types must be related to individual 'production niches': these are in turn related to a specific period and must be distinguished from the general 'technical horizon'. The technical horizon encompasses a wider time-span, and includes a sequence of different 'production niches' that follow one another over time[284]. Similarities between 'technical horizon' and what has been called here 'mainstream fashion', and between 'production niches' and 'individual interpretation of mainstream motifs', are easy to recognise. The notion of 'production niches' or 'production milieu', which precise definition was first detailed by Giovanna Bianchi, also applies to architecture in general. It is precisely the close connection between techniques and visual appearance of an artefact – i.e., the outcome of building or carving activities – that indicates that nearly identical products must pertain to the same production niche. As seen above, distinctive elements of artisanal knowledge can only be learnt within the workshop practice: therefore, they can neither be transmitted by means of drawings, nor exactly copied from ancient buildings, but are transferred from a location to another by means of movement of craftsmen[285].

[283] Among many, see: Bianchi 1996. – Caballero Zoreda 2012. – Caballero Zoreda / Utrero Agudo 2012. – Utrero Agudo 2012. – Caballero Zoreda / Utrero Agudo 2013. – Villa del Castillo 2016. – Utrero Agudo 2016. – See also Mannoni 1976.

[284] Caballero Zoreda 2012, 116-117.

[285] On these points see: Bianchi 1996. – Caballero Zoreda / Utrero Agudo 2012, esp. 428. – Caballero Zoreda / Utrero Agudo 2013, esp. 127-128. – Villa del Castillo 2016, 173-174. – Utrero Agudo 2016, esp. 285-287. – In the archaeological practice, this also has significant consequences in the chronological attribution of architectural structures. According to Caballero Zoreda / Utrero Agudo 2013, a meaningful example are some buildings in the Iberian peninsula, that present identical construction features and techniques of securely dated buildings of the 8th-9th centuries, but are nevertheless assigned to the Visigothic period. This would entail the rather improbable assumption that building techniques remained absolutely unchanged for at least two hundred years. – When

On the one hand, distinguishing the levels of 'mainstream fashions' and 'individual interpretations' of it, and considering the workshop practices of the past, are significant grounds to a better understanding of the artisanal mobility attested by the written sources. On the other, as shall be seen in detail in the next Chapters, this is also essential to an accurate interpretation of the material architectural remains and their sculptural decoration.

III.2.7. **Gold *solidi*, pigs, and houses: the travelling craftsmen as a status symbol, and the social status of craftsmen**

The number of existing records on mobility of artisans is rather remarkable, especially if one considers the general scarcity of sources on Early Medieval construction-craftspeople in comparison to other periods[286]. Overall, the written documents analysed in the previous Chapters show travelling artisans as being very often related to high- and very high-level construction sites, frequently presented by the compilers as sort of status symbol for the elites who fetched them. Skilled construction craftworkers – including of course sculptors – and their precious fund of artisanal knowledge, were highly prized by the contemporaries. The bigger the project, the larger the distances covered by the artisans, the more enthusiastic the tone of the chroniclers. Having the power to summon the best craft-workers from afar was perceived as a noteworthy achievement, in the same way as having the possibility to use the finest building materials, the most beautiful marbles, and the most precious metals and stones.

In general, the foreign artisans represent an element of prestige that is always worth recording – no matter if it is a large group coming from far away, or simply a single worker who must cover the relatively shorter distance between Aachen and Reims. Indeed, the written sources attest virtually all lengths of the journey of travelling craftsmen – from a few dozens of kilometres to a few thousands – and a quite diversified clientele for their services: abbots, bishops, popes, noblemen, kings, and emperors. The grounds for this care in mentioning travelling artisans, and the reason why they are presented as a sort of status symbol for the patrons, are in all likelihood related to their superior skills. As seen above, mobility for work was far more frequent among the most

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correctly analysed according to these methodological guidelines, sculptures can not only provide relevant information of the production context and economic framework of construction activities, but also turn into real 'index fossils' that can significantly ease the chronological assignment of a building. – See: Caballero Zoreda 2012. – Caballero Zoreda / Utrero Agudo 2013.

[286] Lomartire 2009, 208-209. – Beghelli 2014, with literature. – From the 12th century onwards, the written and iconographic documentation on construction workers is by far larger than in the early centuries of the Middle Ages. See for instance: Bernardi 2014. – Binding 2010.

talented masters. Their condition of free men has been highlighted in many studies[287], and is clear from most of the Early Medieval legislation concerning craftsmen and from most of the written sources seen in the previous Chapters.

For sculptors, the awareness of one's talent emerges from the practice of signing their works: above, few have been mentioned among many other cases attested in the Early Middle Ages[288]; in the words of Peter Rockwell, «the most delightful example from this period is the signed self-portrait of a carver named Ursus on the altar of the abbey church at Ferentillo, Italy. This carving is a living reminder that carvers' egos remained ever rampant, even in this supposedly Dark Age»[289]. The custom of signing sculptures would have become even more frequent in the Romanesque and Gothic periods, and, also in Byzantium, it represented a continuous tradition from Late Antiquity to the end of the Middle Ages[290]. As much as the Church tried to «suppress the notion of individual genius, insisting that creative skills were a gift of God», and urged «artists to retain their humility», master craftsmen appear to have been proud of their creations, and conscious that they were admired[291].

Of course, this appreciation for high level expertise did not come without appropriate compensation. The abovementioned *Memoratorium de mercedibus commacinorum* lists the prices of diverse items and services made by the *Commacini* master builders[292], in all likelihood themselves travelling craftsmen[293]. Apart from this Lombard document, we have nearly no evidence on the precise amounts of money disbursed for the craftsmen. Ermanno Arslan and Gianfranco Pertot have tried to relate the prices included in the *Memoratorium* to the precise, real corresponding items, and to the purchasing power of the period[294]. The first point entails the issue of establishing the dimensions of the structures and objects listed in the document, for the price for every item logically depended on its size – now as then, the longer or thicker a wall, the higher its

[287] In general on this point see: Mac Lean 1995, 129. – Lomartire 2009, esp. 168-169. – Delogu 2010, 100-102. All with literature. – See also Paragraph III.2.2.

[288] See Paragraph III.2.2. – Other renowned examples are to be found, for instance, at Split (*Dominicus marmorarius*: Milošević 2000, 143), at Bobbio (tombstone of Cumianus, signed by *Johannes magister*: Destefanis 2004, 172-182, nr.1), or at Savigliano (*Gennarius magister marmorarius*: Crosetto 2013, 365). – For an overview on Early Medieval signed sculptures in Italy, see Dell'Acqua 2000.

[289] Rockwell 1993, 202. – On the same point, see also Lomartire 2009, 207.

[290] Stalley 1999, 108. – Guiglia / Guidobaldi 2011. – Lidova 2017. – On the subject of status and identity of Byzantine sculptors, see Pedone 2021.

[291] Stalley 1999, 107-108.

[292] See above, Paragraph III.2.2.

[293] Azzara 2009, 30. – Delogu 2010, 103. Both with literature.

[294] Arslan / Pertot 2009.

cost, and so forth. The measurements are expressed in feet – almost always squared feet – though a doubt remains about which foot, whether the Roman (ca. 30 cm) or the Lombard (ca. 44 cm)[295]. In any case, with 1 *solidus* it was possible, for instance, to plaster a surface of 600 square feet, or to pay for the manufacturing of 15 square feet of (decorated?) *axes*, i.e. marble slabs. The same amount of money sufficed for 9 small columns of a height of 4 or 5 feet (1,5 to 2,2 metres depending on the length of the foot considered)[296]. Saverio Lomartire has convincingly argued that the items generically defined as *axes* could include marble chancel-screen slabs, and stressed that the size of the columns is fully compatible to not only those used in windows and the like, but also to those used as elements of church furniture. In structures like the *pergulae*, pillar, column and capital were very often made with a single block of stone, and a number of surviving examples measure indeed about 2 metres[297]. The juxtaposition with the costs for plastering – but this applies to many other cases listed in the *Memoratorium* – clearly shows how expensive was the work of the *marmorarii* in comparison to other crafts. Also, it has been argued that the prices included in the list are to be referred to the workforce only, and normally did not include raw materials[298]. Actually, there is plenty of evidence to suggest that the supply of materials was generally the patron's task[299]. Therefore, one might assume that the manufacture of 9 small columns, that could hypothetically be employed in a *pergula*, costed 1 *solidus* – to which, in this case, one should add the expenses for the manufacturing of the decorated marble slabs.

If marble workers were among the best-paid artisans, can we correlate the amounts of money listed in the *Memoratorium* with the real purchasing power of a *marmorarius*? The first complication arises when trying to relate the values used as reference frame in the legislation, to the coins physically circulating in the Lombard kingdom. As well as in most parts of the West, the *solidi* mentioned in documents and laws – i.e. texts meant to be used for prolonged periods of time – functioned only as reference system, as «convenient units of billion», for the real *solidi* (with a fixed value of 1/72 *librae* of gold) hardly circulated in the Lombard kingdom after the late 6th century, and the gold content and value of the circulating coins – i.e. *tremisses*, 1/3 *solidus*, and their fractions – were subject to shifts, especially from the early 8th century onwards[300]. In the

[295] Arslan / Pertot 2009, 65-67.

[296] Arslan / Pertot 2009, 62, with complete list translated into Italian.

[297] Lomartire 2009, 176.

[298] Lomartire 2009, 179.

[299] See below, Chapter IV.2.

[300] Grierson / Blackburn 1986, 2-4, 55-73. – Blackburn 1995, 539-542. – Blackburn 2005, 661-662. – Gerberding 2005, 31-32. – Halsall 2005, 87 (quote). – Arslan / Pertot 2009, 81-82, and footnote 28. –

Lombard documentation, possibly as a reaction to these problems, references to *solidi* and *tremisses* are often replaced by references to *aurum* (gold) and, generally, *moneta* (coin)[301]. For the matter we are concerned with, all this means that it is difficult to establish what a master marble worker could actually buy with 1 *solidus*, gained for instance with the manufacturing of 9 small columns. In addition to that, sure references to the market values of goods are rather difficult to find in the official documents[302]. However, there is at least one profitable example. From the Edict of Rothari (643), it appears that, at the time when the text was compiled, with 1 *tremissis* – i.e. 1/3 *solidus* – one could buy 4 pigs of medium quality[303]. This datum seems to be consistent and compatible with the price of lard attested in the later *Memoratorium*[304], probably dating to the reign of Liutprand (712-744)[305]. Therefore, one might tentatively conclude that, with the incomes deriving from the manufacturing of 9 small columns, a *commacinus* master sculptor could buy 12 pigs. Considering the relatively little time needed for this production – about a week, with the probable help of apprentices? – and adding further possible incomes – for instance, from the manufacturing of chancel screen slabs – this seems quite a good compensation.

Above we have seen that the brothers stone builders Natalis and Appulo paid 60 *solidi* for a house just outside Lucca in 787, and 80 *solidi* for a vineyard and other lands in 788[306]. Another document states that in 739 a Rodpert *magister commacinus* sold a house at Diano (Tuscania, next to Viterbo), for 30 *solidi*[307]. These are possibly the only surviving legal acts from Early Medieval Italy that transmit sales of goods involving master builders. A direct comparison with the data conveyed by the *Memoratorium* would result in a hypothetical equation 270 small columns = 360 pigs = 30 *solidi* = a house. Cursorily, it might be noticed that today a pig costs between 500 and 800 € circa, so, at present day too, 360 pigs worth indeed a rather respectable house. Yet cases like the *commacini* marble workers clearly show how careful one should be when comparing data coming

[301] Arslan / Pertot 2009, 88-89.

[302] For instance, the prices established by law to compensate theft cannot be considered representative of the market value of the goods that have been stolen, for the amount of money owed to the victim includes both a refund for the goods *per se* and a fine to punish the crime: in general on these points see Arslan / Pertot 2009, 84 and *passim*, with literature.

[303] Arslan / Pertot 2009, 88, with references. – Interestingly, one can compare the much more expensive price for one pig in the Byzantine empire in the 7th-8th century, i.e. 2/3 to 1 *nomisma* (*solidus*): Morrisson / Cheynet 2002, 840, 844.

[304] Details on this comparison in: Arslan / Pertot 2009, 85-87. – The price of lard is mentioned in the *Memoratorium* in the context of the description of the *annona*, a fixed quantity of food and wine owed to every craftsman.

[305] On the dating of the text see: Azzara 2009. – Jarnut 2009, 23, both with literature.

[306] See above, Paragraph III.2.4.

[307] Jarnut 2009, 2 and 5-8, with literature.

from different documents and referred to different situations, and how many variables must be taken into consideration – not least because of the complex and even problematic nature of a testimony as the *Memoratorium*.

In any case, all these documents attest a quite remarkable purchasing power for master marble workers and master builders. This is not only shown by the relative comparison to other crafts in the *Memoratorium*, but also by the simple fact that individuals like Natalis, Appulo and Rodpert could afford tenant houses and lands. Also, titles as *vir honestus*, reserved to the upper-middle social classes, show the rank of masters like Rodpert in their communities[308]. Evidence from other chronologies and areas in Early Medieval Europe show indirectly a comparable purchasing power and position in the society, even if we do not exactly know how much the artisans were paid. The stonemasons working at Hexham, for instance, are explicitly said to have been 'lured' from Rome by hope of generous reward[309], whereas the special contractual clauses concerning the foreigner artisans at the building site of the Palatine Chapel show not only their high professional level and how much it was esteemed, but also the great extent to which it was compensated[310]. The old Irish laws, and in particular the *Uraicecht Becc*, also attest the privileged status of master builders, who pertained to the lowest ranks of the nobility (*aire déso*, 'lord of vassalry') together with jewellers and blacksmiths. Differently from these, however, the builders had a higher degree of social mobility: if able to practice more than one craft, they could aspire to higher ranks of aristocracy, and the status of a *sáer* (builder in wood or stone) could surpass even that of the jurist[311]. As well as their Southern colleagues, Early Medieval Irish builders and sculptors «enjoyed geographical mobility»[312].

The connection among outstanding artisanal skills, admiration for fine craftsmanship and adequate remuneration characterise other Early Medieval arts, too. A most renowned case concerns Eligius, the abovementioned goldsmith who, in the 7th century, worked first at Limoges and then in

[308] Jarnut 2009, 7-8. – See also: Wickham 2005, 389. – Delogu 2010, 100-103.

[309] Willelmus Malmesbiriensis, De gestis pontificum Anglorum III, 117. See above, Paragraph III.2.1.

[310] Notker Balbulus, Gesta Karoli Magni I, 31. See above, Paragraph III.2.2.

[311] Mac Lean 1995, esp. 131-133. – As said above, the original meaning of the word *sáer*, at the time when the *Uraicecht Becc* was written (8th century), referred mainly to those who worked wood and stone, wood to a greater extent than stone. However, over time the word shifted towards stone-builders, in parallel with the increase of buildings constructed in stone in the islands. An inscription datable to the 9th-11th centuries on a stone high cross mentions a 'Odran sair'. It is likely that *sáer* refers to the wright who took care of the structural design of the cross – whether in wood or stone – and built it, while the carver who decorated it pertained to a lower social rank. Carvers could achieve the same highest social ranks as their employers only in three generations: Mac Lean 1995, 128, 134 and 136.

[312] Mac Lean 1995, 154.

Paris, at the court of Chlothar II and Dagobert I[313]. Some passages of his *Life* are particularly charming: at the beginning of his career, the fame of his talent soon reached the royal treasurer, and after a while

> a certain cause brought him to the notice of King Clothar of the Franks. For that king wanted a seat urbanely made with gold and gems but no one could be found in his palace who could do the work as he conceived it. But when the aforesaid royal treasurer had satisfied himself of Eligius's skill of Eligius, he began to investigate whether he might complete the work as it was planned. When he was sure that [Eligius] could easily undertake it, [Bobo, the royal treasurer] went to the prince and indicated to him that he had found an industrious artisan who was at his disposal for the work without delay. Then the king most readily gave him a great weight of gold which he in turn gave to Eligius. [...] And from that which he had taken for a single piece of work, he was able to make two. [...] He had accomplished the work commissioned from him without any fraud or mixture of *siliquae*, or any other fraudulence. [...] Having brought the completed piece to the palace he gave one seat to the king and kept the other back. The king began to marvel and praise such elegant work and ordered that the craftsman be paid in a manner worthy of his labour. Then Eligius produced the other in their midst: "I have made this piece", he said, "from the gold which I might have lost through negligence". The king was thunderstruck with even greater admiration and questioned the other workmen whether any of them could do the same from the original weight and accepted the answer he got from them acknowledging the sublime favour of his skill: "From this, you will believe in the utmost". And indeed this was the origin in the royal palace of honouring and believing the testimony of Eligius. From this of course, the goldsmith rose and his work was always most wonderfully done with the most learned skill, and he began to find increased favour in the king's eyes and the presence of his optimates[314].

As seen above, the extraordinary skills of Eligius also brought him outside Paris, for, as well as sculptors and builders, he occasionally left his place of residence to reach the locations where external commissioners called him to work[315] – although one should presume that the length of the stay 'abroad' was generally shorter for goldsmiths than for construction craftworkers. Indeed, in

[313] See Paragraph III.2.4.

[314] Vita Eligii 5-6. - Translation: J.A. McNamara. The complete translation can be found on the Internet History Sourcebooks Project at: legacy.fordham.edu/halsall/basis/eligius.asp – The print version (McNamara 2000) is commented but cut.

[315] See Paragraph III.2.4.

this Paragraph the focus has been on the most talented craftsmen, who, as said, were those who more likely to move for work and were the main agents in the diffusion of sculptural and architectural fashions[316]. Also, they are the artisans who are more frequently documented in the written sources. However, this of course does not mean that in the Early Middle Ages all the craftsmen operating in the building sector were well paid, free laymen. Monks, for instance, could work at the building site of their monastery, and both unskilled free labourers and serfs – albeit largely ignored by the written documentation – represented the irreplaceable majority of workers in almost every construction site, without whom no project could be completed[317].

III.2.8. **A note on the 7th century: the economics of architectural stone items in context**

However divergent in their focuses and conclusions, a number of studies agree on the recognition and chronology of various phenomena marking a divide between the Ancient economic system and the Medieval one: many of them occurred during the 7th century, or reached an apex in this period, as a result of the 'accumulation' of short-term and long-term events (for instance, the gradual weakening of the role of the State, the decline of the fiscal system, the substantial decrease in population, the plagues, wars and territorial fragmentation). Three phenomena are recurrently mentioned: the regionalisation of productions and economies; a gradual shrinkage in the scale of the distribution of many types of goods, with the almost complete cessation of long-distance transport (especially maritime) of items; and, finally, the overall contraction in the demand of a variety of products[318].

These observations were largely based on archaeological evidence, especially on pottery sherds, which have the advantage of being ubiquitously present, can often be accurately provenanced, and allow the analysis of both foodstuffs and commodities[319]. A little considered example in general economic studies – presumably, due to the scarcity of archaeological evidence in comparison to ceramics – is that of some types of cast bronze vessels retrieved on the European territory. A recent update to some 'standard' typological classifications has shown that, starting from the early 7th century, the items circulated over shorter distances than in the 5th-6th century,

[316] See Paragraph III.2.2.

[317] On this point see below, Part IV. – See also Stasolla 2010.

[318] On these points, see: Laiou, Morrisson 2007, 40-42. – Delogu 2010, 39-92 (esp. 66-73). In his comprehensive analysis, the scholar compares numerous works, among which some of the most relevant for our purposes are: McCormick 2001. – Wickham 2005.

[319] Wickham 2005, 702.

being now distributed over a few dozens to a few hundreds – no longer thousands – of kilometres. The most significant types of bronze vessels were manufactured in Europe – most probably in urban contexts and in proximity to the main trade routes – and, although the production continued to be a standardised one, the goods circulated 'only' on a continental – no longer 'intercontinental' – scale[320]. One might also quote garnet jewellery: the conclusions of a large scale international project suggest that, more than a change in fashion, the break in production of this type of goods in the Merovingian area depended on an economic downturn[321].

Even less considered in general economic studies[322], stone objects followed a comparable trend, their market being subject to the same abovementioned historical events, and to the same changes, which led a number of scholars to identify the 7th century as a turning point in European and Mediterranean economic history[323]. Indeed, as most historians stressed, during the 8th and the 9th century many European areas witnessed a recovery, yet within a 'new' economy, characterised by different traits in comparison to the Late Antique period[324].

Also in the case of stone items, the 7th century appears as an age of transition between different production systems: while in the 6th century many elements of the Ancient production processes were still surviving, in the 8th century a system with several new features is already at work at full capacity. As seen earlier in this work, intense exploitation of major stone sources, quarry workshops, standardised manufacturing of decorated sarcophagi, church furnishings, capitals, load-bearing columns in precious marbles, etc., and, finally, long-distance trade of these stone objects, existed until the 6th century[325], but disappeared in almost all European and Mediterranean regions in the 7th century – at the same time as the Byzantine power was weakening in the West[326] – and are absent, virtually everywhere, in the 8th century. In the 7th century West, continuative production of sarcophagi at the quarries only existed in Gaul, but their distribution occurred on a significantly reduced scale in comparison to the previous centuries, and anyway this

[320] This confirms previous interpretations outlined in Périn 2005. – See: Beghelli / Pinar 2013. – Beghelli / Pinar 2014. – Beghelli / Drauschke 2017. – Beghelli / Pinar 2019a and 2019b.

[321] Weltweites Zellwerk International Framework (direction: Dieter Quast; coordination: Alexandra Hilgner). Preliminary publication: Greiff / Hilgner / Quast 2017.

[322] See the Introduction. – See also Beghelli 2022. – On this point, for the Roman period, see Russell 2013, esp. 4.

[323] Laiou, Morrisson 2007, 40-42. – Delogu 2010, 39-92 (esp. 66-73). Both with literature.

[324] Delogu 2010, 83-92, with literature.

[325] See especially Chapters II.2 and II.3.

[326] See above, Chapter II.3.

«en série» manufacturing appears to have ceased towards the early 8th century[327]. In the 6th century, the newly-made architectural elements circulating on a trans-Mediterranean scale were still a relevant mean of diffusion of new fashions in building, but in the 8th century this role seems mostly played by the travelling craftsmen, while the written sources, starting from the 7th century, increasingly present the best artisans coming from afar – not the stone coming from distant lands – as a status symbol. Thus, phenomena occurring during the 7th century, such as the regionalisation of productions, the gradual shrinkage of the distribution networks, and the almost total lack of long-distance transport of goods, are clearly visible from the 'angle' of stone items, too.

However, the 'thread' of stone objects also allows to follow the other abovementioned phenomenon characterizing the 7th century, namely the contraction in the demand. As seen in the Part I., chronology is a problematic issue in the study of Early Medieval architectural sculpture. Securely dated sculpted items (e.g. because of an inscription mentioning a well-known historical character) are certainly not abundant for the 8th and 9th centuries, but they are ever rarer for the 7th century (one example: **fig. III.6**)[328]. Architectural sculpture from this period (as opposed to funerary sculpture, i.e. sarcophagi, stelae, crosses, and gravestones) is also rare: there is, indeed, general consensus about a drop in the production in comparison to the previous and subsequent centuries[329], although hardly any study attempted to put it in its general economic context, or to investigate the specific reasons for it[330]. Many of the abovementioned major changes experienced by the market for stone products during the 7th century, and the slump in the manufacture of architectural sculpture, depended on a downturn in the building sector. Among the historical events causing the general transformation of the economic system between Late Antiquity and the Early Middle Ages, some must have particularly affected the building sector, namely decline in population, wars and territorial fragmentation, and plagues. Population decline occurred gradually, but was surely one of the reasons for the decrease in construction activities, and especially in monumental stone building: this, by the 7th century, mostly consisted of churches and monasteries, which practically represented the only other employers of stone-carvers apart from the individuals (notably in Gaul) paying for funerary sculpture. Additionally, scholars have argued that many cities already boasted

[327] Périn / Renou 1985. – Delahaye / Périn 1991. – See Part II.

[328] The gravestone of Ursicinus bishop of Torino, reproduced in **fig. III.6**, dates to 610: Casartelli Novelli 1974, 165-166, nr. 94. – For a collection of securely dated materials see Beghelli 2021.

[329] Panazza / Tagliaferri 1966, 13. – Romanini 1969, 231. – Tagliaferri 1981, 17. – Russo 1984, 37-38. – Vieillard-Troiekouroff 1985, 191. – Cassanelli 1987, 243. – Heitz 1987, 9. – Heitz 1989, 189. – Vieillard-Troiekouroff 1989b, 227. – Metzger 1991, 256. – Melucco Vaccaro / Paroli 1995, XI, 61. – Jakšić 2001, 182. – Jurković 2001, 153. – Paroli 2001b. – Guild 2004. – Coroneo 2005, 59-60. – Ibsen 2006b, 278. – Ibsen 2007, 312. – Beghelli 2021.

[330] Beghelli 2021, with literature and exceptions.

relatively recent churches from Late Antiquity. These were at times very large, which implies, therefore, that new places of worship were not required[331]. The European areas touched by periods of political instability and conflict surely did not provide optimal conditions for the development of architectural crafts, and, finally, it must be assumed that the Justinian plague of the mid-6th century had killed, together with a high proportion of the population, many masons and sculptors too (thus possibly reducing or interrupting stonecarving activities in entire districts)[332]. While these and other factors, together, caused a contraction in the demand for stone products, they also indirectly played a part in the spike in the mobility of skilled labour: this, as seen above, appears to have become increasingly prominent starting from the 7th century, when permanent stoneworking workshops at the quarries or in urban context were no longer profitable[333].

Also during the remaining part of the Early Middle Ages, stone objects, and in particular architectural sculpture, follow the same tendencies that characterised the general economic system. The economic recovery occurring during the 8th and especially the 9th century concerned sculptural production, too, with a noticeable boost in the quantity of manufactured items, parallel to a revival of construction activities[334]. Because of the scarcity of securely dated sculptures to be used as chronological benchmarks, it is difficult to appreciate in detail (for instance, from decade to decade) this increase in production. However, even a sketchy comparison – like the one presented above – between the 6th and the 8th century production systems shows that, after the 7th century 'hiatus', sculpture crafts will 're-emerge' with new traits; and this is another point in common with the general economic background described in many studies: as Paolo Delogu brilliantly epitomized, the Middle Ages was born 'new' – characterised by the beginnings of a system which would develop in the following centuries – and was born in the 7th century[335].

[331] Ward-Perkins 1984, 58-61. – Parsons 1991, 20. – Stalley 1999, 32. – Arthur 2002, 60, 79.– Wood 2007, 236. – Greenhalgh 2008, 50. – Cagnana 2012a, 171. – Delogu 2010, 55. – Jurković 2001, 153. – Beghelli 2021. – Beghelli / Marsili forthcoming. – On this point, for architecture in general, see Paragraph II.3.2. – In most Late Antique churches, stone furnishing must have looked like almost new. Fifty or even a hundred years are indeed a rather young age for stone items, as one can easily realise observing today even older artefacts: for instance, the architectural decoration of the nineteenth-century buildings, not to mention Gothic church sculpture, that in many locations in Europe is still in very good conditions, despite the injurious aggressions of contemporary pollution.

[332] On these points, see for instance: Jakšić 2001, 182. – Tagliaferri 1981, 17. – Coroneo 2005, 59-60. All with literature. – In general, on the plague and its historical consequences, see Little 2007.

[333] See the previous Chapters of this Part III.

[334] See Paragraph II.3.2 ('Carolingian Renaissance') and, in general, Beghelli 2021, with literature.

[335] Delogu 2010, 92.

Chapter III.3.

Some archaeologically-identified travelling stone-carving workshops

> Those who speak of the origin of a custom, as well as of an art, and their communication from one nation to another, commonly err by confining themselves to isolated points between which there is a resemblance, and drawing from them a general conclusion[336].

The previous Chapters of this Part III. have been mainly focused on written sources. Chronicles, annals, laws, legal acts, biographies, inscriptions on the stone items shed a great deal of light on the context of production of buildings and architectural sculpture, on the craftsmen operating in this field, and on a number of relevant aspects related to the economic background of construction activities and to the social sphere of makers and patrons. The available evidence clearly shows that the mobility of artisans – on short, medium, and long distances – was a very widespread phenomenon in the 7th-9th centuries. However, all this would remain, so to speak, a reliable but 'immaterial' account, if there was no physical evidence to tell the same story. The surviving sculpted materials can reveal much on their production processes and on the craftsmen who manufactured them: the analysis of the stone fragments enables to recognise the locations where the same group of sculptors has worked, to appreciate the extent of their operating area, to observe the repertoires of different workshops (and how the carvers repeated and combined the motifs in it), to identify diverse sculpting fashions coexisting in a given territory. Yet in order to provide significant results, this kind of study must be conducted with a precise method.

III.3.1. **Methods and results**

> Let us take into consideration a Romanesque or Gothic tympanum, broken into pieces, whose fragments would be scattered among different places: some are in museums, some others are reused in the walls of later

[336] Winckelmann 1968 [1764], 31 (English translation; original in German). – On this passage see Caianiello 2005, 50-52.

> ecclesiastical buildings, and so forth. Here the half of a Christ in Majesty, or of a demon, a part of a cornice; there the archangel Michael, or, worse, only his hand. Throughout the whole history of art, no one ever analysed just the arm of a character, or just one of the capitals in a building, and then compare it with pieces from thousands of kilometres away [...] On the contrary, the aim of a scholar would be to collect the scattered fragments, to reconstruct the original item, and then to analyse it stylistically and to establish the possible parallels. No one ever read a paper on the finger of a Gothic sculpture but, by contrast, lots of papers exist on any piece of Early Medieval chancel-screen pillar, with prodigious comparisons with Sasanian art, the Islam, Muslim-ruled Iberia, Italy... This tendency not to consider the decoration of Early Medieval sculpture as a whole is almost inexplicable[337].

In archaeology, one might say, context is everything. This is true for all types of studies, from those focused on single, small sites, to very large-scale investigations focused on global phenomena of the past. Every object can tell an entirely different story depending on the place where it was found – a bronze ewer, for instance, can be assumed to have been a liturgical implement when found near to the remains of a church altar, or an everyday life item when found in a house. When the find-spots are known, studying the distribution of different types of commodities, from the humblest to the most sumptuous ones, can provide a detailed picture of the social and economic framework of a given territory in a given period. Every bit of a wall can contribute to the reconstruction of the original plan of a building, but only when the mutual relations among all the architectonical structures and features on the site are carefully analysed. And so forth: countless other examples exist, to show the paramount importance of the context in archaeological studies. If the context is not properly considered – as an American archaeologist warns us in a charming autobiographical account – we risk to simply stow museums with ancient objects which are «no more than pretty»[338]. A place like Pompeii is so impressive to us precisely because it is a wonderful picture of a whole 'piece of reality': the tragic event of the volcanic eruption has 'fossilised' the everyday life of all social strata and the items they used, the spaces where they lived and worked, the food they ate, the places where they had a glass of wine or bought olive oil. Of course, archaeological sites like this are absolutely exceptional, as for the quantity and

[337] Jurković 2000, 233 (original in French).

[338] Hirst 2017.

quality of information that can be acquired. However, the reconstruction of the original appearance of landscapes, structures, or buildings, and of the human activities that took place in them, is normally the main aim of any archaeological excavation, even the smallest one.

Yet, as Miljenko Jurković asserted, this often does not apply to Early Medieval sculpture, for reasons that remain somewhat shrouded in mystery. Even when the rest of the church is accurately studied and the results of the archaeological investigations are likewise thoroughly published, the pages devoted to the Early Medieval sculpted fragments are frequently consisting in a simple catalogue, where the items are considered separately and presented individually, each in a single entry. This practice was very typical of the first scientific works on Early Medieval sculpture, has decidedly marked the subsequent history of studies, and is still rather common, as the trend has only recently started to reverse. Thus, within these catalogue-like publications, the authors give a list of parallel finds – often drawn from very different areas and periods – for every single fragment, and then use the parallels to date the piece in question. The overall result can be that thirty, forty small fragments are ascribed to a multitude of different periods within a time-span of about a century or two. Generally, no further information is provided, to explain this myriad of phases in the architectural decoration of the church, precisely because the fragments are treated, since the very beginning, as single units, and not as parts of an original whole[339]. In other words, in these cases the context is not at all considered. No attempts are made to reconstruct the original shape of the stone furnishings, to understand whether the fragments came from just one structure or correspond to modifications and repairs occurred over time, to associate these furnishings to a specific position in the church, or to a period among those detected during the archaeological excavations[340].

In the general presentation of the results of an excavation, even a minor repair in one of the church's walls or floors can be – rightfully – carefully documented, described and dated, while – paradoxically – much a greater change like the addition or renewal of stone furnishings can be passed over in silence. One can figure that the Early Medieval believers entering the church might not have been aware of a tiny section of the floor fixed after a leak of water, whereas we can be reasonably sure that they must have noticed a whole new beautiful chancel screen, donated by their bishop or king to embellish the church. In practice, the tendency not to consider the sculpted

[339] See Paragraph I.2.5, and the quotation of Jurković at the beginning of this Paragraph. Similar considerations have been expressed in many other contributions of the same author, for instance Jurković 2016. – See also: Dierkens 2004, 73. – Beghelli 2013, 18-22, with literature.

[340] See previous footnote.

fragments as a whole – and to neglect to determine the original structures they belonged to – can lead to ignore an entire period of the history of an ecclesiastical building.

Thus for these obvious reasons, any archaeological and art historical study focused on architectonical sculpture should begin – as it is normal for other periods, like the Gothic one in Jurković's example – with the reconstruction, as precise as possible, of the elements of stone furniture and decoration of the building. Or at least – when for instance the reduced quantity of the fragments, or their conditions of preservation, do not allow to pinpoint the exact form and typology of the original structures – with the grouping of the sculpted items according to the characteristics of their decoration and working technique. Not always all the Early Medieval fragments found in a church are from the same period, and an attentive sorting allows to determine to how many groups they can be ascribed to. In archaeological terms, this operation aims to ascertain the relative chronology of the sculpted items, as the pieces in each group can be considered contemporary to each other. This is an essential procedure, a crucial one for the understanding of the sculpted remains and the history of the church. The next stage would be establishing what period each group belongs to – i.e., determining the absolute chronology[341] – though this step of the work, as shall be seen, requires a very precise methodology, for it is mainly based on the comparison with objects from other locations.

Clearly, each homogeneous group of fragments corresponds to one single action, one single moment in the history of the church: the moment when a chancel screen was installed, when it was replaced by a newer one, when internal doors were embellished with decorated lintels, when a ciborium or a sumptuous sarcophagus were added to the stone furniture, and so forth. A self-evident corollary is that each group of sculpted fragments corresponds to the work of one single group of sculptors. Thus, when broadening the view to other locations and find-spots, a very interesting consequence of this research approach is that, at times, it enables to identify the work of the same workshop in different churches.

Considering the sculpted fragments in their whole means, obviously, considering their decorations in their whole. This was the starting point of a number of studies focusing on the context of production of Early Medieval sculpture, and on the detection of the work of the same group of carvers in different locations. Although these studies are characterised by slightly different methods, one could say that the common thread is the recognition of specific 'individual interpretations' of the 'mainstream sculptural fashions' of a certain period[342], with the aim of

[341] On these points, see Beghelli 2013, 69-74 and 207-219.

[342] On these points see above, Paragraph III.2.6.

spotting the presence of these specific individual interpretations in different places. For instance, vine-scrolls were among the most popular motifs of Early Medieval sculpture, yet they could be carved in countless different ways. Every group of sculptors tended to follow their own workshop tradition[343], making the vine-scroll by employing very specific techniques, size, details, mutual proportions between details, and so forth[344]. Understandably, the more complex and elaborate a motif, the more distinctive and recognisable will be the individual, workshop-specific interpretation of it. Also, every group of sculptors had its own *repertoire*, consisting in the precise choice of just a certain range – or combination – of motifs, among all those that were commonly used in the period[345]. For instance, a given workshop could favour wine-scrolls, floral motifs and whirls, while another might prefer variations of interlaces with small animalistic filling-figures, and yet another could be specialised in elaborate interlaced patterns. Therefore, considering the *mutual association* of motifs in every context – i.e., the whole of the decorations attested in a certain site – is of vital importance to the achievement of reliable scientific results. Studies adopting this approach allow the fascinating possibility of following the work of a group of sculptors, starting from material evidence they left behind in a given area. Methodological matters will be explored in a more detailed way in the next Chapter, where will be discussed the case study chosen for this work. In the following pages, some concrete examples of the application of this method will be presented: images, as it has been said, are much more eloquent than words[346].

III.3.2. **Dalmatia and Istria**

It seems appropriate to begin this overview on Early Medieval sculpting workshops from nowadays Croatia, which is probably the country with the oldest tradition of studies on this subject – initiated with the studies of Ivo Petricioli[347]. Scholars have amply engaged in following the movement of different groups of sculptors, giving rise to a large and structured scientific debate – still a rare circumstance in the contemporary academic research. The method adopted in these studies is, as said[348], based on the detection of *multiple* similarities and motifs in common among

[343] See above, Paragraphs III.2.6., III.1.2 and III.1.3.

[344] This point has been repeatedly highlighted in the studies of Nikola Jakšić: see the collection of studies Jakšić 2015, with extensive English summaries.

[345] This point has been repeatedly stressed by Miljenko Jurković. See: Jurković 2000, 227, and footnotes 5, 6 and 7. – Jurković 2016, with literature. – In general, on style as the result of deliberate choices of craftsmen and artists, see Lang 1987, 177-178.

[346] Jurković 2000, 229.

[347] In general, and for a history of studies, see: Chapter I.1. – Petricioli 1985. – Jurković 2000. – Jurković 2016.

[348] See the previous pages of this Chapter.

different groups of sculptures. Comparing not individual specimens, but entire groups of sculpted items (from several dozens to a few hundreds of specimens) has also enabled to recognise actual 'signature-motifs', i.e. ornaments or details typical of just one and only sculpting workshop. Croatian scholars often refer to their method as the 'Morellian method'[349], from the name of the art historian who first performed systematic studies of the minor, 'diagnostic' details in artworks, which are characteristic of one particular artist and therefore allow to determine the author of a given work[350].

Some interesting sculpting workshops identified in this way operated in Istria and Dalmatia, and some are very precisely datable owing to the inscriptions carved on the stone elements. A gable arch with an inscription naming the prince Tripimir (845-864) dates the liturgical furnishings from the monastery of Rižinice (Solin, Dalmatia) to the mid-9th century: the sculpted elements, in their whole, have so many common features with others in different Dalmatian locations that they look practically identical. Thus Nikola Jakšić recognised the work of the same travelling atelier of sculptors in seven churches (Žažvić, Kašić, Biskupija / Lopuška Glavica, Vrpolje, Plavno, Biograd and, perhaps, Mijovilovac in Pridraga near Zadar)[351] (**fig. III.7**). It has been noticed that, since the motifs look so astonishingly similar, the original liturgical furnishings must have been produced in a relatively short time, about a generation at most (ca. 20-30 years)[352]. Very interestingly, the same time-spans for the 'life' of an ornamental repertoire have been identified on solid basis – i.e. thanks to the workshop's marks – within 5th-6th Byzantine ateliers[353], thus confirming, once again, the conservatism of sculpting practices[354].

Two other workshops identified by Jakšić operated a little later, during the rule of Branmir (879-889), also mentioned in the inscriptions. The first one left fragments of a lower quality (at Sopot near Benkovac, Zdrapanj near Bribir, Cetina, Biskupija and Crkvina near Knin, Rapovine and Plavno: **fig III.8**), whereas the second one, just like Tripimir's atelier, produced very refined items (at Muc, Nin, Otres / Ostrovica, Stupovi / Biskupija: **fig. III.9**). The author explains the presence of the 'lower quality' group of sculptures with an historically attested, brief struggle for ecclesiastical power, that temporarily interrupted the political relations and thus hindered the customary exchange

[349] Jurković 2000, 226-227, with literature.

[350] Morelli 1880.

[351] Jakšić 1997. – See also Jurković 2000, 228-230.

[352] Jurković 2000, 229, with literature.

[353] Marsili 2019, 123.

[354] See above, Paragraph III.2.6.

of artists among elites[355]. With the resolution of the crisis, the best sculptors would come back to work in the region. Both the first and the second group of carvers, however, have worked in a very short period of time, less than ten years. Therefore, this chronologically fortunate case clearly dispels a very common practice in the study on Early Medieval sculpture, according to which, in absence of precise chronological benchmarks, the sculpted materials are dated to very different periods based on the differences in their quality[356].

The atelier of the so-called «maître de chapiteaux de Bale» was named after the church of S. Maria Velika at Bale: these stone-carvers worked also in other locations in Istria, namely Dvigrad, Šijana, S. Thomas at Rovinj, S. Pelagius at Novigrad, Guran next to Vodnjan, S. Quirinus next to Vodnjan, Muggia Vecchia next to Trieste[357]. In S. Maria Velika at Bale, the workshop manufactured not only the liturgical furnishings, but also capitals with actual load-bearing function in the structure of the church (**fig. III.10**). The craftsmen employed both *spolia* and new materials from the surrounding areas[358]: according to a widespread Early Medieval practice, the column-shafts are reused, but their basis are freshly made[359], in order to level them at the same height[360].

Just like his colleagues, analysing in detail both decorative patterns and their combinations, Ante Jurčević has revised the carved fragment from Biskupija / Crkvina (Knin, Dalmatia), recognising the work of three workshops along the 9th-beginning of the 10th centuries[361]. One of them, the atelier of the «maître du chancel de Koljani», operated around the first quarter of the 9th century, not only in Biskupija[362], but also in at least two other locations in Dalmatia: Galovac / Crkvina[363] and Koljani[364], location after which the master was named.

Ivan Basić and Miljenko Jurković had related to the same atelier some refined sculptures of Split, arguing that the craftsmen could have been sent from Rome (or from North-Eastern Italy) to

[355] On the central role of elites-communication for the circulation of craftsmen see above (Paragraph III.2.5) and below, Chapter IV.3.

[356] Jakšić 1997, 45. – Jurković 2000, 230-231.

[357] Jurković 2009. – Jurković 2012.

[358] Matejčić / Chevalier 2007.

[359] See above, Chapter II.4.

[360] Jurković 2009, 101.

[361] Jurčević 2014.

[362] Milošević 2000, 270-271. – Jurčević 2014, with literature: according to the most recent research, the workshop's sculptures must be dated to 820-830 (when the church was built) or, at most, to the mid 9th century. In previous studies, they had been generically dated to the 9th century.

[363] Belošević 1992-1993. – Belošević 1994-1995. – Belošević 1995-1996. – Milošević 2000, 270-271. – Jurčević 2014.

[364] Milošević 2000, 270-271, with literature.

Dalmatia soon after the Carolingian conquest of Istria, in the last quarter of the 8th century[365] (**fig. III.11**). Some close similarities exist as well between Dalmatian and Istrian sculptures[366]. The presence of foreign sculptors in Istria was, on the other hand, already suggested by the earlier scholarship, the most notable example being the ciborium of bishop Mauritius at Novigrad (last quarter of the 8th century): this was most probably made by a workshop partially, or even entirely, composed by stone-carvers from Cividale del Friuli[367]. About another group of sculptures from Novigrad, it has been hypothesised that the makers came from Rome[368].

As a last example, one can quote the works of the 'Master of Zadar ambos', most probably coming from Cividale del Friuli, who worked at Pridraga, Novigrad, Zadar, Nevidane (island of Pašman), and on the island of Rab between the late 8th and the early 9th century[369].

III.3.3. **North-Eastern and Central Italy**

In a paper published in 2002, Silvia Lusuardi Siena and Paola Piva defined four groups of sculptures from Friuli Venezia Giulia and neighbouring regions in Northern Italy and Istria, dating from the early 8th century to the Carolingian period. For some of them, basing on a method similar to that used by the Croatian scholars, they hypothesised the work of the same workshop. In other cases, despite some extremely significant resemblances, the authors preferred to speak generally about 'artistic relations and influences'[370]. Among many other stone elements, the study considers two rather renowned pieces: the ciborium from Sant'Ambrogio di Valpolicella, region Veneto – which shows the abovementioned inscription of master Ursus and his apprentices Iuvintinus and Iuvianus[371] – and the so-called 'urn' of S. Anastasia from Sesto al Reghena, region Friuli Venezia Giulia near Pordenone.

As for the first item (**fig. III.1**), Lusuardi Siena and Piva pinpointed some distinguishing features suggesting that the sculptors working at Sant'Ambrogio came from Cividale del Friuli and also operated in Trento. One of the most significant point in common (a sort of signature-motif) is a very peculiar plant-scroll ornament, which appears in a substantially identical version on the

[365] Basić / Jurković 2011.

[366] Basić / Jurković 2011.

[367] Jurković 1995. – Lusuardi Siena / Piva 2002, 318. – Matejčić 2006, 18. – Basić / Jurković 2011, all with literature.

[368] Matejčić 2006, 16-17.

[369] Josipović 2016. – Jurković 2016, 233, with literature.

[370] Lusardi Siena / Piva 2002. – On the notion of 'influence' see above, Paragraph III.1.1.

[371] See above, Paragraph III.2.2.

ciborium, on a large slab at Cividale, and on another ciborium slab from Trento. The same workshop would also work at Aquileia and at San Martino. The inscription at Sant'Ambrogio allows to date the activity of these sculptors to the reign of Liutprand (712-744)[372].

The so-called 'urn' of S. Anastasia – made from a Roman sarcophagus – also shows numerous traits in common with a group of stone items from Cividale del Friuli: nevertheless, Lusuardi Siena and Piva seem hesitant in assuming the work of the same group of sculptors, and speak instead of carvers 'inspired' by the urn[373]. On the other hand, Chiara Lambert more openly supported the hypothesis of a single workshop operating in both locations[374] (**fig. III.12**).

During the second half of the 8th century, some other stone-carvers moved from North-Eastern to Central Italy. The very same plant-scroll ornament can be seen both on a slab from the church of S. Marco at Rigoli (close to Pisa, Tuscany) and on an ambo-front from Megliadino San Fidenzio (close to Padova, Veneto). The two stone items have further features in common with the sculptures produced in the North-Eastern area of *Langobardia Maior*[375], but the plant-scroll is so peculiar that, alone, reveals they were made by the same artisans. The overall shape, and every detail, are substantially identical – the smaller leaves and the bigger, three-lobed ones, the animal-heads (a nearly unique characteristic), the cornucopias (i.e. the cone-shaped ornament the branches originate from), the tiny buttons with drill-holes (**fig. III.13**). The remaining motifs on the Tuscan slab (a huge cross in a circle with lily-flowers and helixes, a plait with buttons and an astragal, i.e. a bead and reel moulding) are characteristic of the second half of the 8th century in Cividale del Friuli and surroundings: it has been assumed, therefore, that this should have been the area of origin of the sculptors who worked at Rigoli and Megliadino San Fidenzio[376].

A last, noteworthy example to be mentioned concerns some master carvers from the area of Venezia who, judging by the impressive resemblances with the materials from Reichenau-Niederzell (SS. Peter und Paul), worked in both locations during the early 9th century, using locally procured stone. As Romina Schiavone pinpointed, the two regions were bound by close relations, as

[372] Lusardi Siena / Piva 2002, 301-303: according to the authors, this workshop was 'influenced' by the so-called 'Berico-Benacense workshop', discussed in the next Paragraph. – On the fragment from Trento see also Beghelli 2013, 231-233.

[373] Lusuardi Siena / Piva 2002, 304-305.

[374] Lambert 1999, 92. – Actually, the resemblances among the sculpted items from Cividale and Sesto al Reghena are so close that assuming of the work of two different ateliers would appear as the *lectio difficilior*.

[375] Lusuardi Siena 2000: the ambo has a close parallel, for example, at Rive d'Arcano (Friuli-Venezia Giulia).

[376] Lusuardi Siena 2000. – Ducci 2013, 48-50. – See also: Ciampoltrini 1991, 47. – Vedovetto 2016. – Vedovetto 2021, 49-50, 88-90. – For other possible mobile sculpting ateliers within Tuscany see Ciampoltrini 1991a.

shown for instance by Egino, founder of the church in Reichenau (799), who had been previously the bishop of Verona[377].

III.3.4. **The 'Berico-Benacense' workshop**

Named after the geographical area where its products are attested, this workshop operated between the Berici hills (close to Vicenza, Northern Italy) and the shores of the Garda lake in the early 9th century[378]. Ettore Napione took into consideration the sculpted items from four churches, one in Cisano di Bardolino (S. Maria), not far from of Verona, and three in Vicenza (SS. Felice and Fortunato; the cathedral of S. Maria Annunciata; S. Giorgio in Gogna). Five fragmentary slabs, an octagonal chancel screen pillar and a cornice have many decorative patterns in common (**fig. III.14**). Two slabs (one from Cisano, the other from Vicenza), for example, show a similar decoration organised in two squared panels: one of them is nearly identical in both of the sculptures, whereas the second one is different. The plant-scroll ornament used as a frame in the slab from Vicenza (SS. Felice and Fortunato) is, in turn, substantially identical to those that appear on the cornice from Vicenza (S. Giorgio in Gogna) and on two other slabs found respectively in Cisano and in Vicenza (cathedral of S. Maria Annunciata). Both these last slabs have the plant-scroll on three sides of the rectangular frame, and the same plait on the fourth side. Further elements in common which appear in two or more of the four slabs are a bird carved in the very same way, the astragal (i.e. a bead and reel moulding), the cable moulding (or ropework, carved in imitation of a twisted cord), the plait with two strands, the lily (used as a filling motif in the corners) and the daisy; some of these ones, in addition to a second type of plant-scroll and a peculiar type of cross, are also to be found in the octagonal pillar and in a fifth fragment of slab from the church of SS. Felice and Fortunato (Vicenza)[379].

In the same way as the scholars mentioned above, Napione worked from an overall perspective, considering the whole of the decorative patterns. The common features of the sculptures from the four churches range from elaborate, recognisable motifs (e.g. the squared panels, the bird, the vine-scroll) to simpler ones (e.g. the plait-work, the astragal or the cable moulding). Even these last, most widespread motifs, however, are significant, because they correspond to specific choices among many other possibilities. In other words, they are relevant if considered together and not individually, for they were part of a set and therefore contribute to the

[377] Schiavone 2019. – Schiavone forthcoming.

[378] Napione 2002.

[379] Napione 2002.

identification of the sculptors' repertoire. The slabs with the squared panels, in particular, are a clear example of how the same craftsmen used to vary their compositions, as only one of them is practically identical in both of the sculptures, whereas the second one differs. Also the frame-motifs are combined and alternated in different ways. Moreover, the sculptures show the same manufacturing technique as for the depth and cutting-angle of the engraving, and the size of the decorative elements[380]. Between the two possible places of provenance of the stone-carvers (Cisano and Vicenza), the second seems more probable, given the importance of the city in comparison with the smaller centre of Cisano[381]: this hypothesis is also consistent with the general evidence on the locations of residence of construction craftworkers analysed above[382].

[380] Napione 2002.

[381] Napione 2002, 331.

[382] See above, Paragraph III.2.3.

Chapter III.4.

Travelling sculptors in and around the Western Alps: a new assessment

The sculptures found in a number of locations on both sides of the Western Alps, in nowadays Piedmont, Liguria, and South-Eastern France, are surely among the most interesting materials to be used to test the abovementioned research method. These sculptures are characterised by a clear predominance of vegetal motifs and scrollwork. These, as seen above, facilitate the comparison among fragments from different locations, as they are elaborate ornaments with many details: similarities or differences between sculptures from different locations are therefore easily detectable. Moreover, this group of materials includes at least one securely dated example, from Nice-Cimiez, years 774-800[383]. Thus besides attempting to follow the movements of the sculpting atelier responsible for this production, one can quite precisely date its activity: this means that one can also compare the workshop's products with other, different, securely dated ones, which results in the interesting possibility of getting a general idea of diverse sculpting fashions coexisting in the same period.

Yet this group of sculptures has been the object of a peculiar history of studies. The two main works that considered them as a whole, formulating hypotheses on the artisans who manufactured the stone elements, date to the Sixties and the Seventies: the article of Denise Fossard[384] became particularly popular among French scholars, while the article of Silvana Casartelli Novelli[385] had an extraordinary success among Italian scholars. Since then, new materials were found, especially on the Italian side of the Alps and, above all, many of the arguments used by Casartelli can no longer be accepted, due to the intervening progress in historical, archaeological and art historical sciences. Nevertheless, almost all the Italian publications devoted to the materials found after the Seventies rigorously followed Casartelli's approach – while this, as said, did not happen in France.

[383] See below.

[384] Fossard 1965.

[385] Casartelli Novelli 1978.

III.4.1. **A brief history of studies**

In the mid-Seventies, Micheline Buis included in her doctoral thesis a thorough catalogue of the 8th and 9th centuries sculpted materials from South-Eastern France. The study aimed at collecting all the decorative patterns and analysing their associations, in order to analyse their continuity into the Romanesque period, and their 'evolution' and changes within the new architectural style. Buis also investigated the origin of the lithic materials the sculptures were made of, although, given the large territory taken into consideration, this was not always possible. Being research was focused on other matters than production, the craftsmen who manufactured the sculptures represented an only cursorily addressed subject[386]. However, since the stone was virtually always locally procured, but the sculptures showed strong similarities in different find-spots, Buis hypothesised the work of some itinerant artisans from Lombard Italy, but did not pinpoint the exact locations where the same groups of sculptors could have operated[387].

The sculpted materials from Piedmont were not collected in a single catalogue, but the finds from the large territory of the diocese of Turin were gathered and published in 1974[388], and accurate studies exist on the sculptures from other areas of the region. The vast majority of these materials were found during archaeological excavations carried out, in several locations, by the *Soprintendenza ai Beni Archeologici* (the State Bureau of Archaeological Heritage): in the respective publications, a great deal of attention has been paid to the reconstruction of the original pieces of liturgical furnishings[389].

As for Liguria, the only comprehensive catalogue of materials remains the work published in 1945 by Paolo Verzone[390]. This book actually represents a sort of small miracle, as the author succeeded in collecting information and photographs in the middle of the Second World War. Verzone himself mention these circumstances in his introduction, apologising to the reader for possible omissions or mistakes – but in retrospect, one might say that Verzone had very little to apologise for. In this case too, the primary aim of the study was obviously not to investigate production, though the conclusions are partially focused on grouping the sculptures according to their typologies. Verzone recognised some identical features in the so-called tomb of St. Pons at

[386] Buis 1975.

[387] Buis 1976, 240.

[388] Casartelli Novelli 1974.

[389] See the literature quoted for the single find-spots in the next pages.

[390] Verzone 1945. – From the mid Nineties, 'forthcoming' volumes of the Italian Corpus of Early Medieval sculpture were repeatedly announced (as in the instance of the Dioceses of Vado, Albenga e Ventimiglia: see Frondoni 1994, footnote 1) but, to date, they remain unpublished.

Nice-Cimiez (Provence-Alpes-Côte d'Azur) and in the sculpted slabs from the cathedral of Ventimiglia (Liguria). The group, then, had to be ascribed to the last quarter of the 8th century, owing to an inscription on the tomb of St. Pons which mentioning Charlemagne as king of the Franks and the Lombards (i.e., later than 774 and before 800, when he became emperor). In Verzone's opinion, the same craftsmen had worked in both locations – possibly during the episcopate of Syagrius, nephew of Charles and founder of the monastery of Cimiez[391].

Twenty years later, Denise Fossard assigned to the same mobile workshop (i.e. the one operating in Cimiez and Ventimiglia) the so-called arcosolium-tomb at Albenga (Liguria) and some other sculptures from Gavi (Piedmont) and Pavia (Lombardy). Fossard also listed some parallel finds from Provence-Alpes-Côte d'Azur (Marseille, Frejus, Vence, Digne/Saint-Michel de Cousson)[392].

Also Jean Hubert, in 1968, supported the thesis of a common group of stone-carvers working at Albenga and Cimiez, adding Aix-en-Provence to the list[393].

In 1978, Silvana Casartelli Novelli admitted some stylistic relations between Cimiez and Ventimiglia, but ascribed the sculpted fragments from the latter location to earlier periods and workshops. Moreover, according to the scholar, the arcosolium tomb at Albenga was even earlier than most of the sculptures from Ventimiglia[394] (see table below, at the end of this Paragraph). Her groupings, chronological placements, and the attribution of some sculptures to different generations of the 'Maritime Alps workshop' («bottega delle Alpi Marittime»)[395] have then been adopted in

[391] Verzone 1945, 168-170.

[392] Fossard 1965, esp. page 10. Both the (so-called) tomb of St. Pons at Cimiez and the arcosolium-tomb at Albenga were originally chancel screens, re-arranged into their current form during subsequent epochs: Marcenaro 1994, 199. – Buis 2002.

[393] Hubert 1968.

[394] Casartelli Novelli 1978, esp. 12, 19-20.

[395] In the 'Albenga-group', dated to the 2nd-5th decades of the 8th century, Casartelli included: the sculptures from Borgo San Dalmazzo / Pedona, Piedmont; Libarna, Liguria; some pillars and capitals from Milan, S. Maria d'Aurona; a couple of pillars from Como, S. Abbondio; a cornice from the area of Nervia in Ventimiglia (Casartelli Novelli 1978, 14-16); a single slab from Ventimiglia, cathedral of S. Maria Assunta, now reemployed in the main altar (Casartelli Novelli 1978, 19, and fig. 52). The artefacts from Albenga are then paralleled to some inscribed slabs from Pavia (Casartelli Novelli 1978, 17). The second group (third quarter of the 8th century) included: some of the fragments from Ventimiglia, S. Maria Assunta (Casartelli Novelli 1978, 20, and figures 53, 54, 55); a pillar from Ravenna (Casartelli Novelli 1978, 20, and fig. 56; a few fragments from Noli (Casartelli Novelli 1978, 20, and figures 57, 58, 59). The third, youngest group included some sculptures from Nice-Cimiez and those from Marseille, St. Victor (Casartelli Novelli 1978, 20-21). – On St. Maria d'Aurona at Milan, see also Casartelli Novelli 1978a, 82, and Ibsen 2007, 323, nr. 6.15: a pillar (also published by Dianzani 1989, pl. XLVII, nr. 1c) is exactly identical to another one from Noli (Verzone 1945, 89-90, nr. 81. – Frondoni 1987, 49. – Frondoni 1988, 94-95), but its provenance from Milan is uncertain. According to both Ibsen and Verzone, however, the fragments from Milan and Noli are made in different stones, namely marble and limestone: one can be at least sure, then, that the two fragments did not originally belong to the same pillar.

many later Italian studies[396]. In the decades following 1978, new find-spots and sculptures were added to Casartelli's lists, lacking, however, any re-examination of what was generally still considered an «extensive and convincing essay»[397].

	Aix-en-Provence	Borgo San Dalmazzo	Marseille St-Victor	Nice-Cimiez	Ventimiglia S. M. Ass.	Ventimiglia Nervia	Albenga	Como	Gavi	Libarna	Milano	Noli	Pavia	Ravenna
Verzone 1945				X	X									
Fossard 1965				X	X		X		X				X	
Hubert 1968	X			X			X							
Casartelli Novelli 1978, Group 1 (2nd-5th decades 8th c.)		X				X	X	X		X	X		X	
Casartelli Novelli 1978, Group 2 (third quarter 8th c.)					X							X		X
Casartelli Novelli 1978, Group 3 (last quarter 8th c.)			X	X										

III.4.2. **The 'Visigothic theory'**

In her work, Denise Fossard had focused on the stylistic analysis of the sculpted fragments, and on the historical context of the abovementioned inscription on the 'tomb of St-Pons' from Nice-Cimiez, which represented a crucial chronological benchmark for the whole group of related sculptures, dating it to 774-800 or perhaps even more precisely, as shall be seen, to the years 777-787. More than ten years later, Casartelli reconsidered Fossard's results, proposed different typological groupings, and went much further with historical considerations: to date her groups of fragments, she started from – and based her hypotheses upon – a few renowned events, thus establishing a direct link between such events and the stylistic features of the sculptures. Some close resemblances, detected by both Fossard and Casartelli, among the sculpted fragments from the abovementioned centres in Southern France, Piedmont, Liguria, and Lombardy, are indeed hardly questionable, as well as the scholars' remarks on the mobility of craftsmen. Rightfully considered as 'classics' of the history of studies, and still much cited, these important works need however, after

[396] For instance: Frondoni 1987, 41-45. – Frondoni 1994. – Marcenaro 1994, 195-215, 204-205. – Arslan 1996. – Crosetto 1998, 313-318. – Crosetto 1999. – Ibsen 2007, 313. – Lomartire 2007, 334. – Crosetto 2009, 11.

[397] Frondoni 1987, 41. Original in Italian.

about half a century, a re-examination in the light of the newer advancements both in the archaeological and historical fields.

The main contributions that can be made today concern three points. In the first place, a critical reappraisal of Casartelli's historical arguments is of paramount importance, because the chronology of her groups of sculptures – still accepted by many authors – was strictly bound to precise historical events and their interpretation back in the late Seventies. Secondly, the corpus of sculpted materials must be revised: in addition to the fragments recovered in recent decades, there are other sculptures known for a long time – some of which unpublished – but little or not at all considered in the scholarship. Thirdly, the use of specific statistical methodologies applied to this 'new', updated corpus, makes it possible to challenge the previously proposed typological groupings[398].

As for the first point, Casartelli started from the observation that during the 7th century sculptural production appears quantitatively modest throughout Western Europe, except in the Visigothic kingdom. However, many Visigothic sculptors would flee the Iberian peninsula in 711, the year of the Islamic conquest. These «refugee craftsmen» would then place their skills at the disposal of the Lombard kingdom – especially in its Northern territories –, playing a fundamental role in triggering the so-called 'Liutprand Renaissance'[399]. After 774 – year of Charlemagne's conquest – the descendants of these sculptors would scatter in different directions, including Southern France (and Nice-Cimiez), to take advantage of the new work opportunities made possible by the fall of the border between the Lombard and the Frankish kingdom. Hence the dating of the sculptures: post-711 and pre-774 for those in Lombard lands, and post-774 for those retrieved in France, i.e. west of the border 'deleted' by Charlemagne. Casartelli then subdivided in two groups, upon stylistic grounds, the sculpted fragments dated to the period prior to 774, thus creating a total of three groups: the first, assigned to 711-750 ca.; the second, assigned to 750-774 ca.; and the third, assigned to 774-800 ca.[400] (see the table in Paragraph III.4.1).

Casartelli explains the chronology of the first group (second-fifth decades of the 8th century) as a direct consequence of the «ruin brought by the Arabs»[401]. These observations derived from the contemporary historiographical debate: back in the late Seventies, the Islamic conquest of the

[398] About this third point, see the next Paragraphs.

[399] Casartelli Novelli 1978, 14. – Art historians use the term 'Liutprand Renaissance' to indicate the prolific period of the Lombard art – in terms of quantity and quality of artefacts – during the first half of the 8th century, especially in the area of Pavia: see Arslan 1996.

[400] Casartelli Novelli 1978.

[401] Casartelli Novelli 1978, 11, 14. Original in Italian.

Iberian peninsula in 711 could actually appear as a plausible cause for a possible mass migration of local populations, including sculptors. Indeed, to justify an impact on Lombard art so profound as to contribute to prompt the 'Liutprand Renaissance'[402], one must imagine a real 'exodus' of artists – something that Casartelli actually seems to assume throughout her paper. However, in the past forty years, historical and archaeological research has overcome this interpretation of events. There is no evidence of a mass migration out of the Iberian peninsula as a result of the Islamic conquest, and, except for a part of the aristocracy and some intellectuals who fled to the North of Spain, «the local populations remained where they were, under the protection granted by the new rulers [...], and – as long as they paid taxes and respected the treaties signed with the conquerors – they continued to live under the authority of bishops and noblemen who were leading the communities before the arrival of the Arabs»[403]. Moreover, since the early days of the occupation, the Visigothic and Arab aristocracies begun to stipulate political alliances and to forge marriage bonds. No scholar, of course, would deny the violence which comes with war events – including the Islamic conquest – but the portrait of the Arabs as brutal abusers during the years and centuries following 711 is now generally perceived as obsolete: a number of studies have highlighted that this image is a construct deriving from past nationalistic historiography, which exalted the Visigothic kingdom as the first state formation unifying the whole peninsula[404].

Remarkably enlarged during the past few decades, the archaeological record has also clearly shown the absence of any kind of sudden break, or systematic signs of destruction and abandonment, around the year 711 and for the 8th century in general: rather, change occurred very gradually from the viewpoint of material culture, and a new society becomes archaeologically 'visible' starting only from about the 10th century[405].

An important argument used by Casartelli in support of her hypothesis on the migration of Visigothic sculptors towards the Lombard kingdom was the «total extinction» of the art of stonecarving in the territories of Iberian peninsula occupied by the Arabs[406]. This assumption, too, was absolutely natural in the academic context of 1978: back then, the late Visigothic period was generally considered the latest possible time for the occurrence of Christian building, hence most of

[402] Casartelli Novelli 1978, 13-14, 16.

[403] Guichard 2000, 18, 32. Original in French.

[404] Guichard 1994. – Guichard 2000. – Montanari 2002, 53-54. – Brown 2003, 295-320. – Manzano Moreno 2011, 17-18. All with literature. – In general on this subject, see also: Said 1991. – Hourani 1992.

[405] For a general overview, see: Manzano Moreno 2011, 5-7. – Gutíerrez Lloret 2015, 53-54, 59, 62, 66, 70, 72, 76 (with numerous examples of continuity until the late 8th century).

[406] i.e. the whole peninsula, except for Asturias: Casartelli Novelli 1978, 14.

Spanish Early Medieval sculpture was dated to the pre-711 period. Often, however, these dates were assigned in the absence of real chronological indicators: therefore, even the argument used in Casartelli's study should be reconsidered in the light of the advancements of the research in the last forty years. Today it is widely known that, despite the progressive conversion of society to the new creed – especially starting from the 9th century – the Muslim rulers never prohibited Christians from professing their religion, as long as the due taxes were paid, nor did they forbid ecclesiastical building, including renovations of pre-existing churches and additions of architectural and liturgical sculpted elements[407]. Furthermore, despite a few instances are still contended[408], a number of churches traditionally assigned to the late Visigothic period, with their architectural decoration and sculpted furnishings, were post-dated to the 8th-10th centuries[409], based on new excavations, typological classifications, and archaeometric analyses[410]. Sculptures, therefore, no longer have to be necessarily dated to the pre-711 period, while a break in the art of stonecarving after the Islamic conquest seems, nowadays, rather implausible: on the contrary, abundant evidence of artistic exchanges within 8th-10th centuries Iberian peninsula – also occurring through the movement of building craftspeople – has been brought to light in the past decades, showing once more that these artisans had not massively fled to other European regions.

The year 774 would be the other date of the *histoire événementielle* which, according to Casartelli, clearly marked a before-and-after in the history of Early Medieval European sculpture. In a similar way to what had happened more than sixty years earlier, the stonecarvers (descendants and not from Visigothic «refugees») would have abandoned the territories of the *Langobardia* conquered by Charlemagne, and emigrated where new patrons were summoning them, i.e. «to the South, at Rome and in the Papal States, and, from Nort-Western Italy, to the neighbouring

[407] In general on these points, from an archaeological perspective, see: Gutíerrez Lloret 2015, 68-72. – Beghelli 2021. Both with literature. – See also Guichard 2000, 27.

[408] For a critical overview and some dissenting viewpoints see: Chavarría Arnau 2008, 324-326. – Chavarría Arnau 2010, 160-161, 172-174.

[409] Among others, see: Caballero Zoreda / Fernández Mier 1999. – Tosco 2003. – Caballero Zoreda 2006, 123-124. – For a general overview, see: Caballero Zoreda 1994-1995. – Caballero Zoreda / Utrero Agudo 2005.

[410] Regardless of the ongoing lively debate on the chronology of some of these sites, what is relevant for our purposes is the present-day general consensus in dismissing the '711-breakdown theory': if the erection of whole churches or monasteries could take place after the Arab conquest, there was all the more a reason for minor restorations like the addition or replacement of sculpted furnishings. Indeed, in other regions of Europe marked by a 'boom' in Christian building during the 6th century (a phenomenon also seen in the Iberian peninsula: Sales Carbonell 2012, 405-406. – Chavarría Arnau 2019), this was a very common occurrence: the 8th and 9th centuries carved elements were often added to pre-existing structures (see above, Paragraph II.3.2). Independently of the pre- or post-711 foundation date of a church, the carved stone fragments found in it can thus still belong to the 8th or 9th centuries. When broadening observation to wider sculptural 'trends' in France, Italy, and other areas, a number of post-dated Iberian sculptures (Villa del Castillo 2016) actually seem to fit much more comfortably in the general framework of the 8th-9th centuries, rather than the 6th-7th.

territories of Provence and Burgundy». Hence the dating to the last quarter of the 8th century of a fragment from Marseille St-Victor and the stone remains from Nice-Cimiez[411]. Despite the close resemblances between the finds from Cimiez and those from the nearby cathedral of Ventimiglia (ca. 40 km away), which Verzone and Fossard considered to be coeval and made by the same atelier, Casartelli dated the Ligurian finds to an earlier period (third quarter of the eighth century), because she did not think it plausible that the sculptors had crossed the border before 774 (see the table in Paragraph III.4.1). However, the abundance of sculptures dating to the late 8th and early 9th centuries in Northern Italy (some of which found precisely in Ventimiglia) indicates for this territory a continuity of artisanal tradition and building activities, even in the period of transition between the Lombard and Frankish rulers[412]. Furthermore, are we really sure that political and cultural borders were so rigid? On this subject too, research has developed considerably and, as seen above, today we know that artisanal mobility often had a 'transnational' character[413]. Precisely on this point, shortly after the publication of her most famous essay in 1978, Casartelli had changed opinion, following the discovery of new fragments in the Piedmontese abbey of Novalesa, which, founded in 726 in Frankish territory, yielded carved fragments very similar to those from Albenga (dated to the early / first half of the 8th century): this was the evidence of a transfer of sculptors between the Lombard and Frankish areas well before the 'abolition' of the political border in 774[414].

Nowadays, therefore, the main historical arguments used by Casartelli – which influenced to such a great extent the periodisation and dating of the three groups of sculptures to circa 711-750, 750-774, and 774-800 (see table in Paragraph III.4.1) – appear rather questionable.

But even from the viewpoint of the sculpted materials, research made progress in the last decades. An eloquent example is a small pillar from Como, pinpointed in 1978 as a testimony of the direct contribution of Visigothic sculptors in Northern Italy, on the basis of the comparison with a slab from Salamanca at the Archaeological Museum in Madrid[415]. Yet the trait in common only

[411] Casartelli Novelli 1978, 20. – See also: Frondoni 1987, 41-57. – Marcenaro 1994, 215. – Gandolfi 1995. – Marcenaro 2014, 79-85.

[412] Lomartire 2013, 345-346. – On the 9th century sculpted fragments from the cathedral of Ventimiglia, see below, Paragraph III.4.10.

[413] See Paragraph III.2.5.

[414] Casartelli Novelli 1979, 52 (nr. 8), 54-56.

[415] Casartelli Novelli 1978. – Following Puig i Cadafalch 1961, Casartelli identifies the origins of Visigothic sculpture in Celtiberian and Late Roman metal objects, such as 4th / 5th century '*Kerbschnitt*' belt-buckles: today we know that the latter finds are very rare in Spain in comparison to other European regions, and are generally found in locations far away from the churches that yielded sculpted decoration (Aurrecoechea 2001, 133-139, and distribution map nr. 9). The main problem of this kind of assumptions is however, as Chris Wickham and others have observed, that 'influences' from very distant objects in space or time are hardly plausible, and even less explainable in concrete terms.

consisted in one individual, simple detail – a trefoil leaf – which is however inserted in rather different decorative contexts. As seen above, today a number of scholars consider this approach as misleading[416]. More recently, Jorge Morín de Pablos and Rafael Barroso Cabrera have convincingly related the slab from Salamanca to a precise production and artistic context, recognising an almost identical specimen – both in the structure and in the details of the decoration – from Zamora, and also pointing out the derivation of the motifs from Late Roman architecture, especially mosaics[417]. On the Italian side, Maria Letizia Casati noted the full consistency of the pillar from Como with the Lombard sculptural production, especially from Milan, Pavia and Brescia[418]. Already in 1999, Milagros Guàrdia i Pons had observed that some resemblances between the Visigothic sculpture and that from other areas in Europe only depend on the common 'source of inspiration', since the ornaments are often derived from Roman models[419].

A partial review to Casartelli's periodisation has been proposed in Alberto Crosetto's latest works[420], who based his studies not on single ornaments, but on combinations of decorative patterns, and on the comparison of *sets* of motifs replicated in different find-spots within the area of nowadays Piedmont, Liguria, and Provence-Alpes-Côte d'Azur. The scholar pinpointed very close resemblances among the sculpted materials from Alba (Southern Piedmont) and Albenga, and, additionally, between the fragments from these two locations and those from Borgo San Dalmazzo (Southern Piedmont), Ventimiglia, and Nice-Cimiez[421], implying that the same mobile team of sculptors worked in all five locations[422], and therefore creating different groupings from Casartelli's ones (see the table in Paragraph III.4.1).

In conclusion: on one hand, as scholars like Verzone or Fossard had already pointed out, there is little doubt that the same group of stone-carvers must have worked in several locations in Piedmont, Liguria, and Southern France (and perhaps even in Lombardy). As Crosetto noticed, the motifs from different find-spots of this macro-area are indeed «similar to such an extent that their

[416] See Paragraphs III.1.1, III.2.6, and III.3.1.

[417] Morín de Pablos / Barroso Cabrera 2008, 694 and figs 9-10, 698.

[418] Casati 2007b. – Casati 2014, 5.

[419] Guardia i Pons 1999, esp. 211.

[420] Crosetto 2013. – Crosetto 2013a. – On the contrary, some former studies refer to the 'Visigothic theory'; see for instance: Crosetto 1998, 313. – Crosetto 1999, 173. – Crosetto 2009, 11.

[421] Crosetto 2013, 365-366. – Crosetto 2013a, 194. The scholar dates the so-called arcosolium-tomb at Albenga to the mid 8th century, and the sculptures from Alba to a slightly later period, i.e. the second half of the 8th century.

[422] Crosetto 2013, 365-366. – Crosetto 2013a, 194.

diffusion can hardly be explained without assuming the mobility of craftsmen»[423]. Yet, on the other hand, the absolute chronology assigned to these sculptures – as well as their exclusion or inclusion in the work of one or more ateliers – largely depend, still nowadays, from Casartelli Novelli's paper from 1978. The only way to determine more accurately where and when these mobile stone-carvers might have worked, seems to take a fresh look at the sculptures in their whole, trying to put aside the 'Visigothic theory'.

III.4.3. **The 'Piedmontese-Provençal workshop': selection and analysis of the sculpted materials**

In the re-examination of the materials from South-Eastern France and North-Western Italy, the first stage of the work was obviously to identify all the sculpted fragments potentially 'suspected' of having been made by same group of sculptors – which, hereinafter, will be referred to with the simple geographical designation of 'Piedmontese-Provençal workshop'[424]. To this purpose, an initial survey was conducted, as accurately as possible, basing on the available literature on Early Medieval sculpture: the survey concerned not only South-Eastern France and North-Western Italy, but also most of the territories within the geographical boundaries of this work (mainly, from East to West: the Eastern Adriatic area, the Alps and the adjacent macro-regions on both sides, the Italian peninsula, France, and the Iberian peninsula, especially its North-Eastern parts). This appeared as an inevitable preliminary operation: however far from the 'core' in South-Eastern France and North-Western Italy, none of these territories could be excluded *a priori* from the investigation, because both material and written evidence analysed in this Part III show that sculptors and other construction craftworkers could move over rather long distances. Unsurprisingly, materials from many find-spots in this large area revealed generic similarities with those in Southern-France and North-Western Italy, but these vague resemblances depend on the 'mainstream fashions' of the period, especially in the 8th century, when a number of securely dated sculptures show a decided predominance of floral and vegetal motifs.

Real, precise correspondences, clear enough to indicate the work of the same group of sculptors, have been detected in the following locations:

- Aix-en-Provence (St. Sauveur)
- Alba (S. Lorenzo; SS. Frontiniano e Cassiano)

[423] Crosetto 2013, 365. Original in Italian. – On the same subject see also Crosetto 2013a, 191.

[424] With reference, in 'neutral' alphabetical order, to the main territories where the sculptors worked.

- Apt (St-Anne)
- Avignon (two erratic fragments from Rue Bonaparte)
- Bergamo (S. Alessandro)
- Borgo San Dalmazzo (S. Dalmazzo)
- Caraglio (S. Lorenzo)
- Dolceacqua (S. Giorgio)
- Marseille (St-Victor; La Major)
- Nice-Cimiez (St-Pons)
- Pollenzo (S. Vittore)
- Torino (S. Salvatore)
- Ventimiglia (S. Maria Assunta and two erratic finds from the area of the Roman city, near the river Nervia).

	Aix-en-Provence	Alba S. Lorenzo	Alba SS. Front. Cass.	Apt	Avignon	Bergamo	Borgo San Dalmazzo	Caraglio	Dolceacqua	Marseille St-Victor	Marseille La Major	Nice-Cimiez	Pollenzo	Torino	Ventimiglia S. M. Ass.	Ventimiglia Nervia	Albenga	Como	Gavi	Libarna	Milano	Noli	Pavia	Ravenna
This work	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**	**X**								
Verzone 1945												X			X									
Fossard 1965												X			X		X		X				X	
Hubert 1968	X											X					X							
Casartelli Novelli 1978, Group 1 (2nd-5th decades 8th c.)							X									X	X	X		X	X		X	
Casartelli Novelli 1978, Group 2 (third quarter 8th c.)															X							X		X
Casartelli Novelli 1978, Group 3 (last quarter 8th c.)										X		X												

As the table shows, this group of find-spots (**figs III.15-III.29**) differs from those proposed by the abovementioned scholars: some locations are 'new' and did not appear in any of the previous studies (e.g. Apt, Bergamo, Caraglio, Dolceacqua, Pollenzo, Torino, etc.), whereas others were present, but combined in different ways (e.g. Aix-en-Provence, which appeared only in the grouping made by Jean Hubert, who associated it to Albenga and Cimiez. Yet other locations,

belonging to some of the previous groupings (e.g. Albenga), were left out from 'our' grouping, the reasons for which will be discussed below[425].

The materials examined in the next Paragraphs do not include Late Antique and Late Medieval sculptures, which were found in some of the considered churches. However, the whole of the Early Medieval sculpted fragments – i.e., anything that showed characteristics consistent with a dating within the broad period 7th-9th centuries – has been taken into consideration. This means that the sculptures analysed in the following pages correspond to the entirety of the Early Medieval finds – known and/or published to this day – from each find-spot, and are not the result of some *ad hoc* selection of just the more 'convenient' stone items. Almost all materials were personally analysed by the author of the present work (by visiting museums or storage rooms of different Institutions where the stone finds were preserved)[426], and almost all fragments are depicted in the **figures III.16-III.29** (Piedmontese-Provençal workshop) and **III.32-III.37** (other workshops identified during the investigation).

In all the find-spots but one (Ventimiglia) almost all the sculptures turned out to belong to just one period – i.e., they were made in the same moment and belonged to the same original set of decorated stone furnishings. In some find-spots, isolated fragments seemingly showing different characteristic from the rest of the group seem to suggest minor repairs or small additions to pre-existing sets of stone furnishings and architectural decoration[427]. Conversely, at the cathedral of Ventimiglia is clearly attested the work of two other workshops ('Early workshop of Ventimiglia' and 'Late workshop of Ventimiglia', **figs III.32-III.36**) besides the Piedmontese-Provençal atelier (**figs III.17-III.18**), meaning that the number of preserved fragments allowed to recognize the making of entire new decorated stone structures, rather than small parts resulting from repair works. As shall be seen, these three groups of sculptors worked at the cathedral of Ventimiglia in different moments within a time-span ranging from the early 8th to the 9th century. The same situation probably concerned Bergamo, where, despite their very limited amount, the materials seem to indicate the activity of not only the Piedmontese-Provençal workshop, but also of another one.

[425] See Paragraph III.4.9.

[426] As regards the fragments which were not accessible to the public, for granting me access to the materials and permission to study them, I am very grateful to: Vincenzo Tiné, Stefano Costa, Sara Chierici (Soprintendenza Archeologia, Belle Arti e Paesaggio per la città metropolitana di Genova e le province di Imperia, La Spezia e Savona); Don Luca Salomone, Valentina Silvia Zunino (Ufficio Beni Culturali della Diocesi di Ventimiglia e Sanremo); Don Thomas Le Bourhis (priest of the cathedral of Ventimiglia); Don Giorgio Maccario (priest of the church of Caraglio); Danilo Sfamurri, Luigi Di Francescantonio (Museo Civico di Sanremo). Odile Cavalier, Alban Rudelin, and Victoire Autajon (Musée Lapidaire, Collection archéologique du Musée Calvet) have kindly provided the high-resolution pictures of the fragments from Avignon, previously published in Buis 1975.

[427] See below, Paragraphs III.4.8 and III.4.10.

Finally, the study enabled to identify an atelier operating on a relatively small area in Southern Piedmont, possibly during the early 8th century (workshop 'Monticello d'Alba', **fig. III.37**).

Not all the find-spots listed above have been the object of systematic archaeological investigations conducted with modern methodologies. This explains the variation, in terms of quantity, of fragments – and, consequently, of motifs attested – in different find-spots. However, the very few fragments from locations like Caraglio, Bergamo, or Dolceacqua, have been anyway included in the group of the Piedmontese-Provençal workshop, because they show rather distinctive and well-recognisable traits. The future of research might tell whether new possible finds will confirm – with the detection of further typical motifs – the assignment to our group of sculptors. A final note must concern the sculptures from Marseille La Major and Bergamo. The fragments are currently lost, but their find-spots are known and, above all, at the moment of their discovery they had been thoroughly documented with excellent drawings. There was, therefore, no reason to exclude them from this study: their features are clearly observable from the drawings, even if, at the moment, a direct examination of the sculptures is no longer possible.

In the following Paragraphs, the sculptures of the Piedmontese-Provençal workshop will be examined according to three different perspectives, increasingly going into detail, with the aim not to lose any piece of information. In Paragraph III.4.4, a more general perspective will be adopted, analysing the evidence on the original architectural structures the stone fragments belonged to, and the overall composition of their decoration. In Paragraphs III.4.5 and III.4.6, the decoration will be 'disjoined' in its single components, which will be inserted in typological tables (**figs III.31a-III.31c**) in order to recognise the whole repertoire of the sculpting workshop. These typological tables allow to carry out a systematic investigation, modelled on the statistical / archaeological method of the 'correspondence analysis'. At last, in Paragraph III.4.7, will be considered the small details in common, i.e. the tiniest particulars of the sculpted decoration, which also represent revealing signs of the work of the same group of sculptors in different locations.

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In the next pages, the same find-spots and the sculpted materials found in them will be repeatedly cited. For the sake of clarity, and in the attempt not to complicate the text, the references to figures will be limited to the bare minimum. Unless otherwise indicated, every mention of a find-spot implies a reference to the corresponding figure in the group **figs III.16-III.30** *(with the photos of the fragments) and/or to the corresponding rows in the typological tables (***figs III.31a-III.31c***). The same applies to the bibliography: in order to avoid repeating the same footnotes, the*

significant literature for every find-spot has been specified in the **List of finds**, *i.e.* **Paragraph III.4.12**. *Unless otherwise indicated, every mention of a sculpted fragment or a find-spot implies a reference to the literature listed in the corresponding entry in the* List of finds.
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III.4.4. **Considering the whole. Original architectural structures and overall composition of the decoration**

As seen above, the most accurate studies from a methodological viewpoint show that the fragments from a given find-spot should be addressed in their whole[428], which would imply, in the first place, the identification of the original structures. The sculptures assigned to the Piedmontese-Provençal atelier belonged to liturgical furnishings and architectural decoration that is not always possible to recognise, especially in the locations where the number of finds is very low. Detailed reconstructions have been proposed for Nice-Cimiez and Borgo San Dalmazzo (**fig. III.20**). In the other cases, the existing studies do not provide graphic reconstructions – and at times do not even try to identify the original structures –, but from the forms of the stone elements it is possible to infer that they mainly pertained to chancel screens or altars. *Pergulae* are surely attested at Alba (SS. Frontiniano e Cassiano) and at Borgo San Dalmazzo, and possibly at Torino, while in the other locations the screen was probably of the low type, without an upper part, and only composed of slabs and pillars[429] (see **fig. I.4**). Some of the decorated slabs might have belonged to an altar. On the contrary, pieces of stone furnishings like ciboria or ambos seem currently not to be documented within the Piedmontese-Provençal workshop's production[430].

Of course, considering the sculptures in their whole also implies a preliminary step of the work, aimed to ascertain whether the sculptures belonged to the same original set of furnishings, or they pertained to structures made in different periods and by different artisans. In our case, as seen, this last option concerns Ventimiglia – where two groups of finds, discussed in Paragraph III.4.10,

[428] Chapter III.3.

[429] For different types of chancel screens and stone furnishings see above, Chapter I.1. – At Alba and Borgo San Dalmazzo, the presence of a *pergula* is indicated by the fragments of the small arches that surmounted the entrance to the presbyterium. – At Torino, the upper part of the pillar is topped by a disc-shaped part, that could have been used as a base for a small column: however, there are no drill holes or other signs that can suggest the assemblage of the pillar with the small column: the presence of a *pergula* remains therefore unsure. – At Marseille La Major, the jutting (and broken) upper parts of the pillars are most likely not to be related with remains of small columns, but rather to the so-called 'pineapples' that topped the pillars in a number of chancel screens of the low type.

[430] An ambo is documented within the production of the 'Early workshop of Ventimiglia': see below, and **figs III.33** and **III.35**.

are clearly different from those assigned to the Piedmontese-Provençal workshop – and perhaps Bergamo[431]. In the other locations, the ornamentation appears as rather homogeneous.

On the considered sculptures, the main subjects of the decoration are almost always of just four categories: three types of scroll-work, and combinations of crosses, flowers and whirls (**figs III.16-III.29**). The most frequently attested scrolls are the vine-scroll and the spiral-scrolls. The first one shows alternating grapes and leaves (e.g. **figs III.23**, Torino, and **III.26**, 6; see also **III.31b**, PP 9 and PP 12). The second one consists in alternating plain spirals, beaded spirals (**fig. III.31a**, PP 6, PP 7, PP 8), and spirals of a type that – for the sake of simplicity – will be called the 'ammonite-spiral', for its resemblance to the prehistoric mollusc extinct at the end of Cretaceous period[432] (**fig. III.31a**, PP 3). At Alba, Caraglio, and Apt, the spiral-scrolls include also grapes (**figs III.21**, **III.23**, **III.28**, and **III.31b**, PP 9). A third type of scroll – attested at Aix-en-Provence, Alba, Borgo San Dalmazzo, Marseille, Nice-Cimiez, Ventimiglia – shows helical elements in the form of a three-bladed propeller (**fig. III.31b**, PP 14). Besides the scrolls, the other most common decoration pattern consists in a combination of specific motifs, that can be 'free' or included in thin circles knotted to each other. These motifs are always lily crosses (beaded or not: **fig. III.31a**, PP 2 and PP 4), flowers (with rounded or pointed petals: **figs III.31a-b**, PP 1, PP 5, PP 17), and whirls (**fig. III.31b**, PP 16)[433].

Both this pattern (i.e. combinations of lily crosses, flowers, and whirls) and the three types of scrolls are used on both elongated, parallelepipedal stone items – like lintels and pillars – and rectangular or nearly square stone items, like chancel screen slabs or altar fronts. The overall composition of all four categories of decoration is always completed by small elements that also tend to be repeated in the same versions, and to be put in the same positions. For instance, when the scrolls are placed next to each other on a slab, the empty spaces between them are filled with either a leaf, either a bunch of grapes (Alba, Apt, Nice-Cimiez, Ventimiglia: see corresponding figures). This also applies to the empty spaces between knotted circles: the centre of the slabs from Nice-Cimiez and Ventimiglia show the same, small Greek crosses with wedge arm-terminals, while the motif at the centre of the squared slab at Marseille St-Victor is a bunch of grapes (see corresponding figures). The frames to these main subjects are almost always simple plaits or small intersecting arches.

[431] For Pollenzo, San Dalmazzo and the 'Monticello d'Alba' workshop, see Paragraphs III.4.8 and III.4.10.

[432] It is perhaps necessary to stress that this is a simple name. This designation does not at all imply that the fossils of these animals were the source of inspiration for the sculptors.

[433] In just one case – on a pillar at Nice-Cimiez – these elements are accompanied by heart-shaped leaves: **fig. III.16**, 6.

Thus, in every location considered, the stone elements show the same general composition and components of the decoration, albeit components can combine in various ways and, owing to the difference in the number of surviving finds, not *all of them* are attested in each and every location. To highlight the specificity of these motifs and overall composition of the decoration, a comparison to some roughly coeval materials, for instance those made by the 'Split stonecarvers' workshop' (late 8th century, **fig. III.11**) and by the 'Berico-Benacense workshop' (early 9th century, **fig. III.14**)[434], will be most useful.

As many of their colleagues in the late 8th and early 9th centuries, our Piedmontese-Provençal sculptors showed an inclination for scroll-work, vegetal motifs and crosses, whereas interlaces have a subordinate role: only a few types are used, usually with the function of framing or simply topping the main subject of the decoration. These, however, are features that must be related to the 'mainstream fashion' of the period. The Split and the Berico-Benacense workshops also preferred vegetal and geometrical patterns over interlaces, and used motifs like flowers, whirls – some of which even similar to those made by the Piedmontese-Provençal workshop – and crosses (**figs III.11** and **III.14**). Yet already at first glance, it is evident that, overall, the decoration of the sculptures changes greatly from an atelier to another. Both the Split stonecarvers' workshop and the Berico-Benacense workshop arranged the composition in rectangular and squared panels, defined by thin cable mouldings in the case of Split (each panel contains one single motif) or by plaits and vine-scrolls in the case of the Berico-Benacense atelier (each panel can contain more than one motif) (**figs III.11** and **III.14**).

This way of organising the decoration is completely different from that of the Piedmontese-Provençal workshop: the various motifs used by 'our' sculptors (crosses, flowers, scrolls, etc.) are not enclosed into panels but fill the whole surface of the slab, being occasionally framed by plaits[435]. The comparison among ateliers can continue, analysing more in detail the single decorative elements used in the compositions.

III.4.5. **Peculiar motifs and techniques VS. 'mainstream sculpting fashions'**

The correspondences in the Piedmontese-Provençal, Split, and Berico-Benacense motifs only concern, in a very generic way, the types of subjects used – which, as said, were among the

[434] Basić / Jurković 2011. – Napione 2002. see above, Paragraphs III.3.2. and III.3.4.

[435] This is particularly clear in the case of the best preserved slabs, that allow to reconstruct the original appearance of the more fragmentary ones. – Sort-of small panels appear only in one slab at Apt, but they are anyway empty (originally intended for an inscription which was never carved?): the main subject is a cross decorated with vine-scrolls. In all the other well-preserved slabs assigned to the Piedmontese-Provençal workshop, the decoration is never organised into panels.

most fashionable ones in that period (**fig. III.31**). Scrolls, crosses and flowers are carved in entirely different versions by the Piedmontese-Provençal and by the Berico-Benacense sculptors, as is very clear, for instance, when observing the slab at Cisano, which contains all three elements[436] (**fig. III.14**, 1: compare to **fig. III.31a**, PP 1-8). Another example is a slab from Split, that shows not only crosses of another form in comparison to those from the Piedmontese-Provençal workshop, but also in a entirely different context, i.e. beneath arcades and flanked by the so-called 'trees of life' (**fig. III.11**, 5-6: compare to **fig. III.31a**, PP 2 and PP 4). Crossed lilies appear both at Split and at Vicenza (e.g. **figs III.11**, 3, and **III.14**, 3), but then again, they are made in different ways, not only as for their shape, but also as for the technique – the relief is lower at Vicenza – and the size of the elements. Indeed, the peculiar way to carve the crossed lilies, together with a unique type of rosette called 'cross-rosette with bloomed arms' (**fig. III.11**, 7, 8), are the most distinctive features of the Split stonecarvers' workshop: they are 'signature-motifs', i.e. sort of 'index fossils' which, together with the repeated association with other specific ornaments, enable to recognise the work of this particular atelier[437].

One might object that, whereas the Berico-Benacense and the Piedmontese-Provençal sculptors carved all the motifs in quite different ways, the flower with rounded petals and the whirl attested at Split (**fig. III.11**, 1 and 6) have an overall form similar to those of the Piedmontese-Provençal workshop. One however, as repeatedly remarked in the previous pages, should avoid comparisons based upon individual motifs, separated from their context[438]: indeed, the variants of these 'mainstream motifs' are different as for their details, size, technique, and position in the general composition of the decoration: see, for instance, the internal part of the petals, which is always hollow in North-Western Italy / South-Eastern France (**fig. III.31a**, PP 1). Also, no Piedmontese-Provençal whirls or flowers are encircled in individual rings and then enclosed in squared panels like at Split (**fig. III.11**, 1).

This and the previous Paragraph have been focused on the comparison between the Piedmontese-Provençal, the Split, and the Berico-Benacense workshops, but, of course, the same could be done with any other homogeneous and well contextualised group of fragments. In sum, a comparison among ateliers – even a very cursorily one, and limited to only three cases – allows not only to appreciate differences in the general organisation of the decoration, but has also the advantage to give an idea of how many variants of the same 'mainstream motif' could exist during

[436] On the notion of 'peculiar motifs' VS. 'mainstream fashions' see above, Paragraph III.2.6.

[437] Basić / Jurković 2011.

[438] See Paragraph III.3.1.

roughly the same period, because each workshop had its own distinctive way to carve the ornaments (**fig. III.31**). When considering this last point, it is even easier to understand that the correspondence of some peculiar decorative patterns – especially the most elaborate and recognisable ones – is a very significant hint of the work of the same sculpting atelier in different locations. However, even the reiteration of identical, peculiar decorative patterns in different places must always be evaluated in its context.

III.4.6. (Repeated associations of) peculiar motifs, 'signature-motifs', and 'long-distance runners'. Correspondence analysis, seriation, and the workshop's repertoire

In order to analyse at best, in their context, all the motifs attested in each find-spot, and in order to compare in a systematic way whole contexts and not individual fragments, in this work will be adopted a method modelled on the 'multiple correspondence analysis', and in particular the process called 'seriation'. Using a very sketchy definition, one might say that this is a statistical method for verifying the existence of, and analysing, *patterns of association* of *qualitative variables*. Ever since the 19th century, this method has been successfully employed in archaeology in the most diverse fields, to arrange «artefacts, sites or assemblages into a linear sequence on the basis of the degree of similarity between the various elements in the sequence» and therefore to study, for example, hoards, deposits, buildings, layers from settlements with related finds, and so forth, «particularly when there is a lack of stratified material»[439]. Datasets are often very large, usually comprising hundreds of contexts (for instance, graves in several cemeteries) and consisting of thousands of variables (for instance, the grave goods in each of these graves), sorted by typology[440]. Generally, the aim of such studies is verifying the chronological sequence of the archaeological materials, or to define types and typologies starting from the correspondences in certain characteristics of the considered objects[441]. The starting point of correspondence analysis and seriation is always a table containing all the qualitative variables: considered their large amounts, these variables are normally examined by means of dedicated software, some of which specifically developed for archaeological use. Precisely the availability of large quantities of data, which enlarge the statistical dataset the software works with, facilitates these operations.

[439] Shaw / Jameson 1999, s.v. Seriation.

[440] Shaw / Jameson 1999, s.v. Seriation. – Siegmund 2017.

[441] For Late Antiquity and the Early Middle Ages, see for instance: Siegmund 1998. – Legoux / Périn / Vallet 2004 – Siegmund 2017. – Pinar Gil 2017. – On types, typology and style see below, Paragraph III.4.11.

In our case, the chosen software has been *Past*, in its version 3.22. The dataset was much narrower in comparison to the abovementioned instances: our qualitative variables are the sets of motifs, or *types*, attested in each find-spot (**figs III.31a-III.31c**), and what must be verified are the multiple correspondences of individual motifs within one or various find-spots (**figs III.38-III.38b**).

Our aim was to recognise patterns of associations among the motifs / types, and hence to identify sculpting workshops. Of course, the final result of any correspondence analysis and seriation rests entirely on the accuracy with which the initial variables – i.e. types or characteristics of the objects – have been defined[442].

Figures III.31a-c, **III.31d**, **III.35** (above), and **III.37** (above, right), are the summary-tables of all types: the decorative patterns attested in each find-spot have been disassembled in their single components, i.e. sorts of 'ornamental units'. This was a necessary operation, because of the fragmentary condition of the materials, and also because of the sculptors' custom of always using the same 'decorative units', yet combining them in different ways. The types have been determined according to strictly morphological (not iconographic) criteria, i.e. according to the specific form / shape that the same subject can take[443]: for instance at Alba S. Lorenzo, or at Apt, are attested two types of grapes, one having a rather elongated design, the other having a more rounded shape (**fig. III.31b**, PP 9 and PP 10). As another example, the spirals can have a higher or lower number of spires, usually – and logically – depending on the size of the stone elements (**fig. III.31a**, PP 7 and PP 8). Flowers are also attested in diverse forms (**figs III.31a-c**, PP 1, PP 5, PP 17, PP 18); and so forth. The denomination of each motif / type has been kept as simple as possible: in figures **III.31 a-c**, 'PP' stands for 'Piedmontese-Provençal workshop', for, as we shall see, the other two workshops – probably earlier – identified during the study had a different way to carve scrolls, flowers, leaves, grapes, etc. (**fig. III.35**, above: 'Early workshop of Ventimiglia', abbreviated EwV; **fig. III.37**, above right: 'Workshop Monticello d'Alba', abbreviated WM)[444].

In **figures III.38-III.38a** can be seen the final result of the seriation performed in the present study, consisting in a table. Each column is a type, while each row is a sculpted fragment (for a total of 109 specimens, named after their find-spot): for example, the fragment 'B. S. Dalmazzo 8' bears a motif belonging to just one type (PP 7), while the fragment 'Nice-Cimiez 4' shows the same motif (type PP 7) and, additionally, another four (types PP 3, PP 6, PP 8, PP 11). As it is self-evident, the

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[442] Shaw / Jameson 1999, s.v. Seriation, with literature. – On the use of multiple correspondence analysis in archaeology, and for a short but thorough guide on the software Past, see Siegmund 2017, with literature.

[443] On types, typology and style see below, Paragraph III.4.11.

[444] For these workshops see below, Paragraph III.4.10.

table's purpose is to identify multiple (not sporadic) correspondences among sculptures, both within the same site, and among different locations. Taking the sculpted fragment as the basic unit of the study (and not, for instance, a whole site with all the types attested there) allows one to rely on physical, secure, and objective relations, according to the same principles governing the interpretation of stratigraphy. Just as, for instance, the original plan of a building is reconstructed from the physical relationships among individual archaeological layers (layer A is related to B, B is related to C, etc.), the associations of motifs / types on the sculptures enable to identify macro-groups whose elements are linked together (**fig. III.38b**). Another possible comparison is with the analysis of funerary deposits. The types / motifs attested on a sculpted fragment correspond to the grave goods: by examining their correspondences, one can set the stone fragments (or the grave goods) into a larger context, therefore investigating their relations with other sculptures (or graves), coming both from the same church (or graveyard), and from other sites.

The qualitative variables contained in the initial table (i.e., as said, the starting point of any correspondence analysis and seriation) can be ordered and arranged using software such as *Past*, which, in very general terms, work by 'gathering together' data which are 'similar' to each other, 'pushing away' the data of different kind. Therefore, while the input consists of unsorted information (i.e. a disordered table), the result of the procedure is a new, ordered sequence of rows and columns in the table[445]. This can be achieved in different ways, but the function of *Past* used in the present study was one of the simplest ones, i.e. *unconstrained seriation* (also called sequencing or ordination, in the sense of sorting and re-sorting)[446]. In the final result (**figs III.38** and **III.38a**), *Past* has indeed rearranged the data contained in the rows and columns (which were initially entered in the table in simple alphabetical order) according to the mutual relations that bind the sculpted fragments to each other. As can be clearly seen, well-defined groups (corresponding to different sculpting workshops) emerged from the seriation (**figs III.38** and **III.38a**), which will be addressed

[445] See Siegmund 2017.

[446] Siegmund 2017 (esp. 34-35, 46), who remarks that before the computer era, this process was carried out manually, by ordering rows and columns. The first computer software for CA was an automatization of this repeated re-sorting of rows and columns only. Nowadays the mathematical solution is much more sophisticated and achieved by way of calculation, the correspondence analysis proposing a new sequence for the rows and columns only at the end of these calculations. Correspondence analysis proper is multi-dimensional, meaning that after calculating the first sequence on the first axis, it looks for a second dimension, which is independent from the first one, and goes on with a third dimension, and so on. Rarely these second, third or higher dimensions of the material are of archaeological significance. The sequence obtained through seriation (or sequencing, or ordination) corresponds to the first axis of correspondence analysis. Therefore, the results of a correspondence analysis applied to the same archaeological materials are virtually the same as the ones obtained with seriation.

in the next pages. The abovementioned network-graph in **figure III.38b**, made with the software *Gephi* (version 0.9.2), shows, perhaps in an even more immediate way, the main results of the seriation.

In the network-graph, *Gephi* has joined the dots (types) whenever they appeared together on the same sculpted fragment: the lines, therefore, represent the sculptures, which are the 'bearers' of the physical relations that connect types to each other: in the point cloud corresponding to the Piedmontese-Provençal workshop (PP), the motifs are all linked together by a very dense network of relations (**fig. III.38b**).

It is important to stress that, differently from other studies (and as a consequence of the kind of data entered in the original table), the seriation operated by *Past* (**figs III.38** and **III.38a**) cannot, in itself, provide hints on the chronological sequence of the groups of sculpted materials. As shall be seen, every group includes fragments which must be considered as substantially coeval to each other: yet their dating (and therefore their arrangement in a chronological sequence) must be determined by using data 'unknown' to the software, such as the presence, in a group, of securely dated specimens (e.g. by means of an inscription).

We shall start our discussion from the most sizeable group of materials, corresponding to the Piedmontese-Provençal workshop, while the other ateliers will be considered in Paragraphs III.4.8 and III.4.10. Already a first glance to the typological tables and the seriation results in **figures III.31a-c**, **III.38**, and **III.38a-b** shows that there are multiple points in common among find-spots, i.e. that entire *sets of motifs* tend to repeat in different locations, even if the single types can be combined in different ways in the overall composition. Of course, the correspondences increase in number where the amount of attested fragments is larger. In some cases, the decoration has been damaged by the reuse of the fragments as pavement – e.g. the flower with rounded petals and the lily cross at Apt (**fig. III.31a**, PP 1 and PP4), or the 'ammonite' spiral at Alba San Lorenzo (**fig. III.31a**, PP 3) – but a little additional attention suffices to recognise all the characteristics of the motifs.

In general, in every location, the same types are reiterated in a substantially identical form. This applies to both the most elaborate motifs – e.g. crosses, spirals, flowers, etc. – and to some simpler ones, like for instance the very peculiar palmette used at the ends of the scrolls at Alba SS. Frontiniano e Cassiano, Borgo San Dalmazzo, and Apt (**fig. III.31b**, PP 15). The form of the motifs varies occasionally, and only slightly, owing to the limited size of the stone element: for example, the flower with rounded petals PP 1 (**fig. III.31a**) has always the very same design, except at Borgo San Dalmazzo: here, the sculptors used it on a *pergula* lintel where – differently from all the other

locations – they did not have enough space to carve details like the double border of the petals or the trimmed circle at the centre of the flower. Even identical motifs, however, can vary slightly in their size, at times even within the same church or find-spot: this represents, once again, evidence that no cartoon or *spolvero* was used during the carving process[447].

Thus the table and graph in **figures III.38** and **III.38a-b** highlight *repeated associations*, in different locations, of the same types or motifs, i.e. *multiple*, *and exact*, *correspondences* of peculiar ornaments. It is precisely the reiteration of many – not just one or two – motifs that defines the group, indicating the work of the same team of sculptors. The same logic, as seen above, lies behind the identification of the Split, the Berico-Benacense, and other sculpting ateliers recognised in previous studies[448]. In our case, the reiteration of three specific types of flowers PP 1, PP 5, and PP 17 (or four, if one considers the element with 4 leaves PP 18 as a flower: **figs III.31a** and **III.31c**), two specific types of lily cross (PP 2, PP 4, **fig. III.31a**), two specific types of scroll-work (including for instance PP 3, PP 6, PP 8, PP 9, PP 12, **fig. III.31a-b**), and so forth, represents the relevant factor that enables to recognise the work of Piedmontese-Provençal sculptors in diverse places.

In other words, what the tables show is the workshop's repertoire, i.e. the result of the selection – operated by the Piedmontese-Provençal sculptors – of just *certain* motifs over many more that were fashionable in the period, meaning that the sculptors did not carve *any* flower, *any* scroll, etc., but only some specific types. Above all, the tables show their *peculiar* way of carving these motifs (**fig. III.31**)[449]: for instance, their distinctive and unique design of the vine-scroll, and the grapes and the leaves in it (**fig. III.31b**, PP 9-PP 12), or the distinctive and unique version of the flower with eight pointed petals (**fig. III.31a**, PP 5). Following a most useful notion of the 'Croatian school'[450], one might add that some of these peculiar motifs are actual 'signature-motifs', i.e. motifs that, as far as it was possible to ascertain, appear exclusively in the locations included in the table, and nowhere else.

The signature-motifs of the Piedmontese-Provençal workshop appear to be the beaded lily cross (**fig. III.31a**, PP 2) and to two components of the scrolls, i.e. the beaded spiral and the ammonite-spiral (**fig. III.31a**, PP 3, PP 6). Of course, what is 'unique' is the scroll in its whole, including its structure, its other parts (i.e. the simple spirals PP 7 and PP 8), and its small details,

[447] See above, Paragraphs III.1.2. and III.1.3.

[448] See above, Chapter III.3.

[449] On these notions see above, Paragraphs III.2.6. and III.3.1.

[450] See above, Paragraph III.3.1.

but its 'uniqueness' is mainly due to these very peculiar components (i.e. the beaded spiral and the ammonite-spiral).

As Miljenko Jurković stressed, both distinctive interpretations of given motifs and actual signature-motifs can only be recognised as such after the accurate analysis of a fairly complete catalogue of the sculptures in the considered territory[451]. As for our case, as seen at the beginning of this Chapter, the available scientific publications cover quite well the area of Southern France and Northern Italy, and literature on other European areas outside Southern France and Northern Italy was also examined as thoroughly as possible. Signature-motifs, then, make sense and are recognisable only in their broader context: this, however, does not only mean their geographical context, but also their role in reference to the other decorative types attested in the same find-spot. As can be verified through the typological tables, in the find-spots where many fragments were found – i.e. those that offer a wider base for comparison – the Piedmontese-Provençal signature-motifs are always accompanied by other typical, peculiar motifs, that the workshop repeated in the same way in different locations. Again, it is this reiterated *pattern of associations*, or of correspondences, that highlights the nature of signature-motif of certain ornaments – i.e. ornaments which were not used by other groups of sculptors, but only by the Piedmontese-Provençal workshop.

Consequently, once a certain type has been recognised as a signature-motif, this becomes a strong hint for the work of a specific atelier, even in the locations where very few fragments were found. For this reason (i.e. because of the presence of the beaded lily cross, or of the scroll with beaded and ammonite-spiral) find-spots like Avignon, Bergamo, Caraglio, Dolceacqua, Pollenzo, and Torino have been included in the table and in the list of places where the Piedmontese-Provençal sculptors most probably worked. Contexts like these, where just two or three fragments were found, can be difficult to evaluate: for instance, as shall be seen, at Bergamo only one out of three stone items seems to be ascribable to the Piedmontese-Provençal workshop, whereas the others are probably later[452]. At Avignon, Caraglio, Dolceacqua, Pollenzo, and Torino only two to four distinctive types link the sculptures to other locations, whereas the find-spots which yielded more fragments are related to each other by six, seven, or more correspondences. In any case, as noted earlier, future archaeological investigation and possible new finds might provide additional correspondences and common traits with the other sites, as occurred, for instance, at the cathedral in Alba or at the abbey of Borgo San Dalmazzo. Prior to the systematic archaeological excavations

[451] Jurković 2000, 230. – See also previous Paragraph III.4.6, and above, Paragraph III.3.1.

[452] See below, Paragraphs III.4.8 and III.4.10.

carried out in these sites, only a few sculpted fragments were known, but some of them already showed signature-motifs. Some years later, the excavations brought to light many new finds[453], which proved to be very consistent with the repertoire of the Piedmontese-Provençal workshop. In the same way as for any other seriation applied to archaeological materials, new finds are always the factor that allows to verify the solidity or correctness of a system, therefore representing an excellent 'stress test'. Typical examples are the grave goods discovered after the creation of a typo-chronological classification for some classes of objects: the new finds can confirm the dating and typologies proposed in the system – and even contribute to refine it – or, on the contrary, they can prove it incorrect or inaccurate in some of its parts[454].

In our group of sculptures, the association of the same motifs repeated in different locations does not only concern peculiar motifs and signature-motifs, but also some simpler, common and less distinctive ones, like small arches, plaits of 2, 3, 4 and 5 strands, brezel-interlaces, etc. (**fig. III.31c**, PP 21-25). Some of them, like the small arches (PP 20), have at least some particular features: note the tiny elements, in the form of a flame, carved in the area where the arches intersect (**fig. III.31c**, PP 20, Alba S. Lorenzo and Ventimiglia). Others, like brezel-interlaces and plaits (**fig. III.31c**, PP 21-25), are nearly impossible to distinguish from their counterparts used far and wide in the 8th and 9th centuries. These motifs, probably owing to their relatively simple and strictly geometrical structure, appear in a substantially identical shape throughout Europe, and for a prolonged period of time. In the correspondence analysis applied to archaeological materials, the types which appear in the same form for a long period of time are often called *Langläufer* or 'long-distance runners' (**fig. III.31c**)[455]. However, this does not mean that arches, plaits, and other interlaces are unimportant. The significance of the long-distance runners lies precisely, again, in the overall context. Only a few of the very many interlaced ornaments and other common motifs of the period were chosen and used by the Piedmontese-Provençal workshop. Also, these long-distance runners behave exactly like the other types in the table: they tend to reiterate, *as a set*, in different locations. So even if they are not, alone, 'diagnostic' types to identify the work of the Piedmontese-Provençal sculptors, they should not be considered as second-rate elements: on the contrary, they belong with full rights to the repertoire of the workshop and – together with the most peculiar and recognisable motifs – they contribute to characterise it.

[453] Crosetto 1998. – Crosetto 1999. – Crosetto 2013a.

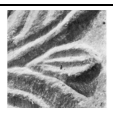
[454] On the notion of 'stress test' applied to correspondence analysis in archaeology, see Pinar Gil 2017a, 53 and 81-86.

[455] Siegmund 2017.

III.4.7. **Small details in common**

So far, in the examination of the sculptures, the decoration has been considered on two levels: first, its composition and structure; then, with the typological tables and the seriation, the ornaments have been 'disassembled', in order to systematically compare their main components. That fact that decorative elements are substantially identical in different locations appears as self-evident from the photographs. The peculiarity of the repertoire of the Piedmontese-Provençal workshop emerges even more clearly when comparing it to that of other roughly coeval ateliers, like the Split or the Berico-Benacense ones[456].

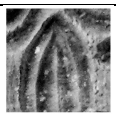
However, the smallest details, probably not so immediately evident when looking at the photographs, deserve a few additional remarks. Small details – as repeatedly stressed in the studies of the 'Croatian school' following the so-called 'Morellian method'[457] – contribute, too, to characterise the specific, peculiar form of a certain motif, and therefore represent most revealing signs of the work of the same workshop in different locations[458].

		Aix-en-Provence	Alba S. Lorenzo	Alba SS. Cassiano e Front.	Apt	Avignon	Bergamo	Borgo San Dalmazzo	Caraglio	Dolceacqua	Marseille St-Victor	Marseille La Major	Nice-Cimiez	Pollenzo	Torino	Ventimiglia
1. Drop leaf, oval		X	X	X	X		X	X	X		X	X	X	X		X
2. 'Tripartite' drop leaf		X	X	X	X			X	X			X		X	X	X
3. Elongated lateral leaf		X		X	?		X	X			X	X	X	X	X	X
4. Double node (scroll)		X	X	X	X		X	X	X		X	X	X	X	X	X

[456] See above, Paragraphs III.4.4 and III.4.5.

[457] See Paragraph III.3.2.

[458] Jurković 2000, 226-227, with literature. – Morelli 1880: see above, Paragraph III.3.2.

		Aix-en-Provence	Alba S. Lorenzo	Alba SS. Cassiano e Front.	Apt	Avignon	Bergamo	Borgo San Dalmazzo	Caraglio	Dolceacqua	Marseille St-Victor	Marseille La Major	Nice-Cimiez	Pollenzo	Torino	Ventimiglia
5. Corner lily		X	X		X	X					X	X	X			X
6. Stylised lily / palmette			X		X			X		X	X		X			X
7. 'Flame' / dog-tooth ornament		X	X		X						X			X		X
8. Rope moulding		X	X		X	X	X	X	X	X	X	X	X			X
9. Bead and reel moulding								X			X	X	X			

As the table above shows, the diverse types of scrolls used by the Piedmontese-Provençal atelier are always completed with the same set of decorative elements (see entire sculptures in **figs III.16-III.29**). Between the single round 'units' of the scrolls, appear two types of leaves: oval leaves with trimmed border (**no. 1** in the table), and a sort of variant of it, where the incised lines make the leaf look like a tripartite element (**no. 2** in the table): this last small element is very peculiar of the Piedmontese-Provençal workshop, hardly to be found in locations other than those where the atelier worked. The spaces between the scroll and the edge of the slab, lintel or pillar, are almost always filled with likewise very characteristic elongated lateral leaves with a wavy form (**no. 3** in the table). The scrolls have always a double node (**no. 4** in the table).

Small filling motifs also repeat with the same form in different locations: corner-lilies appear near the edges (**no. 5** in the table), while stylised lilies (sorts of palmettes, with pair of volutes turned outwards and a central bud or fruit) are used in diverse parts of the slabs (**no. 6** in the table). The small motifs in the form of a flame (**no. 7** in the table) that appear under the intersecting arches at Alba San Lorenzo, Alba Santi Frontiniano e Cassiano, and Ventimiglia (**fig. III.31c**, PP

20) are 'converted' in rows of independent units at Aix-en-Provence (**fig. III.27**, 2), where they are inserted – as separatory elements – between the flower with rounded petals and the contiguous lily crosses, in a way that seems vaguely reminiscent of the Classical motif called 'dog-tooth'. These elements are also carved in corner positions at Marseille St-Victor (**fig. III.25**, 9: on the lower end of the ammonite-spiral scroll) and on the fragmentary slab with the flower with eight pointed petals (**fig. III.25**, 2). They are to be seen also at Apt (in the slab with the vine-scroll, right under the plait: **fig. III.28**, 2), at Pollenzo and, again, at Ventimiglia (**figs III.23** and **III.18**, 10, on top of the elongated lateral leaves).

At last, the mouldings framing the decorations are rope mouldings (**no. 8** in the table) or – especially on stone elements decorated on two adjacent faces – bead and reel mouldings (**no. 9** in the table; see **figs III.16-III.29**). As a whole, the correspondences among all these small details behave, once again, in the same way as peculiar motifs, signature-motifs, and long-distance runners, i.e. they tend to be reiterated *as a set* in different locations. While this is more obvious in the case of scrolls – as some of the details listed above, like the double node, *are* parts of the scrolls –, the same also happens in the case of individual filling motifs like the corner lily, the stylised lily, the 'flame' motif, and so forth.

III.4.8. **Outliers: minor repairs and other workshops**

A last aspect to be considered in the discussion of the correspondence analysis applied to the sculpted materials are the so called 'outliers'. As seen, what indicates the work of the same group of sculptors in different locations is the multiplicity of coinciding variables: indeed, every type repeats many times in various places, whether a peculiar motif, a signature motif, a long-distance runner, or a filling detail. Only three motifs repeat just twice: the flower PP 17 (Nice-Cimiez and Borgo San Dalmazzo); the small Greek cross with wedge arm-terminals PP 13 (Nice-Cimiez and Ventimiglia); and the flower with eight pointed petals PP 5 (Nice-Cimiez and Marseille St-Victor) (**figs III.31a-b**). These three motifs, however, are undoubtedly associated – on the same stone element – to other distinctive motifs of the Piedmontese-Provençal workshop, so that we can be sure that they belonged to the atelier's repertoire. All the other types (**figs III.31a-c**) repeat a minimum of three times. There are, however, five motifs that never repeat, i.e. are attested just once, in only one find-spot: the trefoil at Alba San Lorenzo, the plait with six strands and two interlaces at Bergamo, and the four-leaf flower at Borgo San Dalmazzo (**figs III.30**, **III.31d**, O 1-5). These are 'outliers', which, as the name suggest, are variables that stand apart from the main group[459] (**figs III.30**,

[459] See Siegmund 2017.

III.38, **III.38b**). It must be noticed that not only each of these five motifs never repeats in other locations where the Piedmontese-Provençal atelier worked, but also that they are *never* associated, on the same stone element, with peculiar motifs or signature-motifs of 'our' workshop (**figs III.38**, **III.38b**). In practice, everything seems to indicate that these motifs did not belong to the Piedmontese-Provençal repertoire, and the stone items they come from were therefore *not* made by this workshop (**fig. III.30**).

At a first look, the traits of some of these motifs could seem compatible with the Piedmontese-Provençal repertoire: it was precisely the seriation that made it clear that they do not belong to it. This is another advantage of applying correspondence analysis to archaeological materials: through the comparison of whole contexts, the table itself can suggest the variables that should be excluded from a given group – in our case, from the motifs used by the Piedmontese-Provençal workshop. This would have been harder to recognise in a traditional study, with contexts considered singularly – or, worse, with fragments considered individually! – and a 'radial' search of parallels from one point to others[460]. Actually, a further examination of the 'problematic' stone elements (**fig. III.30**) enables to detect differences with the Piedmontese-Provençal group of sculptures. At Alba, the small fragment (**fig.III.30**, 4) shows not only a motif – the trefoil – which is not attested elsewhere, but also, the flower seems enclosed in a scroll with triple (veined) stem, while the Piedmontese-Provençal scrolls have nearly always a plain stem (**figs III.16-III.29**). The same applies to Borgo San Dalmazzo (**fig.III.30**, 1), where the otherwise unattested flowers with four petals are enclosed in a scroll with double stem; also, some details are different: for instance, what in the Piedmontese-Provençal scrolls was a lateral, elongated leaf (see previous Paragraph, **no. 3** in the table), here becomes a sort of semi-circular, much more rounded, motif. As for Bergamo, the plait with six strands and the other interlaced ornaments – so called 'encircled patterns'[461] – do not appear in any other location, and the slabs showing these motifs (**fig. III.30**, 2 and 3) are also distinguished by a very different technique, with a much more irregular decoration than that of the slab with the Piedmontese-Provençal motifs (**fig. III.23**).

What these outliers mean in practical terms? The possible explanations for their presence depend mainly on the existence and quality of the archaeological documentation in each site. The systematic archaeological investigations at Alba[462] and Borgo San Dalmazzo[463] provide some

[460] See above, Paragraph III.3.1.

[461] See Cramp 1984, XXXVII.

[462] Micheletto 2013.

[463] Micheletto 1999.

context for the sculpted stone finds, and enable to evaluate the amount of the outliers in comparison to the total number of fragments found: in both locations, the outliers correspond to just one fragment in an otherwise quite homogeneous collection of finds. At Borgo San Dalmazzo, the pillar with the four-leaf flowers could attest a minor repair or an addition to the church furnishings: the faint resemblance to the Piedmontese-Provençal motifs might even reveal the intention of imitating the style of the pre-existing structures. The same – i.e. a repair or addition to pre-existing stone furnishings – might be plausible for the outlier at Alba, even if, given the very limited size of the fragment, this interpretation is hardly conclusive. In the case of Bergamo, in absence of any archaeological context and with only three slabs to judge from, making a hypothesis is even more arduous. In other words, we do not know whether the two slabs with interlaced ornaments are possible 'exceptions' in a hypothetical much larger group of materials in the Piedmontese-Provençal style – thus indicating an isolated addition / repair – or, on the contrary, they belong to a comparably large collection of materials in the same 'interlace' style – thus indicating a complete renewal of the stone furnishings around the mid 9th century[464].

Obviously, the small repairs and possible renewals suggested by the outliers correspond to workshops – different from the Piedmontese-Provençal one, and probably later – that have worked in the same churches. Therefore, what in our tables looks like isolated dots marked by the letter 'O' (**figs III.31d**, **III.38**, **III.38b**), could in theory belong to actual further groups, in the same way as for the 'Early workshop of Ventimiglia' (EwV) and the 'Workshop Monticello d'Alba' (WM) (**figs III.38** and **III.38a-b**): indeed, one should assume that the three sculpting ateliers who carved our outliers have not only worked at Alba, Bergamo, and Borgo San Dalmazzo respectively, but must have operated somewhere else, too. However, as observed at the beginning of this Part III., the characteristics of the sculpted materials do not always allow the detection of their makers' area of activity, meaning that, in many cases, it is hardly possible to identify other locations where the same team of sculptors worked. In the specific instance of our outliers (**fig. III.30**), the main obstacle is not only the very limited number of finds (one or two per site, which provide no base for systematic investigation), but also the fact that the motifs on the fragments are rather generic ones, used in a myriad of places over a large geographical area. At the moment, therefore, it is unfeasible to pinpoint further locations where the 'outlier-ateliers' might have operated.

[464] Ibsen 2013, 303, dates the slabs with interlaces to the second quarter of the 9th century.

III.4.9. **Piedmontese-Provençal workshop: relative and absolute chronology, area of activity, hypothesis on the provenance, patrons (and an earlier generation at Albenga?)**

Whatever fashion tends to change over time: of course, as shown by the archaeological materials, this also happened in the past[465], although in architecture and sculpture modification and innovation occurred more slowly than, for instance, in clothing. As mentioned earlier, based on securely dated materials (owing to workshop's marks, or to inscriptions mentioning historical characters) Giulia Marsili and Miljenko Jurković have observed that Late Antique and Early Medieval ateliers 'used' the same decorative repertoire for approximately one generation[466]. Afterwards, the repertoire could start to change gradually, usually involving, in the initial phases, details and minor components of the ornaments[467]. This process fits well in the general inner organisation of Early Medieval workshops, where tradition played a relevant role and artisanal knowledge was learnt by practice and passed from masters to apprentices[468]. The typological tables and the seriation in **figures III.31a-c** and **III.38a-b** – that show multiple correspondences among find-spots, and entire sets of motifs repeating in various locations in a substantially identical form – enabled to establish a new relative chronology system and to recognise that the fragments in each group (PP, EwV, and WM) are roughly coeval to each other, made in a relatively short period of time[469]. Considering the securely dated evidence from Croatia, it seems reasonable to assume that, in our case too, the sculptures were manufactured within about a generation.

As for the absolute chronology, we shall start in this Paragraph from the Piedmontese-Provençal productions, while the dating of the other ateliers will be addressed later[470]. Within the materials assigned to the Piedmontese-Provençal workshop, there is at least one securely dated example, the so-called Tomb of St. Pons at Nice-Cimiez. The monument survived until the 18th century and its complete inscription – only some parts are still visible – was transcribed before the destruction of some of its slabs and rearrangement of others in an altar. The inscription stated that

[465] In general on this point see Siegmund 2017 (esp. 32 and fig. 1), with literature.

[466] See above, Paragraph III.3.2.

[467] Jurković 2000, esp. 229-230 and 233, fig. 15. – Similar remarks, regarding architecture in general, have been made by Robert Ousterhout 2008, 12, 38, who noted that «architecture can be a conservative profession. Responsible builders follow established practices to ensure a successful result. In designing a building, it is easier and safer to alter the details than it is to alter the concept».

[468] See above, Paragraphs III.1.3. and III.2.6.

[469] As seen above (Paragraphs III.4.1, III.4.2, III.4.3), earlier scholarship grouped and dated the sculptures in a different way, mostly following Silvana Casartelli Novelli's first classification.

[470] Paragraph III.4.10.

the monumentalisation of the tomb of the martyr Pons – of which Micheline Buis and more recently Yann Codou proposed reconstructions, in both cases including a chancel screen enclosing the sarcophagus of the saint[471] – occurred during the reign of *Karolus, rex Francorum et Langobardorum* (king of the Franks and the Lombards). Charles' titles clearly indicate that the monumental tomb was built after the conquest of the Lombard kingdom, in 774, and before he was crowned emperor, in 800[472]. Also, there is a *Passio* of Pons written during the last quarter of the 8th century, probably coinciding with, or in occasion of, the construction of the tomb of the saint[473]. Yet the time-span 774-800 for the manufacturing of the sculpted items could be further shortened. Jean Guyon, who studied the inscription, identified the bishop and patron of the restoration «SI...» – mentioned in the text – as Syagrius, who started his office in 777 and died in 787[474]. The period 777-787 can therefore be considered as a fixed point for the activity of the Piedmontese-Provençal workshop[475], although, of course, the sculptures from find-spots other than Nice-Cimiez could have been produced slightly earlier or later.

However, some clues seem to suggest that the core of the workshop's period of activity should be placed more towards the earlier end of the time-span than towards its later end. We have seen that, on a very general level, a characteristic trait of the 8th century 'mainstream' sculpting fashion is the preference for scrolls, floral and vegetal motifs, sometimes animalistic subjects and more rarely human figures, but all this with a limited use of interlaces. To the examples mentioned earlier in this text, such as the 'Split sculpting workshop', one could add a number of securely dated sculptures. Very famous are for instance the altar of duke Ratchis (739-744, **fig. I.3**)[476], the *tegurium* of the patriarch Callistus (737-756, **fig. I.7**)[477] or the slab of the patriarch Siguald (756-786) reused in the same *tegurium*[478] (**fig. I.7**, slab on the right side), all in Cividale del Friuli. From this city came also the workshop that manufactured a ciborium in Istria, Novigrad: as stated in the

[471] Buis 1979. – Codou 2011.

[472] Fossard 1965. – Guyon 1973. – Buis 1979. – Buis 2002. – Codou 2011.

[473] Codou 2011, 281, with literature.

[474] Guyon 1973, 630-632, dates the inscription even more precisely, to the year 777. – On Syagrius see also Codou 2011, 289, footnote 28.

[475] As regards chronology of the Piedmontese-Provençal workshop, it must be cursorily mentioned that the information about a possible foundation of the abbey of Borgo San Dalmazzo by king Aripert II (701-712), which has, on occasions, influenced the dating of the sculptures, must be considered as unreliable, and is not backed up by any Medieval document. The information is reported by a 18th-century chronicler known for forging historical evidence. For further details and literature, see Beghelli 2020, 320-321, and footnotes 142, 143, 144.

[476] Tagliaferri 1981, 203-209, nr. 311-314.

[477] Tagliaferri 1981, 210-216, nr. 315-330.

[478] Tagliaferri 1981, 216-219, nr. 331.

inscription, the ciborium was commissioned by bishop Mauritius, who is mentioned in a letter sent by pope Hadrian to Charlemagne, dated to 776-780[479]. Another very renowned 8th century group of sculptures, made by a master *Ursus*, is to be found at Ferentillo near Spoleto, where in 739-742 duke Hildericus II commissioned the chancel screen for the abbey of S. Pietro in Valle[480]. Finally, one could mention the tombstone of Cumianus, at Bobbio, donated to the abbey of S. Colombano by king Liutprand (712-744, **fig. III.38a**)[481]. While all these examples are characterised by a marked predominance of scrolls and other vegetal motifs, further securely dated specimens[482] (e.g. **figs I.2-I.6**, **I.9**, **III.7-III.9**) show that, from the late 8th / early 9th century onwards, interlaced ornaments became more and more frequent, eventually 'conquering' the main role in the decoration of chancel screens, ciboria, and so forth[483]. Among the sculptures made by the Piedmontese-Provençal, only one item, from Marseille St-Victor, shows interlaced decoration used as a main subject, occupying a whole panel of the slab (**fig. III.25**, 9). Hints like this might suggest a gradual shift towards the new 'interlaced ornament manner', fully consequent with the chronology 777-787 indicated by the securely dated group from Nice-Cimiez. However, in general, the rest of the repertoire and the compositions seem more closely related to the former 8th century mainstream fashion, thus making plausible that, as said, the core period of the workshop's activity is most probably to be placed towards the earlier end, rather than the later end, of this time-span, i.e. towards 777 and precedent few years.

The area of activity of the workshop extended from nowadays Lombardy to Vaucluse (**fig. III.15**): as seen, new find-spots have been added to those considered in previous studies, but some others have been excluded: the most prominent example is the so called 'arcosolium tomb' at Albenga in Liguria[484] (**figs III.39-III-39a**). The tomb shows no doubt some resemblances to the production of the Piedmontese-Provençal atelier. However, the points in common – mainly, the flowers with rounded petals, the lily cross and the small filling-crosses – are less than the differences. Firstly, the arcosolium tomb at Albenga shows a whole range of motifs that never appear in the Piedmontese-Provençal repertoire, for instance: the Salomon knot; the interlaced-S

[479] Jurković 1995. – Lusuardi Siena / Piva 2002, 318. – Jurković / Matejćić / Ziherl 2006, 22-23. – Matejčić 2006, 18. – Cuscito 2010 – Basić / Jurković 2011. All with literature.

[480] Serra 1961, 19-28, nr. 12-18.

[481] Destefanis 2004, 172-182, and *passim*. – Destefanis 2008, 108-121, nr. 9.

[482] Arguably, Croatia preserves the richest collection of securely dated 9th century sculptures in Europe. One of the most complete general catalogues is Milošević 2000, many parts of which were also published in Bertelli et al. 2001. – See also the literature quoted in the Paragraph III.3.2.

[483] In general on this point see: Coroneo 2005, 89-90. – Cuscito 2010, 112.

[484] See above, Paragraph III.4.3.

pattern with filling pairs of volutes; the very peculiar scroll with diverse leaves; and the beaded clypeus including a five-petal flower on the semicircular slab (**fig. III.39**). Secondly, some of the most distinctive ornaments and signature-motifs of the Piedmontese-Provençal workshop – e.g. the scroll with beaded spirals PP 6, or the beaded cross PP 2 – do not appear at all at Albenga. Thirdly, the motifs similar to those used by the Piedmontese-Provençal workshop are made in a quite different version at Albenga: for instance, the knotted circles intersecting to lozenges, at Alba, Avignon and Marseille have always small lanceolate leaves as a filling motif (**figs III.21**, 7; **III.23**; **III.26**, 1; **III.31c**, PP19), whereas at Albenga there are pairs of volutes (**fig. III.39**). One of the most noticeable differences is in the bunches of grapes and vine-leaves which, as said, are among the most diagnostic types, because of their complexity and the consequent countless number of possible designs. As seen above, the vine-scrolls made by the Piedmontese-Provençal workshop are nearly identical to each other (**fig. III.31b**, PP 9 and PP 12; compare for instance **figs III.19**, 2-3, **III.22**, 4, **III.23**, Torino, **III.26**, 6). At Albenga, this motif is carved in a completely different way. As for the composition, grapes and vine-leaves are not inserted in actual scrolls, but appear, together, as filling motifs in a pattern of knotted circles (**fig. III.39a**, below). As for the components of the decoration, clearly the leaves and grapes are totally different from the Piedmontese-Provençal workshop's ones. Finally, the details characterising the Piedmontese-Provençal vine-scrolls, seen in Paragraph III.4.7, are also absent at Albenga.

On the other hand, as scholars already noticed[485], the grapes and leaves from Albenga appear in a nearly identical version in sculptures from territories lying East of the core of the Piedmontese-Provençal area of activity: significant examples are the abovementioned and securely dated tombstone of Cumianus (712-744) at Bobbio[486], and the sarcophagus of Theodota from Pavia, dated to the first half of the 8th century[487] (**figs III.39-III-39a**). Likewise exact are the correspondences with some specimens from the abbey of Novalesa in Piedmont, founded (and probably immediately provided with decorated stone furnishings) in the year 726[488] (**fig. III.39a**, 4): observe for instance the small Greek cross, the lily cross, and the filling motif (lily) between the knotted circles and the rim of the slab; the very same structure of the pattern is also virtually identical (size and width of the circles, large knots, etc.). Of course, these few motifs alone are not enough to assert that the same atelier worked in these locations, but it would surely be interesting to systematically

[485] Recently, see Marcenaro 2014, with literature.

[486] Destefanis 2004, 172-182, and *passim*. – Destefanis 2008, 108-121, nr. 9.

[487] See Marcenaro 1994, 208-209.

[488] See above, Paragraph III.4.2. – On the sculpted fragments, see Uggé 2004. – Casartelli Novelli 1979 had already acknowledged the close resemblance between the finds from Albenga and Novalesa.

investigate the relations among Albenga, Pavia, Bobbio, Novalesa, and possibly other find-spots, with the method of correspondence analysis.

The remarkable number of motifs appearing at Albenga but absent in the Piedmontese-Provençal repertoire and vice versa, the ornaments which appear in a completely different version at Albenga, and closer resemblances with the materials from find-spots other than those where the Piedmontese-Provençal atelier worked (Pavia, Bobbio, Novalesa), suggests quite clearly that a distinct group of sculptors worked at Albenga. However, as said, a few resemblances exist with the Piedmontese-Provençal productions, and the location, Albenga, would be consistent with the area of activity of 'our' atelier. Is it possible that the sculptors who worked at Albenga corresponded to another generation, most probably earlier, of the same workshop? The chronology of the arcosolium tomb as suggested by its closest parallels (especially Novalesa) might actually indicate an earlier dating than our workshop, in the first half of the 8th century. Also, the conceivable time-span elapsed between the two generations could be consistent with the changes in the repertoire. However, at the moment, the existence of a 'forefather master' to the one who led the Piedmontese-Provençal workshop remains just a hypothesis, which would need to be tested through a systematic study of the sculptures from the 'Albenga group'.

As for the provenance of the Piedmontese-Provençal sculptors, in absence of written sources, it is currently impossible to pinpoint a specific centre. Yet among the locations where their work was so far detected, four belonged to the duchy of Provence – Aix-en-Provence, Apt, Avignon and Marseille –, while all the others belonged to the Lombard kingdom, conquered in 774 by Charlemagne (**fig. III.15**). The area with the higher concentration of find-spots corresponds to nowadays Piedmont and Liguria. Therefore, the presently available data make it more probable that the sculptors were inhabitants of the North-Western part of the former Lombard kingdom / *regnum Italiae*[489].

Finally, as for the patrons who engaged our sculptors, we know only one of them by name, the abovementioned bishop Syagrius. At the moment, we do not know further written or epigraphic evidence attesting specific characters as the commissioners for the Piedmontese-Provençal atelier. However, we do know that they operated in high-level projects: one can therefore assume that their work was much appreciated, and can at least speculate about the office held by their patrons. The majority of the churches furnished with new sculpted elements made by the Piedmontese-Provençal sculptors were cathedrals: one can thus presume that the commissioners were probably the respective bishops. Furthermore, in at least two locations, Alba and Marseille, they not only worked

[489] See maps in Bührer-Thierry 2015, 12 and 45.

at the cathedral, but also in another church of the city: this implies a well structured and ambitious renewal project, hence the availability of proportionate capitals. Those who could promote such enterprises belonged in all likelihood to the higher ecclesiastical or political ranks. Almost all the other find-spots, anyway, also correspond to prominent locations, whether important churches in urban context or abbeys in strategic positions[490].

III.4.10. **An earlier and a later workshop at Ventimiglia, and the 'Workshop Monticello d'Alba'**

As noted above, the use of typological tables and seriation for the study of sculpted fragments helps the investigator to distinguish materials ascribable to different chronologies and workshops. A good example of this were the 'outliers', which had no relations to each other, nor to the rest of the stone finds[491]. Our outliers, however, corresponded to individual or isolated sculpted fragments (**fig. III.30**): vice versa, at the cathedral of Ventimiglia, it has been possible to identify two entire groups other than the Piedmontese-Provençal one. These were called *group A* (**fig. III.33**) and *group B* (**fig. III.36**): in each group, the fragments have typological relations to each other, but show no significant points in common with the Piedmontese-Provençal sculptures (i.e., the ornaments in group A and group B are never associated to distinctive motifs of the Piedmontese-Provençal workshop). The same applies to the small assemblage of materials from Monticello d'Alba and other two find-spots in Piedmont (**fig. III.37**).

Investigation on the latter, and on group A from Ventimiglia, made it possible to detect multiple locations where, in all likelihood, the corresponding workshops have respectively operated (**figs III.38a**, **III.32**, **III.37**, above left). As cursorily seen above, these ateliers have been called 'Early workshop of Ventimiglia' and 'Workshop Monticello d'Alba' (**figs III.38-III.38b**). On the contrary, the very fragmentary condition of group-B-sculptures, combined with the rather common and 'generic' type of ornaments that decorate them, makes it currently unfeasible to pinpoint further places where the group-B-workshop (called 'Late workshop of Ventimiglia') might have operated. For this reason, the 'Late workshop of Ventimiglia' has been left out from the seriation[492].

It must be stressed that, in the same way as for the 'Piedmontese-Provençal workshop', all the workshops' names are purely conventional.

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[490] For the specific literature on each find-spot see Paragraph III.4.12. – In general, on the patrons, see Part IV.

[491] See above, Paragraph III.4.8.

[492] See above, Paragraph III.4.6.

The 'Early workshop of Ventimiglia' (**figs III.32-III.35**) will be the first to be addressed. The repertoire of this atelier is characterised by some very peculiar motifs: from the cathedral of Ventimiglia, see for instance a sort of hexagonal rosette composed of triangles (**fig. III.33**, 2); an ornament composed of small arches[493] (**fig. III.33**, 9 and 10); and a pattern in the form of a grid, which covered almost entirely the surface of the original slab (**fig. III.33**, 4-8). There are also a particular type of scroll with round, split leaves (**fig. III.33**, 1-3) and a vine-scroll (**fig. III.33**, 11), both very different from the scrolls used by the Piedmontese-Provençal workshop. The only framing motif used is the ropework or cable moulding (**fig. III.33**), and the original element of stone furnishings was a *pergula*, as shown by the presence of a fragment of the arch which topped the entrance to the presbyterium (**figs III.33** and **III.35**, below). All these types and features – except the small arches – repeat at Stenico, near Trento, in the chapel of the castle (**figs III.34** and **III.35**, above); surprisingly, the exact correspondences between the materials from Ventimiglia and Stenico have been hardly acknowledged in previous studies. In particular, the two fragments of arch for *pergula* are substantially identical, even in the details, such as the so called 'running dogs' motif (i.e. sequence of volutes) on the edge of the stone element (**fig. III.35**, below, right). The 'hexagonal rosette' is also identical, and in both cases encircled in a clypeus consisting in a double cable moulding (**fig. III.35**, type EwV 3). At Sanremo in region Liguria, only one stone element was found so far (a pillar), but it shows a vine-scroll with the same form of leaves and bunches of grapes as in Ventimiglia, and with the same structure as in Stenico (so called 'medallion scroll', with two interwoven stems, in both locations completed by pairs of spiralled tendrils). Despite minor differences in Stenico, in all three find-spots the leaves of the vine-scroll are heart-shaped and veined. Finally, the second decorated face of the pillar from Sanremo shows a leaf-scroll entirely similar to that attested at Ventimiglia (**figs III.32a**, **III.33**, 11, and **III.35**, above).

In the same way as for the sculptures from the Piedmontese-Provençal workshop, also in the case of Ventimiglia group A, Stenico, and Sanremo, one could theoretically list many generic similarities to materials from a number of other locations (or more precise resemblances, but concerning one single motif in a totally different decorative context[494]): but, as repeatedly stressed, this is a misleading approach, when one's aim is studying sculpting workshops and their production. Vice versa, seriation applied to these fragments has shown that the sculptures from

[493] Given the context – a church – the resemblance with the Hebraic *candelabrum* called Chanukiyah or Hanukkah (used during the eight-day holiday bearing the same name), suggested in previous studies (e.g. Gandolfi 1995, with literature), is most probably unintentional. Also, similar patterns (small arches, one over the other) are documented in Northern Italy: see Beghelli 2020a.

[494] See for instance the parallels pinpointed for the 'grid decoration' in the literature quoted in the List of finds (Paragraph III.4.12).

Ventimiglia, Stenico, and Sanremo are related by multiple and precise correspondences (**figs III.38a-b**). These relations concern the general composition of the decoration, the choice of the 'main' motifs, and even the details; also, at least at Stenico and Ventimiglia, the fragments surely appertain to the same type of original stone structure – a *pergula*. Therefore, in all probability, the same team of sculptors has worked in Ventimiglia, Sanremo, and Stenico: the mobility of artisans (not stone items) is once again suggested by the stone-types used, which are always locally procured, in the vicinity of the churches[495].

The atelier has been named 'Early workshop of Ventimiglia' because of its probable position in the timeline in comparison to the Piedmontese-Provençal workshop: although there are no secure chronological reference points (e.g. inscriptions), a *terminus ante quem* is suggested by the reuse of the pillar from Ventimiglia (**fig. III.33**, 11) in the walls of the crypt, which was most probably built in the early 9th century[496]. The earliest studies on both Ventimiglia and Stenico dated the sculptures to a period ranging from the late 6th to the late 7th / early 8th century[497], while some more recent research on Stenico dated them broadly to the 8th century[498]. However, among the many general resemblances to other materials listed in literature, some of the most pertinent parallels concentrate in the late 7th century to the first decades of the 8th century. Hence the early 8th century appears as the most probable dating for the sculptures and for the period of activity of the 'Early workshop of Ventimiglia'. Since the number of find-spots related to the work of the atelier is currently very limited, it is hardly possible to pinpoint a precise location of provenance of the sculptors: however, the macro-area nowadays corresponding to the regions Veneto, Trentino-Alto Adige, and Lombardia, seems a plausible option[499].

As for the group B ('Late workshop of Ventimiglia'), its most noticeable characteristic is certainly the definite prevalence of interlace motifs, of which just two types show filling ornaments, i.e. bunches of grapes and leaves (**fig. III.36**, 4-5), and whirls and flowers with pointed petals (**fig. III.36**, 9-10): all the other types of interlaces are plain. The only one ornament which is not a plait or interlace is a scroll with flowers (**fig. III.36**, 1 and 4-6). The framing motif to each decorated part or panel is always a plain listel. Another trait that indicates the homogeneity of the group is the consistency of the size of the decorations: knotted circles, for instance, appear in diverse variants

[495] Beghelli 2020a, 228, with literature.

[496] See Beghelli 2020a 225-227, with literature.

[497] See: Rasmo 1982, 39. – Frondoni 1987, 45. – Gandolfi 1995, 84-86. – All with literature.

[498] De Marchi 2000, with literature. – Other authors have even 'stretched' the chronological assignment up to the mid 9th century, which is a very improbable possibility: Porta 2013, 49.

[499] Beghelli 2020a.

(interlaced with lozenge patterns, interlaced with another series of knotted circles, in the form of a band, or forming an extended pattern which covered the whole main panel of a slab) but the circles have almost always about the same diameter. In other cases, the interlaces vary but they (and the panels they belong to) have the same height: compare for instance **III.36**, 13, and **III.36**, 16. All this suggests a composition arranged in a homogeneous way, for stone elements with different ornaments, but meant to be put side by side or anyway next to each other.

The motifs are never associated, on the same stone element, with the most distinctive ornaments of the Piedmontese-Provençal repertoire. Also, the scroll and filling motifs are entirely different: note especially the peculiar form of the bunch of grapes and the leaf (**fig. III.36**, 4-6). If the decorative types of the Late workshop of Ventimiglia were entered in the seriation / correspondence analysis table, the only two motifs in common with the Piedmontese-Provençal atelier would be the brezel interlace and the plait of four strands: these belong to the abovementioned 'long-distance runners', i.e. very common ornaments that persisted for centuries in a substantially unchanged form, and in the most diverse contexts[500]: in this case, plaits and brezel interlace were ubiquitously used already in the Roman period (e.g. on floor mosaics), and would continue to be universally employed within the Romanesque architecture[501].

The fragmentary condition of the sculptures from the Late workshop of Ventimiglia hampers the recognition of the original structures they belonged to. Pieces that are particularly diagnostic for the identification of specific elements of stone furnishings – e.g. the arches for *pergulae* – are also lacking. The presence of fragments most likely belonging to pillars and to large slabs (e.g. **fig. III.36**, 22-23) – suggest a chancel screen, but some of the sculptures could also appertain to window jambs, doorposts, and so forth.

As for the chronology of this group of fragments, the overwhelming predominance of interlaced patterns clearly indicates a dating to the 9th century, possibly the first half, considering that most of the securely dated Carolingian decorated stone materials belong to this period[502]. However, the fragmentation of the sculptures, and the very nature of interlaced ornaments (of relatively simple and rigorously geometric structure, and therefore easy to reproduce in a virtually identical form), are a major obstacle to correspondence analysis aiming at detecting other locations where the Late workshop of Ventimiglia might have operated[503]. Conversely, as seen in the

[500] See Paragraph III.4.6.

[501] See Part I.

[502] See the remarks on this point in the previous Paragraph III.4.9, with literature.

[503] Complete, or almost complete, stone elements would at least allow a detailed insight into the composition of the decoration and the combinations of motifs within the original furnishings, but this is not the case. – As for

previous Chapters, scrolls, floral and vegetal motifs are more complex and can be carved in countless different versions: since they are much easier to 'distinguish' from one another, they represent optimal indicators to identify the sculpting ateliers. In the case of the scroll with flowers of the Late workshop of Ventimiglia (**fig. III.36**, 1 and 4-6), no really relevant matches were detected in other locations, precise enough to suggest the work of the same atelier. Knotted circles enclosing leaves and bunches of grapes similar to those of fragments 4-5 in **figure III.36** have been found in Albenga, in Umbria at Orticoli, and in Genève[504]: while, as repeatedly mentioned, these individual, isolated parallels cannot be used as grounds to attribute sculptures to the same team of carvers, they serve at least to frame the fragments from the 'Late workshop of Ventimiglia' in the larger context of the Carolingian 'mainstream fashions', supporting a dating in the first half of the 9th century.

Finally, the 'Workshop Monticello d'Alba' remains to be discussed. In the same way as for the outliers[505], and for the Early and Late workshops of Ventimiglia, the sculptures in this group (**fig. III.37**) bear motifs that are never associated to distinctive ornaments of the Piedmontese-Provençal workshop (**figs III.38** and **III.38a-b**). Additionally, the fragments of slab, with sequences of crosses placed below arches (**fig. III.37**, 1-2), allow to observe that not only the decorative types, but also their organisation and composition, are very different from the Piedmontese-Provençal productions. Vice versa, as already noticed in previous studies[506], the decoration of the fragments at Monticello d'Alba, Borgo San Dalmazzo and Pollenzo (**fig. III.37**) is reiterated in a substantially identical form, enabling to assume that they were carved by the same group of sculptors.

Although the areas of activity of the Piedmontese-Provençal and the Monticello d'Alba workshops partially overlap (Borgo San Dalmazzo and Pollenzo), the systematic investigation allowed by the use of seriation has provided, once again, the means to 'spot' and characterise different groups of sculpted materials. In this case, too, there are no secure chronological

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the interlaced ornaments, a possible approach could be studying their associations in this and other find-spots, in order to verify whether the same set repeats elsewhere. However, owing to the highly repetitive forms of the interlaced motifs, and to their broad diffusion all over Carolingian Europe, applying seriation and correspondence analysis to this specific kind of decoration would require, as a starting point, an extremely large database encompassing finds from hundreds of locations. A database as such does not currently exist, although some work is in progress by the present author together with colleagues.

[504] See respectively: Verzone 1945, 21, no. 12. – Bertelli 1985, 228-230, no. 132. – Faccani 2013a, 252-255, fig. 32.

[505] Paragraph III.4.8.

[506] Crosetto 1999. – Crosetto 1999a. – Crosetto 2004.

benchmarks: however, similar (not identical) finds from Northern and Central Italy suggest a dating to the 8th century, most probably its first decades[507].

III.4.11. Composition and repertoire: the workshop's 'style' between archaeology and history of art

To summarise, so far in this Chapter we have seen that the elements which enable to recognise the work of a sculpting atelier are the overall composition of the decoration and the repertoire used by the sculptors. These have been analysed according to a systematic method (the correspondence analysis / seriation, which allowed to achieve excellent results in the study of other archaeological materials), with the aim to identify what, in archaeological terms, could be termed as the production of a *specific* workshop. However, using a typical designation of history of art, one might say that these two elements together – composition and repertoire – are the factors that determine the 'style' of a sculpting atelier.

Innumerable books and articles on style exist, primarily because definitions and descriptions of 'style' change greatly from a period and an art-form to another. The style of a 17th century painter is defined, described and characterised with terminology and categories that are very different from those used for the style of an early 19th century writer, or a mid 20th century architect. The main reason is quite simple: every style resides ultimately, as noted above[508], in the tools, techniques and the materials used – brush, words, cement –, and it depends on the historical context, too. Art historians have long discussed on what style really is[509]. Yet many of the simplest, broadest definitions of style could easily apply to Caravaggio, Le Corbusier, or Flaubert – and, of course, to Early Medieval sculpture.

For instance, one of the meanings of the word according to the *Oxford dictionary online* is «a way of painting, writing, composing, building, etc., characteristic of a particular period, place, person, or movement. [Style in architecture, visual arts or crafts is] a distinctive appearance, typically determined by the principles according to which something is designed»[510]. One of the most authoritative Italian encyclopaedias, *Treccani*, also in its online version, states that style in literature is «a particular way of expression, with constant aspects recognizable in it (in the way of approaching the subject matter, of articulating thoughts, in the lexical, grammatical, syntactic

[507] Beghelli 2020, 318, with literature.

[508] Paragraph III.2.5, with literature.

[509] A classic: Schapiro 1953. – Among many, see also: Ackerman 1978. – Fernie 1995, 361-364, with literature. – Caianiello 2005, 48-52. – Francovich / Manacorda 2017, s.v. Stile, with history of studies.

[510] https://en.oxforddictionaries.com/definition/style, 02.05.2018.

choices, in the construction of sentences, etc.). [These aspects are] typical of a period, of a tradition, of a literary genre, of an individual author»; a very similar definition concerns other arts, where style is «a set of characteristics typical of an artist or a school» or «a set of specific characteristics of an object (which allow to classify it together with others in a certain aesthetic type)»[511]. Similarly, the dictionary *Hoepli* defines style as a «set of traits, shapes, aesthetic elements that characterize a pictorial, architectural, sculptural work, of an artist, of a school, of a trend, of an era»[512]. *Larousse* reads: «set of aesthetic, formal characteristics of something»[513], and *Duden*: «way to express something verbally or in writing, to formulate. In architecture, art, music, literature [style is] what can be considered typical and distinctive, with regard to forms of expression, type of design, characteristics of the shapes and of the contents, or the like»[514]. A quotation of Ernst Gombrich opens the current page of Wikipedia on Style in visual arts[515]: «any distinctive, and therefore recognizable, way in which an act is performed or an artefact made»[516], accompanied by another quotation of Eric Fernie, according to whom style is «a distinctive manner which permits the grouping of works into related categories»[517]. The most renowned essay of Meyer Schapiro opened with these words: «By style is meant the constant form – and sometimes the constant elements, qualities, and expression – in the art of an individual or a group»[518]. Even in studies dealing with Chinese painting one can find definitions that could apply indifferently to Hieronymus Bosch, Walter Gropius, or an Early Medieval sculpting workshop: style consists in «those elements and features of the works of art that determine not only their expressive content but also their

[511] http://www.treccani.it/vocabolario/stile/, 02.05.2018. – Original in Italian: Particolare modo dell'espressione letteraria, in quanto siano riconoscibili in essi aspetti costanti (nella maniera di porsi nei confronti della materia trattata, di esprimere il pensiero, nelle scelte lessicali, grammaticali e sintattiche, nell'articolazione del periodo, ecc.), caratteristici di un'epoca, di una tradizione, di un genere letterario, di un singolo autore. – Per estens., nelle arti figurative [...], l'insieme dei caratteri di un artista o di una scuola. – [...] il complesso dei caratteri specifici di un oggetto (che permettono di classificarlo insieme con altri in un determinato tipo estetico).

[512] http://www.grandidizionari.it/Dizionario_Italiano/parola/S/stile.aspx?query=stile, 02.05.2018. – Original in Italian: Insieme dei caratteri, delle forme, degli elementi estetici che caratterizzano un'opera pittorica, architettonica, scultorea, di un artista, di una scuola, di una tendenza, di un'epoca.

[513] https://www.larousse.fr/dictionnaires/francais/style/74959?q=style#74108, 02.05.2018. – Original in French: Ensemble des caractères formels esthétiques de quelque chose.

[514] https://www.duden.de/rechtschreibung/Stil, 02.05.2018. – Original in German: Art und Weise, etwas mündlich oder schriftlich auszudrücken, zu formulieren; von Baukunst, bildender Kunst, Musik, Literatur o. Ä.: das, was im Hinblick auf Ausdrucksform, Gestaltungsweise, formale und inhaltliche Tendenz o. Ä. wesentlich, charakteristisch, typisch ist.

[515] https://en.wikipedia.org/wiki/Style_(visual_arts), 02.05.2018.

[516] Gombrich 2009 [1968].

[517] Fernie 1995, 361.

[518] Schapiro 1953, 287, who added that «the term is also applied to the whole activity of an individual or society, as in speaking of a 'life-style' or the 'style of a civilization'».

individuality with respect to other works. Used thus, style can be regarded as an indicator of the special qualities of the art of a particular person, group, locale, or time»[519].

The point of this patchy overview on definitions of style is showing that almost all of them – whether taken from simple dictionaries or formulated by world-famous art historians – insist on two aspects. Firstly, they stress the importance of the *combination* of attributes or characteristics. It is not a single formal element devoid of context, but a *set of formal elements*, that enables to recognise the style of a given painter, writer, sculptor, and so forth: after all, already Winckelmann had noted the «error» of those who draw general conclusions from the resemblance of isolated characteristics between objects and artworks[520]. Secondly, they insist on the relevance of *relational aspects*: style defines the individuality of a certain work – i.e., the individuality of each maker or group of makers – «with respect to other works», therefore allowing the «grouping of works into related categories»[521]. This has much in common with systematic methods used in archaeology such as seriation and correspondence analysis. As in history of art, the examination of the morphology of objects – with their formal elements – represents the basis of the study, on which archaeologists build types and typologies. In the present work, the method applied to Early Medieval sculpted fragments enabled to take into consideration *all* the formal elements attested in a given find-spot, compare them with *all* those attested in another, and detect the reiteration of *combinations* of motifs: that is, the reiteration of an entire repertoire (from the same workshop) in different locations. Both in history of art and archaeology, style represents a very important tool in the grouping of artefacts[522], although the aims of a study can differ according to the discipline: as stressed by Meyer Schapiro, «for the archaeologist, style is exemplified in a motive or pattern, or in some […] quality of the work of art, which helps him to localize and date the work and to establish connections between groups of works or between cultures. Style [...] is studied more often as a diagnostic means than for its own sake»[523].

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[519] Cahill 1976, 152.

[520] Winckelmann 1968 [1764], 31 (quoted in full at the beginning of Chapter III.3). – On this passage see Caianiello 2005, 50-52.

[521] See above, Eric Fernie's quote.

[522] In general, on the use of style in archaeology, see Conkey / Hastorf 1990.

[523] Schapiro 1953, 287: «To the historian of art, style is an essential object of investigation. [...] He, too, uses style as a criterion of the date and place of origin of works, and as a means of tracing relationships between schools of art. But the style is, above all, a system of forms with a quality and a meaningful expression through which the personality of the artist and the broad outlook of a group are visible. It is also a vehicle of expression within the group, communicating and fixing certain values of religious, social, and moral life through the emotional suggestiveness of forms».

Traditionally, style has also played a major role in the interpretation and chronological assignment of the specific class of archaeological finds we are concerned with, i.e. Early Medieval sculpture. And yet, as seen above, as early as the Fifties some archaeologists began to describe the 'stylistic analysis' of carved fragments as unreliable: in particular, these scholars were sceptical of the so-called 'stylistic dating'[524], because chronological assignments represent the basis of, and have consequences on, any further levels of investigation and interpretation, from the study of sculpting workshops and their repertoires to the general cultural framing of the carved materials.

Ultimately, the 'stylistic dating' of an artefact is (or at least should be) not more than a date assigned upon a set of particular formal/morphological traits. This is unquestionably a standard procedure in archaeology, and still the most common one[525]. Whether built upon a few dozens or thousands of objects and on a regional or supra-regional scale, typological classifications use securely dated contexts as benchmarks to order types in chronological sequences, and are therefore extremely useful when dating new finds from recent excavations (which, of course, can in turn contribute to refine and adjust the existing typo-chronological seriation). In essence, the attributes (or stylistic elements) which are taken into account when defining types do not vary much from one category of objects to another, be it a small brooch or an entire building: general form and size of the item; proportions among its parts; production materials and techniques («styles were tied to workshop traditions and conventions[526]»); presence and *combinations* of specific ornaments with a *specific* shape and structure; and so forth[527]. One or the other can have greater or lesser weight depending on the class of objects, but it seems rather easy to understand that all these attributes can be used to typify not only pottery vessels, clothing accessories, sarcophagi, or weapons, but also, obviously, carved stone fragments. When it comes to determining the chronology of an individual stone object or group of fragments from a single find-spot, formal-stylistic criteria can be very effective, but only on the condition that they rely on accurate typological classifications: as seen in Part I. and Part II. of this work, these indispensable tools exist, for instance, for Early Medieval sarcophagi or stelae from certain European regions, whereas they are rarely available for

[524] Cecchelli 1954, 181-182. – See above, Paragraphs I.2.3-I.2.5.

[525] Absolute dating methods providing fairly precise chronology (for instance within twenty/thirty years-period) are still available only for a minority of finds, and consistent and extensive data-series used as reference are still exceptional.

[526] Kiilerich 2018, 1, already quoted in Paragraph III.1.2.

[527] See for instance: Siegmund 1998. – Legoux / Périn / Vallet 2004 – Siegmund 2017. – Pinar Gil 2017. – See also Paragraph III.4.6.

architectural sculpture and stone furnishings[528]. Scholarly analysis of Early Medieval architectural sculpture has only recently begun to develop in this direction, while in the past it was widely based on a somewhat unsystematic approach, i.e. the exact opposite of the standard procedure on which typological classifications rest[529]: hence the above-mentioned 'mistrust' of some archaeologists. What these archaeologists seem to fear the most when being sceptical of what they call 'stylistic analysis / dating', is that stylistic criteria appear to depend too much on scholars' subjective and personal perceptions[530]. Since the beginnings of research on Early Medieval sculpture, some studies have in fact paired notions such as 'well done / poorly done', 'orderly / disorderly', 'regular / irregular', etc., with specific cultures, or with the temporal coordinates 'earlier / later' or vice-versa[531]. This approach persisted well past the early scholarship[532].

Clearly, in any period, individual painters or sculptors can be more or less skilled in their art, or can have, for instance, a more 'regular' or 'irregular' way of using the brush or the chisel. But it seems likewise obvious that these criteria should not be used as chronological indicators when Early Medieval sculpted fragments emerge from the ground during an archaeological excavation, as if poor or superb execution were universally typical of a specific time-span.

The debate about 7th-century architectural sculpture is a good example of this. Given the scarcity of securely dated specimens and the absence of typo-chronological frames of reference[533], scholars in different countries developed the most diverse ideas of the typical stylistic features of the period. Eventually, and for reasons that seem difficult to determine, in a number of studies notions like 'mediocre craftsmanship' or 'insecure hand' were turned into stylistic traits, and somehow used as a chronological marker for the 7th century. This, of course, is not the case, as

[528] Luis Caballero noted that despite their bad reputation, the stylistic studies [on Early Medieval sculpture] are significant, on condition that they are performed systematically with a scientific method: Caballero Zoreda 2012, 116, footnote 37. – See also above, Paragraph III.2.6.

[529] See above, Chapter III.3: although studies marked by a more systematic method are multiplying everywhere in Europe (and have provided substantial and consistent results), their relatively recent history implies a still limited availability of typological frames of reference, often restricted to single macro-regions and/or periods.

[530] See for instance Cecchelli 1954, 182. – For a brief overview on this point, see Beghelli 2020.

[531] On this point see: Jurković 2000. – Jurković 2016. – Beghelli 2021.

[532] Some examples from Italy: «Lombard sculptors carved chaotic and convulsive ornaments of barbaric innate taste, while Italic sculptors decorated the stone elements with limpid clarity and symmetry» (original in Italian: de Francovich 1952, 266-267 and 272). – «True barbaric art is vehement, disorderly, irregular, intolerant of any form of spatial restriction, and characterised by an innate vitality» (original in Italian: Serra 1961, 9-10). – «The decorative patterns [of the sculptures from Trento] are clear and precise, having nothing in common with the Lombard and Barbarian; they are strikingly in contrast with the tumultuous and inconsequent Barbarian ornaments» (original in Italian: Porta 2001, 441). – This approach has been decidedly criticised by other authors: see for instance Romanini 1991, 2-4.

[533] See Paragraph III.2.8.

even a small collection of a few securely dated specimens can show[534]. Another instance concerns the relative chronology of some groups of sculpted fragments from the church of St. Johann in Müstair, Switzerland. While some studies assigned the groups to different workshops *and* different periods[535], others explained their heterogeneity arguing that diverse ateliers, coming from various locations, *contemporarily* worked at St. Johann, thus producing sculptures that varied as for the selection of the motifs and their composition[536]. Despite their blatant diversity, the groups would share a number of 'stylistic features', such as small irregularities which communicate liveliness, or (not completely erased) traces of working tools, which create a velvety effect on the stone, where the light is refracted into a diffuse glow[537]. In a brilliant essay of 1987, Berel Lang wrote that «an aspect of an object is stylistically significant only if it follows from a [deliberate] choice or series of choices»[538]. Thus one might wonder, for instance, in which way artisans coming from different locations, with different traditions and different repertoires, meeting for the first time at the building site in Müstair, could have reached an agreement precisely on as much delicate aspects as the way to make the light 'refracting on the stone surface into a diffuse glow'. On the other hand, if one wanted to consider features of this kind as depending on a sort of Early Medieval *Zeitgeist* – and therefore shared by all the sculptors of the period over several decades or centuries – then they become hardly significant in the context of a single find-spot, when trying to assess the relative chronology of the fragments.

The understanding of 'style', 'stylistic trait', or 'stylistic analysis' in the abovementioned remarks on the 7th century's sculpture, and on the fragments from Müstair (as well as in many more examples one could quote), seems very distant from the definitions provided by Schapiro, Gombrich, Fernie, and the like, who insisted on the concept of *distinctive forms* / formal elements to be considered in their whole. These definitions, on the contrary, could be associated to the method preferred by scholars such as Jurković, Jakšić, Napione, Caballero, and a number of others[539], and, clearly, preferred also by the present writer.

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[534] See Beghelli 2021, with examples and literature.

[535] Faccani 2013.

[536] Roth-Rubi 2015.

[537] Roth-Rubi 2015, 282-283. Other features, according to the author, would include: paratactic composition of the ornaments; absence of rigid schematism; interlaced ornaments conceived in a 'material' way, with the bas-relief following the 'overs-and-under' design of the plaits' strands; limited use of the drill; and so forth – Many of these, however, are very common characteristics of the 8th and 9th century sculpture, observed almost everywhere in Europe: see Macchiarella 1976 and Beghelli 2014.

[538] Lang 1987, 177-178.

[539] See above, Chapter III.3.

All things considered, the 'bad reputation' of the so-called stylistic approach to sculptures among some archaeologists seems not so much depending on the method *per se*, but rather deriving from some *uses* of the notion of 'style', which can at times be misleading, or, at the very least, inappropriate for certain purposes, such as determining the dating of the sculptures[540]. As seen above, other ambiguous uses of 'style' resulted in a quest for parallel finds based on individual, decontextualised motifs and fragments, often performed by mixing up the different levels of 'mainstream sculpting fashions' and 'workshop-specific interpretations' of fashionable ornaments[541]. Conversely, a stylistic analysis carried out in a systematic way by either an art historian or an archaeologist, will most likely have very similar structure and results, even if the terminology can slightly change (e.g. 'formal element' / 'type'), if some methods tend to be more used in archaeology than in history of art (e.g. seriation or correspondence analysis), and if the ultimate aims of the study can differ from a discipline to the other[542].

Academic debate needs, as Alain Dierkens puts it, to be 'de- compartmentalised', «ce qu'il faut répéter avec force face aux assertions de certains historiens ou de certains archéologues qui croient constater une incommunicabilité des méthodes, des objets de recherche et de réflexion»[543].

[540] For instance, looking for parallels basing on iconography is, of course, not wrong *per se*, if one's goal is to study the history of a given subject (the peacock, the griffin, Daniel and the lions, etc.). Problems can on the other hand arise if the goal is establishing the exact chronology of the sculpted fragments, especially when the parallels are taken from other artistic fields – textiles, jewellery, etc. – or from other sculptures where the subject appears in a very different form. The distinction between style and iconography «allows the art historian to claim a kind of objectivity (or at least disinterestedness) in being concerned only with the 'how' art is done and not the 'what' or the 'how good'» (Elsner 2010, 107-108). In general on these points see: Jurković 2000. – Jurković 2016.

[541] On these points see above, Paragraphs III.1.1, III.2.6, and III.3.1.

[542] As stressed by Meyer Schapiro: see above in this Paragraph.

[543] Dierkens 2015, 464.

III.4.12. **List of finds (Piedmontese-Provençal workshop, Early workshop of Ventimiglia, Late workshop of Ventimiglia, Workshop Monticello d'Alba)**

Here is collected the essential information on the sculptures from the find-spots considered in Paragraphs III.4.3-III.4.10. In each entry, the numbers correspond to the fragments depicted in **figures III.16-III.28**, **III.32a-III.34** and **III.36-III.37**. The sequence of the entries follows the order of the figures.

- Piedmontese-Provençal workshop

Nice-Cimiez, Saint Pons, abbey (**fig. III.16**)

Literature: Fossard 1965. – Buis 1975. – Buis 1979. – Buis 2002. – Codou 2011.

Fragments: 6

Material: limestone from La Turbie

Type: chancel screen for the tomb of the Saint

Reconstructions: Buis 2002. – Codou 2011.

Measures (height x width x depth):

1. cm 41 x 66 x unknown – **2**. cm 36 x 54 x unknown – **3**. cm 24 x 45 x unknown – **4**. cm ca. – **5**. cm 72 x 21 x 11 – **6**. cm 96 x 17 x 10.

Ventimiglia, S. Maria Assunta, cathedral; via Collasgarba; decumano massimo (**figs III.17-III.18**)

Literature: Verzone 1945. – Gandolfi 1995. – Frondoni 1987. – Frondoni et al. 1994. – Marcenaro 1994.

Fragments: 13

Material: limestone from la Turbie and other local limestones

Type: chancel screen

Measures (height x width x depth):

1. cm 18 x 55 x 12 – **2**. cm 10 x 19 x ca. 5 – **3**. cm 93 x 74 x 10 – **4**. cm 59 x 100 x 10 – **5**. cm 17 x 24 x 8. – **6**. cm 91 x 26 x 14. – **7**. cm 40 x 25 x unknown – **8**. cm 95 x 60 x 10 – **9**. cm 30 x 27 x 10 – **10**. cm 55 x 34 x 18 – **11**. cm ca. 15 x 70 x unknown – **12**. cm ca. 40 x 35 x 7/8,5 – **13**. cm 105 x 65 x 13.

Borgo San Dalmazzo, San Dalmazzo, abbey (**figs III.19-III.20**)

Literature: Casartelli Novelli 1974. – Crosetto 1999. – Micheletto 2005.

Fragments: 19

Material: marble 'bardiglio di Valdieri'

Type: *pergula* (2: enclosure for the saint's grave and enclosure for the presbyterium)

Reconstruction: Micheletto 2005

Measures (height x width x depth):

1. cm 73 x 24 x 12,5 – **2**. cm 54 x 8,5 x 12 – **3**. cm 26 x 5 – **4**. cm 18,5 x 80 x 10 – **5**. cm 16,5 x 52 x 9 – **6**. cm 15,5 x 25 x 10 – **7**. cm 13 x 30,5 x 7 – **8**. cm 12 x 24 x 8 – **9**. cm 16 x 26 x 10 – **10**. cm 18 x 29,5 x 9 – **11**. cm 22 x 21 x 9 – **12**. cm 14,5 x 27 x 9,5 – **13**. cm 22,5 x 21 x 8 – **14**. cm 17 x 31,5 x 9 – **15**. cm 17 x 57 x unknown – **16**. cm 26 x 22 x 12,5 – **17**. cm 46 x 21 – **18**. cm 66 x 42,5 x 7 – **19**. cm 45 x 20.

Alba, S. Lorenzo, cathedral (**fig. III.21**)

Literature: Crosetto 1999a. – Crosetto 2013a.

Fragments: 8

Material: Val Varaita marble

Type: chancel screen

Measures (height x width x depth):

1. cm 78 x 56 x 8 – **2**. cm 34 x 27 x 7 – **3**. cm 80 x 34 x 8 – **4**. cm 42,5 x 33 x 3,5 – **5**. cm 49,5 x 42 x 8 – **6**. cm 13,5 x 33,5 x 9 – **7**. cm 31,5 x 20,5 x 8 – **8**. cm 14 x 16,5 x 7.

Alba, SS. Frontiniano e Cassiano, abbey (**fig. III.22**)

Literature: Crosetto 1999a. – Crosetto 2013.

Fragments: 8

Material: marble (re-use attested)

Type: pergula

Measures (height x width x depth):

1. cm 30 x 14 x 18 – **2**. cm 20,5 x 20 x 7,5 – **3**. cm 20,5 x 43,5 x 5,5 – **4**. ca. 70 x 20 x unknown – **5**. cm 20 x 26 x 8,5 – **6**. cm 33 x 10,5 x 15,5 – **7**. cm ca. 65 x 60 x 5,5 – **8**. cm ca. 60 x 30.

Avignon, rue Bonaparte (**fig. III.23**)

Literature: Buis 1975.

Fragments: 2

Material: limestone

Type: chancel screen?

Measures (height x width x depth):

1. cm 19 x 34 x 4 – **2**. cm 26 x 32 x 4.

Caraglio, San Lorenzo (**fig. III.23**)

Literature: Casartelli Novelli 1974.

Fragments: 2

Material: marble

Type: chancel screen

Measures (height x width x depth):

1. cm 27 x 30 x unknown – **2**. cm 15 x 30 x unknown.

Dolceacqua, San Giorgio (**fig. III.23**)

Literature: Bellezza 1996.

Fragments: 1

Material: marble

Type: chancel screen

Measures (height x width x depth):

1. cm 43 x 37 x unknown.

Pollenzo, San Vittore (**fig. III.23**)

Literature: Crosetto 2004.

Fragments: 1

Material: marble 'bardiglio di Valdieri'

Type: chancel screen

Measures (height x width x depth):

1. cm 55,5 x 26,5 x 15.

Torino, San Salvatore, cathedral (**fig. III.23**)

Literature: Crosetto 2013.

Fragments: 1

Material: Luni marble (reused)

Type: chancel screen (*pergula*?)

Measures (height x width x depth):

1. cm ca. 100 x 20 x 20.

Bergamo, Sant'Alessandro (**fig. III.23**)

Literature: Caldarini Mazzucchelli 2004. – Ibsen 2013.

Fragments: 1 (lost)

Material: local sandstone

Type: chancel screen (?)

Measures (height x width x depth):

1. cm missing data.

Marseille, Saint-Victor, abbey (**fig. III.25**)

Literature: Drocourt 1973. – Buis 1975. – Fixot / Bertrand / Guyon 2014.

Fragments: 10

Material: marble, limestone (reused)

Type: chancel screen

Measures (height x width x depth):

1. cm 10 x 28 x 10 – **2**. cm 34 x 35 x 6,5 – **3**. 10,5 x 12,5 x 3 – **4**. cm 52,5 x 52 x 5 – **5**. cm 26 x 20 x 5 – **6**. ca. 12 x 12 x 7 – **7**. cm 10 x 21 x 8 – **8**. ca. 17 x 10 x unknown – **9**. cm 73 x 80 x ca. 5 – **10**. cm 99 x 22 x 14,5.

Marseille, La Major, cathedral (**fig. III.26**)

Literature: Roustan 1905. – Buis 1975.

Fragments: 7

Material: marble (re-use attested)

Type: chancel screen (pergula?)

Measures (height x width x depth):

1. cm 46,5 x 30 x unknown – **2**. cm 15 x 19 x 7 – **3**. cm 16 x ca. 15 x unknown – **4**. cm ca. 16 x ca. 20 x unknown – **5**. cm 22 x 13 x 8,5 – **6**. cm ca. 82 x ca. 18 x ca. 16 – **7**. cm 34 x 23 x 9,5.

Aix-en-Provence, Saint-Sauveur, cathedral (**fig. III.27**)

Literature: Buis 1975. – Hubert 1967.

Fragments: 5

Material: marble (reused)

Type: chancel screen and at least another element (nr. 4: function not verifiable, but most likely incompatible with a ciborium or an ambo; architectural decoration, door?)

Measures (height x width x depth):

1. cm 79 x 34 x unknown – **2**. cm 77 x 28 x unknown – **3**. cm 39 x 77 x unknown – **4**. cm 62 x 42 x 7 (uncertain provenance; probably St.-Sauveur) – **5**. cm 86 x 71 x 6 (most probably St.-Sauveur; reused in a cellar, Rue Victor Leydet, 600 metres away from the cathedral).

Apt, Sainte-Anne, cathedral (**fig. III.28**)

Literature: Buis 1975. – Buis 1979.

Fragments: 4

Material: limestone

Type: chancel screen

Measures (height x width x depth):

1. cm 114 x 90 x unknown – **2**. cm 106 x 90 x unknown – **3**. cm 67 x 70 x unknown – **4**. cm 20 x 10 x unknown.

- Outliers

Borgo San Dalmazzo, Bergamo, Alba (**fig. III.30**)

Literature: 1. Crosetto 1999. – 2., 3. Caldarini Mazzucchelli 2004 and Ibsen 2013. – 4. Crosetto 1999a and Crosetto 2013a.

Fragments: 1 (Borgo San Dalmazzo, San Dalmazzo abbey). – 2 (Bergamo, Sant'Alessandro). – 1 (Alba, San Lorenzo, cathedral)

Measures (height x width x depth):

1. cm 20 x 115 x 14 – **2**. cm missing data – **3**. cm missing data (scaled in the figures basing on the other fragments) – **4**. cm 14,5 x 12,5 x 3,5.

- Early workshop of Ventimiglia

Sanremo, San Siro (**fig. III.32a**)

Literature: Pallarés i Salvador 1961. – Gandolfi 1995. – Beghelli 2020a.

Fragments: 1

Material: local limestone (?)

Type: chancel screen (?)

Measures (height x width x depth):

1. cm 54 x ca. 17 x ca. 13.

Ventimiglia, S. Maria Assunta, cathedral – Group A (**fig. III.33**)

Literature: Verzone 1945. – Gandolfi 1995. – Frondoni 1987. – Marcenaro 1994. – Beghelli 2020a.

Fragments: 11

Material: limestone

Type: chancel screen

Measures (height x width x depth):

1. cm 15 x 60 x 13 – **2**. cm 21 x 30 x 6 – **3**. cm 40 x 17 x 13 – **4**. cm 23 x 24 x 9 – **5**. cm 25 x 23 x 9 – **6**. cm 16,5 x 11 x 9,5 – **7**. cm 40 x 35 x 10 – **8**. cm ca. 4 x ca. 8 x ca. 3 – **9**. cm 20 x 18 x 9 – **10**. cm 32 x 18 x 9 – **11**. cm 52 x 12 x unknown.

Stenico, castle, chapel of San Martino (**fig. III.34**)

Literature: Cecchelli 1928. – Rasmo 1982. – De Marchi 2000. – Porta 2013. – Beghelli 2020a.

Fragments: 5

Material: oolitic limestone

Type: pergula

Measures (height x width x depth):

1. / – 2. cm ca. 40 x 10 – **3**. cm ca. 40 x 15 x 15 – **4**. cm 76 x 90 x 8 – **5**. cm 81,5 x 88,5 x unknown – **6**. cm 77,5 x 64 x unknown.

- Late workshop of Ventimiglia

Ventimiglia, S. Maria Assunta, cathedral – Group B (**fig. III.36**)

Literature: Verzone 1945. – Gandolfi 1995 – Frondoni 1987.

Fragments: 25

Material: limestone

Type: chancel screen (?)

Measures (height x width x depth):

1. cm 36 x 55 x 7/8 – **2**. cm 13 x 8 x unknown – **3**. cm ca. x 18 x unknown – **4**. cm 38 x 14 x 8 – **5**. cm 37 x 18 x 8 – **6**. cm 20 x 29 x 7/8 – **7**. cm 13 x 9 x unknown – **8**. cm 17 x 10 x unknown – **9**. cm 30 x 24 x 7 – **10**. cm 12 x 30 x ca. 8 – **11**. cm ca. 16 x 20 x 11 – **12**. cm ca. 25 x 19 x 10 – **13**. cm 35 x 82 x 10 – **14**. cm 46 x 20 x 10 – **15**. cm 24 x 20 x 10 – **16**. cm 35 x 28 x 11 – **17**. cm 25 x 30 x unknown – **18**. cm 18 x 32 x unknown – **19**. cm 24 x 22 x unknown – **20**. cm 26 x 15 x unknown – **21**. cm 25 x 16 x 9 – **22**. cm 24 x 26 x unknown – **23**. cm 30 x 24 x unknown – **24**. cm 15 x 50 x unknown – **25**. cm 18 x 26x unknown.

- Workshop Monticello d'Alba

  Borgo San Dalmazzo, San Dalmazzo abbey – Monticello d'Alba, San Ponzio – Pollenzo, San Vittore (?) (**fig. III.37**)

Literature: Crosetto 1999. – Crosetto 1999a – Crosetto 2004.

Fragments: 1 (Borgo San Dalmazzo) – 1 (Monticello d'Alba) – 2 (Pollenzo)

Material: limestone (?)

Type: chancel screen, door frame

Measures (height x width x depth):

1. cm 23 x 15 x 11,5 – **2**. cm 25 x 42 x 9,5 – **3**. 23 x 60 x26 – **4**. 28,5 x 188 x 19.

Chapter III.5.

Craftsmen on the move: contrasting written and archaeological sources

In the previous Chapters we have examined the evidence on the mobility of craftsmen conveyed by the written documents and by the sculpted remains. It appears now relevant to compare the distances covered by the artisans as attested by both these categories of sources (i.e. literary and archaeological evidence), and to analyse other practical issues related to their movement, such as the possible length of a daily segment of the journey, the opportunities and conditions for accommodation at night, and so forth.

III.5.1. **Distances and duration of journeys**

Clearly, a survey on the distances covered by the artisans must be based on approximate values: in many cases, the written sources are not explicit on the place of origin of the craftsmen, or they mention only the macro-region they came from; as for the archaeological materials, even when one recognises in several find-spots the work of the same makers, their provenance is often suppositional. Nonetheless, it is possible to get some significant information. The tables below include the data concerning qualified labour collected so far[544]: the first one is referred to the written sources, the second to the material evidence.

To	From	Km (circa)	Period	Source
Ripon	'Gaul' (Lyon?)	500 (at least) (1.200?)	671-678	Eddius Stephanus, Vita Wilfridi XIV; XVII
Hexham	Rome	2.500	672-678	Willelmus Malmesbiriensis, De gestis pontificum Anglorum III, 117
Wearmouth	'Gaul'	750 (at least)	674-676	Beda, Vita abbatum Wiremuthensis 5; 6
Pictland	Jarrow	300 (at least)	710	Eddius Stephanus, Vita Wilfridi XVII
Saint Rimay	Le Mans	75	early 8th century	Vita Ricmiri I, 7

[544] The few cases of unskilled labour force have been omitted. See above, Chapter III.2.

To	From	Km (circa)	Period	Source
Spoleto	Charlemagne's residence (?)	1.000 (?)	779-780	Codex Carolinus 65
Saint-Riquier	Charlemagne's residence (?)	370 (?)	790	Hariulfus, Chron. Centulense II, 6
Aachen	'All lands lying on this side of the sea'	hundreds / thousands	796-804 .ca	Notker Balbulus, Gesta Karoli I, 28
Ravenna	Rome	370	814	Lib. Pont. 98, CVI; Agnellus, Lib. pont. eccl. Rav. 168
Venice	Byzantine empire (Constantinople)	1.700 (overland) 2.500 (over sea = 1.350 miles .ca)	before 820	Sansovino, Venetia 1581, Lib. I. (Sestriere di Castello), 26-29
Reims	Aachen	300	820 .ca	Flodoardus Remensis, Hist. Remensis eccl. II, 19
Grado	'Francia' (?)	hundreds / thousands (?)	after 803, before 825	Will of Fortunatus II; Menis 1988
Sisak	Grado	330	821	Annales regni Francorum (a. 821)
Aachen	Reims	300	827 .ca	Einhard, Translatio IV, 2
Mosaburg/Zalavár	Salzburg	550	850 .ca	Conversio Bagoariorum et Carantanorum 11

Locations of work	Place of origin	Km (circa)	Period	Bibliography
Cisano di Bardolino Vicenza	Vicenza	90	early 9th c.	Napione 2002
Aquileia Cividale del Friuli Sant'Ambrogio di Valpolicella San Martino Trento	Cividale del Friuli	max. 270	mid 8th c.	Lusuardi Siena / Piva 2002, 301-303
Cividale del Friuli Sesto al Reghena	Cividale del Friuli	85	second half 8th c.	Lambert 1999, 92
Megliadino San Fidenzio Rigoli	Cividale del Friuli	max. 460	second half 8th c.	Lusuardi Siena 2000 Ducci 2013, 48-50
Reichenau	Venice	500	early 9th c.	Schiavone 2019

Locations of work	Place of origin	Km (circa)	Period	Bibliography
Cividale del Friuli Novigrad - HR (ciborium Mauritius)	Cividale del Friuli	140	last quarter 8th c.	Jurković 1995 Lusuardi Siena / Piva 2002, 318 Jurković / Matejćić / Ziherl 2006, 18 Basić / Jurković 2011
Novigrad	Rome (?)	700 (?) overland	late 8th / early 9th c.	Matejčić 2006, 16-17
Bale Dvigrad Guran (Vodnjan) Muggia Vecchia / Trieste Novigrad / S. Pelagius Rovinj / S. Thomas S. Quirinus (Vodnjan) Šijana	Bale (?)	max. 100	late 8th / early 9th c.	Jurković 2009 Jurković 2012
Split	North-Eastern Italy or Rome (via Istria)	max. 600 or max. 1.300 (overland)	late 8th c.	Basić / Jurković 2011
Biskupija / Crkvina Galovac / Crkvina Koljani	?	max. 180	820-830 (or first half 9th c.)	Milošević 2000, 270-271 Belošević 1992-1993 Belošević 1994-1995 Belošević 1995-1996 Jurčević 2014
Biograd Biskupija / Lopuška Glavica Kašić Mijovilovac in Pridraga (?) Plavno Rižinice (Solin) Vrpolje Žažvić	?	max. 140	mid 9th c.	Jakšić 1997
Biskupija Cetina Crkvina Plavno Rapovine Sopot Zdrapanj	Dalmatia	max. 150	879-889	Jakšić 1997, 45 Jurković 2000, 230-231

Locations of work	Place of origin	Km (circa)	Period	Bibliography
Muc Nin Otres / Ostrovica Stupovi / Biskupija	Dalmatia	max. 170	879-889	Jakšić 1997, 45 Jurković 2000, 230-231
Neviđane (island of Pašman) Novigrad Pridraga Rab Zadar	Cividale del Friuli	max. 350	late 8th and early 9th c.	Josipović 2016 Jurković 2016, 233
Ferentino Rome	Rome	80	817-824	Ramieri 1983, 52-54 Melucco Vaccaro / D'Achille 1999, 102
Aix-en-Provence Alba Apt Avignon Bergamo Borgo San Dalmazzo Caraglio Marseille Nice-Cimiez Pollenzo Torino Ventimiglia	North Western Italy (?)	max. 700	second half / last quarter 8th c.	This work
Sanremo Stenico Ventimiglia	Northern Italy (?)	max. 470	early 8th c. (most probably)	This work

The routes have been measured basing upon the Roman and Late Roman road network, by using atlases of ancient topography and the *Tabula Peutingeriana*[545]. Very useful was also the website Orbis, an interactive map for calculating distances and duration of journeys in the Roman empire, resulting from a project of the University of Stanford[546]. Not all the Roman roads were uninterruptedly used throughout the Early Middle Ages, and some places mentioned in the Early Medieval written sources did not exist during the Roman period[547]. The aim of this Chapter,

[545] Tabula Peutingeriana 1976. – Quilici 1994. – Talbert 2000. – Basso 2007. – Albu 2014. – A valuable online tool is the *Regnum Francorum Online* (http://www.francia.ahlfeldt.se/index.php).

[546] Orbis: The Stanford Geospatial Network Model of the Roman World, (http://orbis.stanford.edu/orbis2012/#).

[547] As just one example, the monastery founded by Ricmer was built in an area formerly covered with woods: see above, Chapter III.2.

however, is simply to get a general idea of the extent of the distances covered by the mobile artisans, and to compare the information conveyed by written and archaeological evidence. From this very general perspective, a deviation of a few kilometres on short distances – or even a couple of hundreds on routes of thousands of kilometres – does not affect the overall reliability of the dataset. Also, despite some roads had fallen into disrepair during the Post Classical period, a substantial part of the route network survived and was regularly used, even before Charlemagne started to systematically repair, and expand, the old road system[548].

Some more problematic cases included in the tables need some additional explanations. As for the table with data from the written sources, when the records named only the area of origin of the craftsmen (for instance: Gaul), the distance from the working place (i.e. the destination) was calculated by convention, very approximately, from the nearest border, or city, of that area. This means that, in cases as such, the kilometres equal to the shortest possible distance. In only one case, the provenance is known but the exact location the craftsmen went to is unknown (Jarrow – Pictland). More often, the destination is known, but not the exact provenance: 750 km is the distance between Wearmouth and the Northernmost part of the Frankish realm, in the surroundings of the ancient Gesoriacum (Boulogne-sur-Mer), as the craftsmen who worked at Wearmouth came from 'Gaul'. In the instance of Ripon, the artisans are also said to come from 'Gaul', but here the written sources provide a few more clues on their provenance, for we know that they had been brought to England by Wilfrid while he was coming back from a three-years-long stay in Lyon[549]. In the same way, the sources do not mention the exact provenance of the craftsmen, sent or summoned by Charlemagne, who worked at Spoleto, Saint-Riquier and Aachen[550]. Of course, Charles could have mobilised the artisans from (and to) virtually any part of the kingdom. But in other cases, when the sources are unequivocal about the place of origin of the artisans, these come always from the area of residence of the person who sent them, as in the instances of the workforce sent to Ravenna by pope Leo III or to Mosaburg/Zalavár by the archbishop Liupram. One can hypothesise, then, that at least some of the artisans sent by Charlemagne to Spoleto and Saint-Riquier came from – and probably had worked at – one of the locations the king used to reside in. Not always one can infer from the written sources where exactly Charlemagne was at every moment of each year, for he moved very often, turning more sedentary only during the last years of

[548] Greenhalgh 2008, 135. – Albu 2014, 42-43, with literature: in Visigothic and Merovingian Gaul, for instance, all the great battles were fought next to Roman roads, which shows that they were still important in the military context. In general, one can say that the Roman route network remained in use throughout much of the Frankish realm.

[549] See above, Chapter III.2.

[550] See above, Chapter III.2.

his reign[551]. The main residences were Nijmegen, Aachen, Ingelheim, Worms, Frankfurt and Paderborn[552]. Worms was probably the residence of the king's court until the 790s, when it was moved to Aachen[553]. If one accepts the hypothesis that at least some artisans were sent from one of these locations, the shorter distance possible covered by the craftsmen is from the nearest places to Spoleto (Worms) and to Saint-Riquier (Aachen), i.e. respectively at least 1.000 km (depending on the Alps pass chosen), and 370 km circa. It must be recognised, however, that the documentary evidence is insufficient to rule out the possibility that the artisans came from other locations entirely than one of Charlemagne's residences. As for the construction of the Palatine Chapel at Aachen, it was noted earlier that Charles had surely the means to summon the very best craftspeople from different regions of the empire[554]. Although their places of origin are not precisely listed, the words used in the text suggest that we can reasonably assume a journey of hundreds (or thousands) of kilometres for at least some of these workers. Very challenging, on the contrary, is guessing from where, exactly, were summoned the artisans who travelled from 'France' to Grado to restore the church of S. Giovanni Evangelista. It is known that the patriarch Fortunatus knew Charlemagne personally, having often visited his court and even spent entire periods of his life there[555]. Unlike the previous instances of Spoleto and Saint-Riquier, though, here the written sources do not openly state that it was Charles himself to send the craftsmen – the contact-person could have been, for example, some ecclesiastical personality Fortunatus had met during his journeys, or he could even have called some craftspeople he personally had seen working during his stays. Lacking any reference to the actor who could have sent the workforce, even the smallest clue about their exact provenance within «*Francia*» is lost. As in the case of Aachen, anyway, the words used in the text seem to suggest a long journey. Concerning the craftsmen who travelled from Constantinople to Venice, at last, two distances have been indicated, overland and by sea: despite the latter is nearly double than the first, a journey on waterways might have been faster and, therefore, preferred.

As for the table with data about the archaeologically-identified mobile stone-carvers, the entries correspond to the cases seen in Chapter III.3 and III.4. Some locations are mentioned several

[551] McKitterick 2008, 162.

[552] McKitterick 2008, 162-171. – The letter from pope Hadrian I dates to 779/780, whereas the construction of the church in Saint-Riquier started in 790 (see above, Chapter III.2). Ingelheim was chosen as location for the winter quarters in 787, but possibly frequented since 774 (Bachrach 2013, 408); the palace at Worms burnt in the winter 790-791 (McKitterick 2008, 164); in Frankfurt, a Merovingian palace existed since the 7th century, and would be augmented by Louis the Pious (Delle Rose 1995. – McKitterick 2008, 164-165).

[553] Hummer 2005, 110. – See also Braunfels 1991.

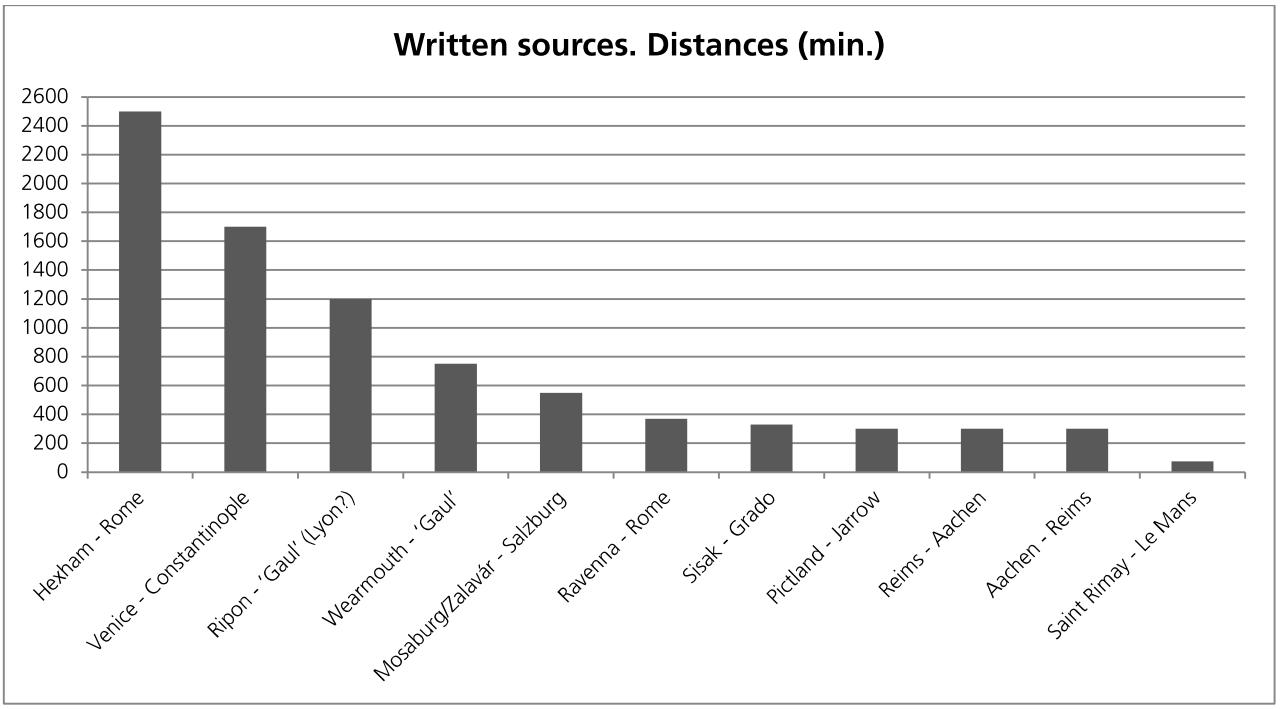
[554] Empire after 800. See above, Chapter III.2.

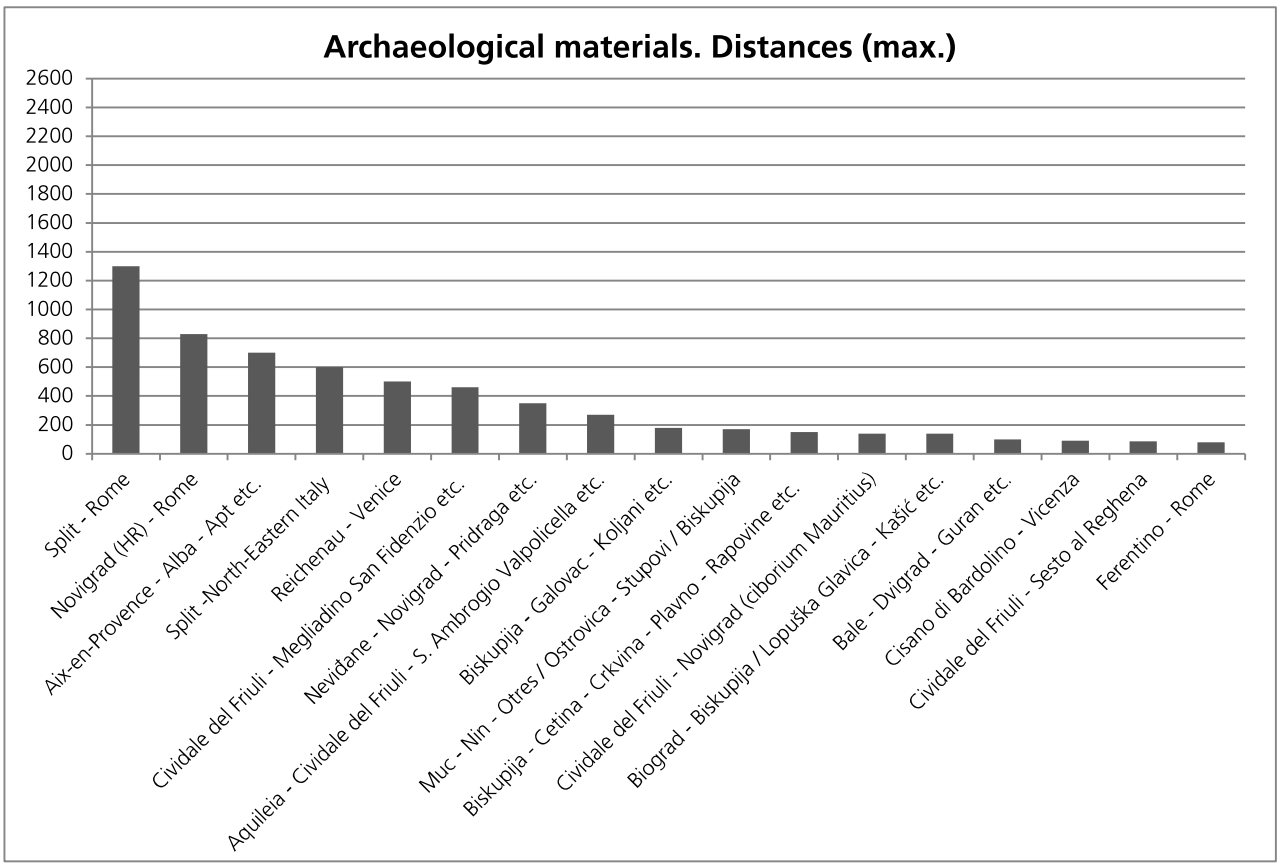
[555] See above, Chapter III.2.

times in the table: this occurs, of course, because more than one workshop could operate in the same city, contemporarily or over time. As mentioned above, identifying the place or area of origin of the craftsmen is not always easy. When it comes to choose between an important city and a smaller settlement / town, it is reasonable to assume that the artisans came probably from the first, not only because of common sense, but also because the distribution of the materials often clusters around larger urban areas[556]. In these cases, it is easier to estimate the distances covered by the stone-carvers. This occurs, for example, in the instances of Vicenza and Cisano di Bardolino, Reichenau and Venice, or of Rome and Ferentino – where, additionally, an inscription mentions the pope. The same criterion led the scholars to propose Cividale del Friuli (capital of the first Lombard dukedom in Italy) as the place of origin for different workshops of stone-carvers who worked at Novigrad (ciborium of Mauritius), Megliadino San Fidenzio, and Rigoli. A group of fragments from Aquileia, Cividale, San Giorgio di Valpolicella, San Martino, and Trento, also show features which indicate the work of a common workshop probably based in Cividale, whereas other craftsmen coming from this centre manufactured, in all likelihood, the so-called urn of S. Anastasia[557]. The stone-carvers who made some very refined slabs found in Novigrad and Split came probably from Italy, either from Rome via Istria (respectively 830 and 1300 km ca.), either, in the instance of Split, also from the North-Eastern part of the peninsula (600 km ca.). In some other cases concerning workshops operating in Istria and Dalmatia, it is more difficult to tell where the craftsmen came from, and therefore the scholars did not hypothesise any precise place of provenance. In these circumstances, the table lists the maximum possible distance covered by the stone-carvers, i.e. the distance between the two farthermost locations where the same artisans have worked. This also applies to Southern France, Liguria, and Piedmont.

[556] See above, Paragraph III.2.3.

[557] Paragraphs III.3.2 and III.3.3.





When comparing the distances attested by the written sources and by the archaeological materials, histograms can surely help in reading the data contained in the tables above.

The first histogram, with data from written sources, includes only the more easily quantifiable data; the records of movement of very uncertain length (such as the one about the master sent to Spoleto by Charlemagne) have been left out of it. As for the craftsmen brought from 'Gaul' to Ripon by Wilfrid, the kilometres indicated are equal to the distance from Lyon, as this was most likely their place of provenance[558]. Despite these datasets come from a selection of sources – and therefore only concern a limited number of cases –, the collection of both written and archaeological evidence has been done in the attempt to present the most significant documents on mobile craftsmen. The data, thus, can be at least used as basis for some general considerations, regardless of the relatively low number of records.

The first fact that stands out from the histograms is a quite remarkable difference in terms of length of the journeys attested by the written sources and the archaeological materials, even if the first histogram lists the *minimum* distances and the second one lists the *maximum* distances.

In 3 cases out of 11, the written documents attest a movement of more than 1.000 km, and in another case the distance covered is only slightly lower, but calculated by convention from Wearmouth to the nearest border of 'Gaul'[559]. To these, one might potentially add the instances which, as said, are included in the table above but not in the histogram, because of the lack of precise data[560]. Thus according to the written sources, the transfers of artisans exceeding 800 / 1.000 km would represent more than 40% of the total (5 cases). As for the mobile workshops identified through the study of the sculpted remains, in only 2 cases out of 17 the scholars have suggested a distances of about 800 / 1.000 km, i.e. 12% circa.

A first explanation for this discrepancy lies in the very mean which conveys the information: the written records about prominent historical figures (such as emperors, kings or popes) are generally more abundant than the ones about 'minor' personalities (such as a simple priest). Since the chances to get artisans from afar increased with the level of political and religious power, the percentage of long-distance journeys *appears* higher in the written documents than the one attested by the archaeological materials – which include a number of smaller, 'less important' churches administered by 'less important' individuals. Another factor which could affect the low percentage of long-distance journeys attested by the sculpted remains may be searched in the history of studies itself on this class of materials. As it has been stressed in several occasions, the studies focused on (or even just taking into account) the mobility of stone-carvers and building craftspeople in the

[558] See above.

[559] See above in this Paragraph.

[560] See above in this Paragraph.

Early Middle Ages are rather rare. This combines with a general tendency to perform research on a regional scale, owing to a long tradition of studies characterised by this approach: the scarcity of archaeological literature on long-distance movement of craftsmen may in turn cause a sort of scholarly 'caution' in pointing out very similar sculptures from quite distant find-spots – and, consequently, to conclude that their makers could have travelled that far[561].

It is not surprising, however, that both the written and the archaeological sources suggest that medium-distance and short-distance journeys were more frequent than long-distance ones. Fetching a team of craftsmen from afar was more complicated and more expensive, not least because the artisans who had more chances to be summoned far-off were the more skilful ones. Very long-distance journeys involved, so to speak, a minority of patrons (i.e. the most important members of ecclesiastical and secular aristocracy), and a minority of craftspeople[562].

Estimating how long it did take to go from a starting point to a given destination in the Early Middle Ages is an arduous task, as the evidence is scattered[563]. The comprehensive work of Michael McCormick on Early Medieval economy, though, contributed to shed light on this subject, too[564]. A few examples can provide a general idea of ordinary travel times. The *speed* of a journey depended of course on conditions of infrastructures, on the season and weather, on the means of transport, whereas its overall *duration* could vary considerably according to the route chosen, the number and length of stopovers, the general health of the travellers and their animals, and so forth. In the 8th and 9th centuries, for instance, an embassy from Italy (or from the Frankish North) to Constantinople, and back, would last between 6 and 11 months in the absence of complications causing delays[565]. Analysis of the written sources on merchants, pilgrims, diplomats, and so forth, suggests that during the Carolingian period the speed of overland travel ranged from approximately 25 to 50 km per day, according to the circumstances[566].

In the year 828, for instance, Einhard and his fellows, who were translating the relics of the Saints Marcellinus and Peter, expected to cover the distance between Michelstadt and Seligenstadt (55 km ca., including sections trough the forests) in just one day. But due the mud on the way caused by heavy rains, and owing to the «constant crowds of people praising God» who intercepted the travellers and wanted to accompany them, Einhard soon realised that they «could not reach

[561] On these points see above, Chapter I.2 and Paragraph III.3.1.

[562] See Chapter III.2.

[563] McCormick 2001, 469-470.

[564] McCormick 2001, esp. 391-570.

[565] McCormick 2001, 469-474. – See also Hodges 1982, 100-103.

[566] McCormick 2001, 476-481.

[their] destination that day» and therefore «stopped at a village called Ostheim [Großostheim]», thus covering a distance of ca. 35 km[567]. Later on, in 991, the monk Richerus covered the 250 km between Reims and Chartres in about one week (ca. 35 km per day)[568]. In the 8th-9th centuries, a journey from the Frankish inland to Rome was expected to last around 6-8 weeks; in 858, a priest probably coming from Mainz left written record of his travel to the Holy See, and complained about its excessive duration of 10 weeks, because of the constant heavy rain[569]. As for the waterways, the sea journey in 653 of pope Martin I across the Mediterranean, from Rome to Constantinople, lasted three months: the ship hugged the coast and stopped in several places[570].

These data contribute to understanding how long it could take for master builders to reach their destination. Many records included in the tables and histograms above refer to a radius of 250-300 km. If one assumes an average of 30/35 km overland per day, and stopovers in a different place every night, a journey as such could have lasted about 8/10 days. Covering much longer distances, such as Rome-Hexham or Rome-Split, could have taken around 2-3 months or more, considering that in long-distance trips the animals (horses, donkeys, mules) needed to rest more than usual, slackening the average speed[571]. As seen in the abovementioned examples of Einhard and of the priest from Mainz, other factors, like the weather, could also slow up the travel speed: in the case of the masters going to Hexham, for instance, one can imagine that rough sea might have been a problem, forcing to a stop waiting for the possibility to cross the English Channel. Conversely, the length of a daily segment of the journey could significantly increase with favourable weather conditions, smaller (and therefore more 'agile') groups of travelling artisans, limited burden (for instance, just a few personal belongings and the working-tools: a situation which must have been common among sculptors, for they did not move with stone[572]), and, of course, swift means of transport, such as horses. Available evidence, as seen in the previous Chapters, clearly shows that the craftsmen who moved across long distances enjoyed a social status high enough to afford horses[573]. Thus at least in some cases, covering a distance of 250-300 km might have taken 'only' 5-6 days.

[567] Einhard, Translatio I, 12. Translation: Dutton 1998, 81-82.

[568] Peyer 2009, 53.

[569] McCormick 2001, 479. – Liutolfus, Vita S. Severi, 290.

[570] McCormick 2001, 483.

[571] On this point see McCormick 2001, 475.

[572] On this point see above, Part II. And Chapter III.1.

[573] See Paragraph III.2.7.

Some of the artisans listed earlier in this Paragraph had to cross the Alps: as strenuous as the path may have been, however, by Early Medieval standards «an astonishing volume of travellers» crossed the Alpine chain in the 8th-9th century[574]. The distance that it was possible to cover in a day of mountain travel ranged between ca. 15 and 30 km, an inference that can be made by looking at the distance between the six *tabernae* (i.e. taverns, inns) operated by the Frankish imperial fisc in the Rhaetian Alps[575]. This leads to the topic of lodging and accommodation.

III.5.2. **Resting on the way: stopovers, board and lodging, hospitality, and costs**

Hans Conrad Peyer's thorough study on hospitality in the Middle Ages is most useful to address some practical issues related to artisanal and artistic mobility[576]. Throughout the Early Middle Ages, all over Europe, the law regulated quite precisely the rules for providing hospitality, which had to be offered for free and was considered a responsibility nobody could evade. Upon request, the householders had to provide for a shelter, water, a fireside, and fodder for the animals, for a maximum of two or three days. Among the Burgundians, travellers were to be hosted in Burgundian houses; they had to be directed to another Burgundian house at the next stopover, and sending them to a Roman house was prohibited. The Alemannic and Lombard laws ensured a special immunity to whomever was going to the king's or to an aristocrat's court (including, one might add, the artisans who went there for work): in the Frankish kingdom, the subjects who refused to give them hospitality incurred legal sanctions. The Bavarian laws protected pilgrims and other travellers against offence, robbery and murder, whereas among Anglo-Saxons the foreigners were considered as being under the direct protection of kings, earls and bishops. The Visigoths allowed the travellers to camp on the roadside, within approximately 20 metres of the road itself: in this case, as the Lombard edict of Rothari also explains, firewood and fodder for the animals could be freely taken anywhere outside enclosed lands. In the Carolingian empire, all travellers could count on the special protection of the emperor himself, and all subjects were expected to provide a place or a shelter in their houses (but not in Italy and Southern France during summer, since these lands were probably considered warm enough to camp in the open), a fireside and firewood, fodder for the animals and water. A monastery or a bishop's house had to be open to everyone, whereas a layman's duty was limited to one, two or a few guests[577].

[574] McCormick 2001, 397, with literature.

[575] McCormick 2001, 478-479. – Peyer 2009, 93-94.

[576] Peyer 2009.

[577] Peyer 2009, 47-50.

All forms of private free hospitality did not include meals, unless the householder offered them spontaneously, in which case the guest could decide, *voluntarily*, to give some money in return: but it seems that plenty of hosts broke the rule, as attested by the reiterations of laws which prohibited the practice of selling food. An exception, as also noted by Massimo Montanari, concerned privileged individuals such as foreign ambassadors and aristocrats, who had the right to be given meals for free[578]. Conversely, many monastic *Rules* – such as the Benedictine one – and 'internal' regulations required the monks to offer food to any guest or pilgrim: the *Statutes* of abbot Adalhard of Corbie dating from 822, for instance, established that 60 pigs out of a total of 600 to be slaughtered every year had to be put aside for guests and pilgrims – excluding pork fat, which was to be stored separately[579].

This was the context in which the journeys of the building masters occurred. As seen, the sources attest both sizeable groups (at times composed by different professionals, like masons, sculptors, painters, etc., each of them with their own teams), and smaller groups (single artisans or individual workshops): for the former, it was probably easier to benefit from hospitality at institutions like large monasteries – where, as mentioned, they might have possibly been lucky enough to receive some cured or fresh pork meat for dinner –, while, for the latter, even a private ordinary house could be an option. In this latter case, just like all other travellers except noblemen and prominent political characters, the artisans were expected to purchase their own food and wine from the locals, or at the local marketplace, being at most accompanied and guided by their hosts[580]. The moment to stop for the night did not always occur close to a settlement. Usually, travellers thus brought with them what was necessary to camp on the roadside, including tents: this solution, though, increased the risk of becoming prey to bandits and highwaymen[581]. The written record on the *tabernae* (taverns, inns) is scarce until the Carolingian period, but their sudden appearance in the laws and many other documents between the late 8th and early 9th century makes one to assume that, even if relatively uncommon, professional hospitality had been implemented for a long time[582]. Here the travellers could buy their dinner and wine – or beer, depending on the region – and also pay for a place to sleep.

Despite the official protection of king and emperors, long-distance journeys were often dangerous and above all, judging from the evidence seen so far, seem to have been an expensive

[578] Peyer 2009, 50-51. – Montanari 1992, 31.

[579] Montanari 1992, 30 and 39.

[580] Peyer 2009, 51.

[581] Peyer 2009, 54-55.

[582] Peyer 2009, 88-89. The taverns seem to have increased in number starting from the 11th century.

undertaking: this might have contributed to the relatively rare occurrence of craftsmen heading for faraway destinations. For merchants, and also for artisans and artists, a long voyage was, so to speak, an investment in itself. Only the most skilled (and therefore wealthiest masters, such as those mentioned in the law of king Liutprand[583]) could afford this investment, which was only worth making if the reward was substantial. This must have also been the case of the makers of the refined chancel-screen-slabs in Split, who came perhaps from Rome[584] and, as well as their colleagues heading to Hexham about a century earlier, might have been brought over from their city «by the hope of rich rewards»[585].

Literary sources are anything but explicit on the expenditure that travelling entailed. At least in some occasions, however, it seems legitimate to assume that artisans did not meet the costs of their own journey, this being rather the responsibility of the commissioners of the works, or of the financial backers. As seen earlier in this Part III., Late Antique and Early Medieval texts mention kings and emperors as benefactors of new foundations or restorations of monasteries and churches: skilled workers dispatched to the building site were often 'offered' to the project together with rich endowments and gifts. In the renowned example of St. Riquier, where abbot Angilbert, the commissioner, gets from Charlemagne, the financial backer, «stonemasons, sculptors, carpenters and glaziers»[586], it must be presumed that the king not only covered the costs for the project, but also paid for the masters' wages. One, therefore, might as well infer that he might have added a few extra-funds to cover the expenses for their displacement. This is not implausible, since we know for certain that, besides appreciable earnings, the 'foreign' skilled masters enjoyed some additional privileges unknown to their local, less skilled colleagues, as in the instance of the construction of the Palatine Chapel in Aachen[587]. Another hint for probable additional financial support to meet the costs for the artisans' displacement comes from Einhard's *Translatio*, in a passage where the chronicler relates how Deusdona, a Roman deacon who had spent a period in Aachen, asks Einhard for a mule to be used in his journey back to Rome. In exchange, once arrived at destination, the deacon may send to Einhard some relics from the saints buried in the Holy See. Einhard agrees, providing both «the animal he had requested», and «[some] money for his daily expenses» during the journey[588]. The circumstances are obviously other than dispatching artisans and artists: still, this

[583] Leges Liut. 18. See above, Chapter III.2.

[584] See above in this Paragraph.

[585] Willelmus Malmesbiriensis, De gestis pontificum Anglorum III, 117: see above, Chapter III.2.

[586] See Paragraph III.2.2.

[587] See Paragraph III.2.2.

[588] Einhard, Translatio I, 1. Translation: Dutton 1998, 70.

account shows that the wealthy, influential personality who ‘commissions’ something involving travelling, also bears the costs for the persons’ transfer. This may well have happened in the case of patrons / financers, and the masters they sent or received for their building and sculptural projects.

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PART IV.

PATRONS

After having addressed construction activities and the production of stone elements from the perspective of the raw materials (Part II.) and of the craftsmen (Part III.), in Part IV. the whole process will be considered from the viewpoint of the patrons who commissioned the buildings, their architectural decoration and stone furnishings. Different perspectives enable to investigate different aspects of the economic background of stone items production: for instance, the examination of the sources of raw stone showed that in the Early Middle Ages the provisioning of lithic materials was almost always carried out locally. In the same way, the analysis of written and material evidence concerning artisans enabled to appreciate the crucial role of the craftsmen's mobility in the diffusion of sculptural and architectural fashions. However, all these activities – choice and supply of materials, recruitment of workforce, organisation of the building site, and so forth – needed to be carefully planned beforehand and, of course, adequately funded. Looking at things from the viewpoint of patrons, therefore, allows to approach subjects like the mechanisms and procedures for fund raising, for procuring the materials, for fetching the right artisans to carry out the project, and for negotiating with them the final outcome of their work.

Chapter IV.1.

Fund raising (and the «ritual economy»)

Usually, the initiative to build or restore a church was taken by a bishop or an abbot but, as seen in the previous Chapters, also Early Medieval kings, emperors and popes frequently undertook this kind of projects[1]. Nearly always, in the written sources, verbs as *restauravit*, *aedificavit*, *fecit*, are directly referred to the patrons – even though, of course, they just ordered the works to be done and, obviously, did not personally engage in the building site's work[2]. The commissioners (or their representatives) took care of almost all the aspects related to the building site: they collected the funds to pay the works, fetched the craftsmen, procured the raw materials; in some occasions, they also coordinated the artisans at the construction site[3]. In the next pages, we shall try to take a closer look to these steps.

That patrons paid themselves for the works was a rare circumstance: usually, they gave others the chance to do something good for their souls, by means of an offer to the Church. In the Carolingian period, as a capitulary emanated by Louis the Pious explains, the *rector ecclesiae* (ruler of a church) had the right to administrate the money collected from the community, and use it to hire labour force and buy the raw materials[4]. The number of persons involved in the management and organisation of the works depended by the extent of the undertaking. For instance, Notker Balbulus reports for the period 796-804 ca.:

> If there were any churches belonging to the royal demesne that had to be decorated with panelled ceilings or wall paintings, local bishops and abbots looked after this. But if new churches had to be constructed, all the bishops, dukes and counts, abbots and anyone who presided over a church belonging to the royal domain, along with all of those who held benefices from the king, worked on them urgently from the laying of the foundation right up

[1] Binding 2005, 20. – Chavarría Arnau 2009, 99-106, both with literature. In general, on Christian patronage of religious and public buildings, see Ward-Perkins 1984, 49-154. – Février 1987. – Farioli Campanati *et al*. 2009.

[2] Binding 2005, 20. – For many examples on Early Medieval liturgical furnishings, see Ibsen 2005, esp. 154-158.

[3] Binding 1996, 31-96. – Binding 1999. – Binding / Linscheid-Burdich 2002, 45. – Binding 2010, 17-26.

[4] Capit. Reg. Franc. I, 287-288, nr. 5. – Azzara 2009, 30-31.

to the roof. Proof of this is still to be seen not only in divine but also in the human basilica at Aachen, and in the houses for every man who held an office [...][5].

Thus the funds to build a church, restore an ancient one, or manufacture new stone liturgical furnishings were generally taken out of the taxes collected from the community[6]. Prominent members of the ecclesiastical and secular aristocracies, however, are often listed among the financers of the undertakings[7]. Eminent churchmen from afar could also make donations to restore a building, especially in the case of the Roman ones; during the works in the corridor connecting S. Andrew and S. Petronilla, Fridigisus, abbot of S. Martin at Tours and of Sithieu, wanted to honour his own monastery's patron with a gift: Leo III (795-816), thus,

coated Christ's confessor S. Martin's altar with fine silver-gilt, out of what abbot Fridigisus had formerly sent[8].

Often, wealthy laymen or important political figures personally contributed to the payment of the works, or offered some new liturgical stone furnishings. For the restoration of S. Riquier in 790, for example, Angilbert could count on generous royal donations, as Charles

ordered to open his great treasures and urged his beloved to take what and how much he needed to carry out his project[9].

A few sculpted fragments bear the names of the persons who offered the liturgical furnishings to the church, such as the *pergula* gable arch and beam from Rižinice, where an inscription mentions the Croatian prince Tripimir and reminds the believers in the church to pray for him[10] (**figs III.7**, and **fig. IV.1**). As stated by an inscription on the remains of the chancel screen trabeation system, in the early 9th century *Domenico*, a tribune, together with his wife *Costancia* and their son, donated the stone furnishings to the church of S. Maria at Murano[11]. A Gregorius

[5] Notker Balbulus, Gesta Karoli Magni I, 30. Translation: Noble 2009, 85.

[6] Azzara 2009, 30-31.

[7] Chavarría Arnau 2009, 100-101, with literature. Mechthild Schulze-Dörrlamm has devoted a thorough article to the subject as regards Carolingian period: Schulze-Dörrlamm 2009.

[8] Lib. Pont. 98, CX. – Davis 2007, 226, footnote 201.

[9] Hariulfus, Chron. Centulense II, 6. – See above, Paragraph III.2.2.

[10] See above, Paragraph III.3.2. – Pitesa 2012, 123-125, nr. 65, with literature.

[11] Agazzi 2002, 46, footnote 12. – Ibsen 2005, 154.

(probably a *notarius*, notary) offered a *pergula* to the church of S. Maria in Cosmedin, Rome, on the occasion of the works ordered by pope Hadrian I (772-795)[12] (**fig. IV.1**). In this case, the pope was the commissioner – as the chancel screen was included in the project of restoration and renewal of the church – but it was Gregorius who paid for its making, by means of a personal gift. The notary, moreover, may have been the same person who provided the church of S. Martina with another *pergula* (his name being carved again on the remains of the beam), and may correspond to the individual named as *secundicerius* in the *Liber Pontificalis*[13].

The same system – i.e. a clergyman commissioning an object, and someone else partially or entirely paying for its making – characterised not only the manufacturing of liturgical stone furnishings or more expensive undertakings as the restoration of a building, but can be found also in other contexts. The so-called '*coffret de Teuderic*' from Saint-Maurice-d'Agaune[14] (Canton Valais, Switzerland, first half of the 8th century) is a case in point. The precious shrine bears an inscription which mentions all the individuals involved in its production: the priest Teuderic orders it to be done in honour of St. Maurice; Nordoalaus and Rihlindis, husband and wife, donate it (i.e. pay for it), and request the craftsmen Undiho and Ello to make it[15].

Chronicles and accounts tended to emphasize the commissioners who contributed, with their own money, to the payment of the works in a church: in the *Liber Pontificalis*, for example, the popes' building and restoration undertakings and donations of precious artefacts to churches in and outside Rome are carefully listed, but the characters who actually provided for their payment are only very rarely mentioned. The compilers, however, made sure to record the occasions when pontiffs disbursed their own private funds: in the Basilica Salvatoris, Leo III

> provided from his own money five of the basilica's crowns with their dolphins, thirty-five canisters, eight bowls[16].

As attested by Andreas Agnellus, the same pope sent from Rome to Ravenna not only skilful craftsmen, but also some money to restore the church of S. Apollinare:

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[12] Lib. Pont. 97, LXXII. On the inscription: Gray 1948, 54-55, nr. 14. – Melucco Vaccaro 1974, 152-153, nr. 106.

[13] Lib. Pont. 97, LXXVII. – De Rubeis / Bordi 2001, 485-486, nr. IV.2.6a-i. – Aimone 2019, 46, with literature.

[14] Quast 2012a, 122, nr. 1.11.

[15] Teuderigus presbiter in honure s(an)c(t)i Mauricii fieri iussit amen Nordoalaus et Rihlindis ordenarunt fabrigare Undiho et Ello. – Leclercq-Marx 2001, 2-3. – Quast 2012, 122, n. 1.11. – Antille 2014, 39. On the donations of liturgical implements from important political and ecclesiastical figures see Schulze-Dörrlamm 2009, esp. the thorough collection of sources at the end of the text.

[16] Lib. Pont. 98, XCV. – See above, Paragraph III.2.3.

> [He] sent his chamberlain Crisafus and other stonemasons [...]; along with his own expenditure, all the suburban cities came [and contributed, bringing] all the beams and roof-tile supports and all fir beams [...][17].

Gift giving to the Church had reached truly immense proportions between the late 5th and the mid 8th century. It has been estimated that probably more than 30% of the Frankish kingdom was given to ecclesiastical institutions, and, even if the precise extent of donations is harder to evaluate, the Church in Italy, Spain, and the Anglo-Saxon kingdoms (after 597) also acquired vast amounts of lands. From a social, economic, religious viewpoint, this «marked a major break with the Classical World»[18] and sparked the growth of an actual ritual economy[19]. And yet, the role of the Church as an agent of economic change has been largely overlooked in the scholarship on Early Medieval economic history: as Ian Wood provocatively remarked, «if the Early Middle Ages were not being studied from within a European / Christian tradition, would this build-up of wealth, power and influence in the hands of clerics not look comparable to what is envisaged in other priest-dominated world societies? Comparison with the Maya, Khmer, Aztecs or Incas might not come amiss. The extent to which the Church came to dominate the society and economy of western Europe between 300 and 800 ought to be recognized as truly astonishing. In downplaying the institution of the Church, as opposed to religion, we fail to recognize the elephant in the sitting room»[20]. Gift giving, from both endowments and community's taxes, «was at the heart of this new economic regime»[21], because both common people and noblemen wanted to earn salvation, and because «almost everyone wished to have a favourable relationship with God and his saints»[22]. Even if new building (including church architectural decoration) was of course only one of the many ways in which the Church spent the acquired capital (other ways being, for instance, the maintenance of clergy and the poor, the lighting of churches, and so forth), it still represented an important share of the overall investment. Secular founders or re-founders of religious establishments, and donors of new stone furnishings, wished «fame in

[17] Agnellus, Lib. pont. eccl. Rav. 168. Translation: Delyiannis 2004, 296-297 and Davis 2007, 224, footnote 191, with minor changes.

[18] Wood 2013, 37.

[19] Hodges 2012, 15-18, 67-90 and *passim*.

[20] Wood 2007, 237.

[21] Hodges 2012, 67-68.

[22] Wood 2013, 62.

this world, salvation in the next», were performing an act of penance or thanksgiving, hoped for God's intercession, or, additionally, wanted a to be buried in the new building, a *memoria* where «commemoration played a critical role […] because of the need for continuing prayers, in perpetuum, for the salvation of the benefactors' souls»[23]. In general, as it was observed about the High Middle Ages (but the statement might well apply to the Early Middle Ages), «churches were deemed to be necessary, so they had to be built. They were almost literally the power stations which supplied the spiritual energy on which the welfare of society ultimately depended. The proper analogy is with modern wars: if resources do not exist, they have to be created»[24].

[23] Ousterhout 2019, 83-84.

[24] Kidson 2004, 704.

Chapter IV.2.
Supplying materials

> However the craft was organised in any given situation, we must believe that it *was* organised[25].

Part II. Of this work concerned the Early Medieval provisioning of stone from the viewpoint of the materials themselves: provenance, sources, means of transport, and so forth. The procurement of stone needed of course to be carefully planned, even when the quantities of lithic materials were limited, and even when they originated from nearby the building site. In this Chapter, therefore, the subject will be approached from this perspective, inquiring the organisational aspects related to the supply of stone and the actors involved. Previous research on this matter is rather scarce: a number of scholars speculated about a quite large range of hypotheses, yet without arguing for any of them in particular, and even doubting that, behind the procurement of stone, there was any kind of organisation at all. Ettore Napione, for instance, stated that it would be necessary «to inquire the mechanisms underlying the stone supply and to identify the persons responsible to meet the request for stone – *if* there actually was anyone responsible –. Also, we need to figure out whether there was a trade in stone – possibly, occasional – or, on the contrary, the patrons *and* / *or* the artisans knew how and where to procure materials, and organised autonomously the extraction activities»[26]. In other words, the hypothesised scenarios include various possibilities and their opposite – mirroring, in a way, the scholarly hypotheses about production processes seen in Part III[27] – : there might, *or might not*, have been individuals responsible for the procurement of stone; a trade in stone was, *or was not*, existing; the patrons *or* the craftsmen indifferently could have cared for the supply of stone. This sentence was of course referred to the specific case discussed in Napione's paper, but it

[25] Ashby 2015, 23.

[26] Napione 2002, 333. Original in Italian. – Similar considerations were expressed in Napione 2001, 114-115, though in this case the author stated that it is unlikely that the stone provisioning was *always* occasional or haphazard.

[27] See Chapter III.1.

actually epitomises a few general questions of research on Early Medieval sculpture and stone items. Some of these have been addressed in Part II., and we shall now focus on the others.

As shall be seen, the evidence collected in this Chapter suggests that the process of acquisition of lithic materials was far from being a disorganised or haphazard operation, could be quite complex, and could involve several individuals. Also, the supply of stone – and, in general, of building materials – was the patrons' responsibility rather than a task for sculptors and masons, both in the case of freshly extracted lithic materials, and in the case of *spolia* from ancient buildings: each option, though, implied different procedures. These two possibilities must therefore be analysed separately.

IV.2.1. **Newly quarried stone**

That the procurement of stone for construction and architectural decoration was generally a task of the patrons, and not of the artisans, is clearly attested by the written sources. As usual, their number is limited but, in the Early Medieval accounts containing references to this specific step of construction activities, neither master masons and master sculptors, nor other professionals on the building site, seem ever to be mentioned as the persons in charge for the supply of lithic materials.

The previous Chapter of this Part, and Part III., contained already references to a passage of Andreas Agnellus on the restoration of the roofs of S. Apollinare in Ravenna, where it is clear that the provisioning of materials is organised and supervised from the patron (the pope) through his attendant Crisafus, who is on site and is helped by bishop Martin[28].

In the *Liber Pontificalis ecclesiae Ravennatis* there is yet another testimony on the patrons' responsibility in procuring the materials, one quite precise in describing the process, although referred to an earlier period. In the time of Maximianus (546-557)

> [...] the bishop summoned the *archiergatus*, that is, the master of the work, and asked him why he had not finished the building of the said church [i.e. St. Stephen at Ravenna]. But the *archiergatus* made it known, saying: «Because you, O our lord, had sailed to the region of Constantinople, cement and bricks were lacking, nor do we have enough stones to have been able to work». Then, at the order of the bishop, in one night so much building material was brought, and the suppliers prepared plaster and tiles, rocks and bricks, stones and wood, columns and stone slabs, gravel and sand, in one night, as I said, that they would hardly be able to fashion in eleven months[29].

[28] See above.

[29] Agnellus, Lib. pont. eccl. Rav. 73. Translation: Delyiannis 2004, 188-189.

(Doubtable) logistic miracles apart, the text is rather accurate and realistic in listing the construction materials: the passage seems to imply that, in absence of the patron, not even the building site foreman is allowed, or can manage the resources, to procure them – not even when the continuation of the works is at stake. It is the bishop who administrates the funds and has direct contact with his «providers».

As seen above, for the construction of his church at Aachen[30], Charlemagne summoned artisans from distant regions,

> set above them an abbot who was the most skilled of all in completing such work [...][31],

and delegated to his prefect the administration of the funds[32]. Thus, Liutfrid was responsible to feed and clothe the 'foreign' craftsmen, as well as to

> supply them diligently with everything that pertained to that construction project[33].

Again, it was *not* the abbot who supervised the building site and coordinated the artisans to be in charge with the task of procuring the materials, but the prefect, who was the direct 'emanation' of the patron and, according to Günther Binding's terminology, 'administrative manager'[34]. The words «everything that pertained to that construction project» refer no doubt to the tools and the materials needed by the artisans; Notker Balbulus is not as thoughtful as Andreas Agnellus to provide us with an exhaustive list, but, given the nature of the project, it is quite obvious that stone was among the necessary items.

The abovementioned *Memoratorium de mercedibus commacinorum* is another document that provides hints – albeit indirect ones – for the fact that, in the Early Middle Ages, stone supply was normally a concern of the patrons. Probably written during the reign of Liutprand (712-744), this price list mentions the amount of money owed for several items, including wooden *cancella*, marble slabs, marble small columns and other elements used in different contexts, including

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[30] Chapter III.2.

[31] Notker Balbulus, Gesta Karoli Magni I, 28. Translation: Noble 2009, 83, with minor changes (cismarinus: *lying on this side of the sea*, opposite to transmarinus, *lying on the other side of the sea; across the sea*).

[32] See the previous Chapter.

[33] Notker Balbulus, Gesta Karoli Magni I, 31. Translation: Noble 2009, 85.

[34] Binding 1999, 17.

churches' stone furnishings[35]. It has been observed that the cost of each item refers to the labour only, and does not include the materials[36]. Hence the *marmorarii*, *abietarii*, and the other professionals belonging to the *Commacini* 'corporation' expected their commissioners to procure stone, wood, and so forth.

Architects or master builders – instead of the patrons – procuring materials for the construction sites are only attested starting from the late 10th and 11th centuries[37].

As seen in Part II., a substantial part of the total expenditure for a building or sculptural project often consisted in freight costs for stone. The survey on the provenance of stone has indeed shown that the materials used for architectural sculpture were procured within a very short distance: when ancient stone items to be reemployed were not available nearby, local outcrops and quarries were the preferred option. Since long before the Early Middle Ages, local resources played an important role, especially as regards construction materials for large projects: in the Roman West too, the distribution of quarries was closely connected to the patterns of urbanisation[38]. Foundations of new cities are not common in the Early Middle Ages, but there is at least one enlightening example which shows that, in choosing the right spot, the patrons still took into great account the availability of stone. In the 9th century, pope Leo IV (847-855) decided to build a fortified city, circa 20 km away from the Roman *Centumcellae* (nowadays Civitavecchia, Lazio, Italy), to give its inhabitants shelter from the raids of the Saracens. The new city, Leopolis-Cencelle, was consecrated by the pope on 15 August 854:

> Everything was built and now resplendent, just as the praiseworthy pope designed it with his hands in his dreams. […] He gave thanks to the almighty Lord, who had seen fit to show him such a place where there was an abundant supply of water, and who had even bestowed stones and sand so that the newly constructed buildings could achieve greater size without labour by the workmen[39].

The archaeological excavations in the site have brought to light entire districts of 9th century Cencelle, with their houses, workshops, streets, graveyards and an episcopal complex, where about

[35] Mem. Mercedibus Commacinorum: see Chapters I.1, and Paragraphs III.2.2 and III.2.7.

[36] Lomartire 2009, 179, who also noted that the items in the list are clearly described as being manufactured *ex novo*, so they do not refer to the installation of *spolia* in a new building.

[37] Ward-Perkins 1984, 206. – Stalley 1999, 108. – Stasolla 2010, 83-84.

[38] Russell 2013, 84-86.

[39] Lib. Pont. 105, CII. Translation: Davis 1995, 154-155.

a hundred marble fragments of stone furnishings have been found, made by a workshop probably from Rome or from Northern Latium[40] (**fig. IV.2**). While the marble employed for the sculptures is surely reused (though its exact provenance is not yet established[41]), the petrographic analyses have proven that the lithic materials employed for the buildings of Leopolis-Cencelle originated indeed from the immediate surroundings, and traces of extraction have also been detected in the neighbouring quarries[42].

The city of Cencelle is a good introduction for another issue which attracted little attention, at least as for the Early Medieval West: namely, the propriety and administration of the quarries and stone extraction points.

As seen in Part II., the rights to exploit these valuable resources in the Roman period were very precisely regulated. During the High and Late Middle Ages, evidence from very different contexts and chronologies also shows that the quarries were generally controlled by secular and religious elites. For example, in the Viking age (ca. 800-1030) Adger, in Southern Norway, the extraction points of soapstone for producing vessels were administrated from the most powerful actors of the region; these individuals owned the rights to exploit the resources and had specialised craftsmen who for them directly at the quarries – as heaps of waste, tools and unfinished and broken vessels found by the archaeologists have proven[43]. Throughout the Viking period and the Middle Ages, the same organisational pattern, with elites controlling / owning the lithic resources – earlier, the landowners, and later, the ecclesiastical institutions and the king – is also to be found in other areas of Norway; the quarries produced not only vessels but also further kinds of stone products essential to the everyday-life, such as quern-stones, bakestones and millstones[44]. Contrary to these last, building blocks, stone crosses, and gravestones, which were manufactured from about the 12th century onwards, were not traded and broadly distributed in the market but tended to stay – as it was also common outside Scandinavia – close to the quarries of origin[45]. The Church had started to

[40] In general, see: Leopoli-Cencelle 1996. – Ermini Pani 2007. – Stasolla 2012. – Moppi 2013-2014. – Ermini Pani / Somma / Stasolla 2014.

[41] The reused marble could possibly originate from more than one source: Roman buildings and villas existed in the immediate surroundings of Cencelle. Another source could have been the city of Civitavecchia or, even, some materials could have been transported, by sea, from Ostia. – Oral communication by Francesca Romana Stasolla, to whom I am grateful for this useful information.

[42] Lorusso et al. 1996.

[43] Schou 2015, 209 and 212-213. – On the elites' control of quarries and metal ores in the North, see also Ashby 2015, 22.

[44] Baug 2015. – As the Medieval kings donated lands to the Church, the quern-stones and bakestones were probably produced by the tenants as a tribute for the new landowners. Yet it is also possible that the landowners hired skilled workforce to produce these goods (see esp. 241-242).

[45] Baug 2015, 244 and 246.

acquire a vast extent of lands, and their 'attached' quarries, when landowners begun to donate them after having been converted to the new religion[46].

Of course, quarries were among monasteries' and ecclesiastical institutions' possessions in other areas of Europe too. For instance, there is abundant evidence for Medieval England, where the Church very often acquired the quarries, or the right to exploit them, directly from the king: from the 13th century, the records multiply, in parallel with the growth in the demand for stone products, but the first detailed documents date back to just before the Norman Conquest in 1066[47]. In 1061, as a new church was being built, earl Waltheof gave his property at Barnack, which included «an excellent quarry», to Croyland / Crowland abbey; the abbey, however, was already granted quarrying rights from this source from king Eadred, in the mid 10th century. At about the same time as Waltheof's donation, king Edward the Confessor (1042-1066) confirmed an arrangement between Ramsey abbey and the monastery at Peterborough. The first obtained from the second a quarry in Lutton and the right to extract stone for ashlar and sculpture at Barnack, and walling stone (perhaps rubble) at Peterborough itself[48]. As just another example, from Germany, Laach abbey in the Eifel region administrated directly its own quarries in Niedermendig, Kruft, and Godelscheid, until the 13th century; lay brothers were employed as supervisors or possibly even as skilled labourers[49]. These quarries had procured the building materials for the abbey – founded in 1093[50] – and, during the 11th and 12th centuries, for a number of churches along the Rhine and beyond[51]; however, the area was particularly renowned for the manufacturing of quern-stones and millstones, used locally and also exported in farther European areas[52].

Further south in Europe, in the 11th-13th centuries, the rights on the extraction of stone or the propriety of quarries were also very often a prerogative of the secular and ecclesiastical elites. Whenever possible, the patrons of Romanesque and Gothic churches and the commissioners of castles, fortifications, and so forth, procured stone from their own possessions, for, as Peter Kidson

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[46] Baug 2015.

[47] Parsons 1991, 8-9 and passim.

[48] Parsons 1991, 8, with literature.

[49] Pohl 2015. After the 13th century, the abbey probably acted as a simple landowner that only rented out its quarries to private individuals, who made profit from them and paid with a part of the produce or with money.

[50] Pohl 2015, 253-255. For the construction of the abbey the closest quarries, in the vicinity of the lake Laach, were the most exploited.

[51] On this point see above, Paragraph II.2.3.

[52] Pohl 2015. – This trade had begun far before the 11th century: see above, Paragraph II.2.2. On the distribution of the so-called Mayen lava quern-stones from the Eifel region in the Early Middle Ages (typically, 45-50 cm in diameter, almost always exported in a partially-finished form), see Parkhouse 1997. – See also: Hodges 1982, 122-124. – Hodges 2012, 28-29, 60-63, 107-108.

noted, «it suited the big landholders who commissioned the churches to exploit the resources of their own estates»[53].

Thus, earlier and later evidence shows that there is no reason to think that quarrying in the 7th-9th centuries could be a haphazard activity, even if in many occasions it was a sporadic one, limited to relatively small quantities of lithic material[54]. In other words, a scenario in which anyone could freely help himself to stone, taken from unattended extraction points, appears quite unlikely.

Early Medieval written evidence on the actors who controlled the quarries is extremely seldom, but a few documents suggest that – just as in later periods – the quarries pertained to somebody's land, being usually owned or administrated by the political elites and the Church, and they could be among the possessions of monasteries and churches, acquired through donations and bequests. In the European areas that were already christianised during Late Antiquity, the process of acquisition of holdings had begun back then, favoured by both the growing problems in administrating large imperials complexes that no longer served their original purposes, and the growing number of wealthy believers who donated their possessions to the local ecclesiastical authorities[55]. At a later date, the will of Goibert (year 838) is an example of this well-established practice, representing the typical case of an aristocrat who leaves his properties to an ecclesiastical institution. Goibert was a rich landowner from the region of Morinie, in Northern Gaul (nowadays Hauts-de-France). In the year 828, Goibert had placed his son Guntbert in the abbey of Saint-Bertin / Sithiu, and had donated lands to the church and *cella* of Steneland – in the diocese of Thérouanne, titled to the Holy Saviour and founded by his mother – under the proviso that his son would have been the *custos* of them[56]. In 838, in his testament, he distributed further proprieties among family members, Guntbert, the abbey of Sithiu, and he also bequeathed to Steneland a *petraria*:

> To [the church of the] Holy Saviour [I leave] that quarry which lies near *Scamnis*[57].

These quarries are to be found in the proximity of Escames / Condette, close to Boulogne-sur-Mer; with the will of 838, they were added to the estates already belonging to Steneland, and

[53] Kidson 2004, 699.

[54] On this point, see Part II.

[55] In general, see Baldini 2008, 221-223, with literature.

[56] Coolen 1958. – Huyghebaert 1959. – Berkhofer 2004, 24-26. – Mériaux 2006, 142-148 and 329. The precise location of the church is debated.

[57] Folcwinus, Gesta abbatum S. Bertini, 634. Translation: M. Beghelli.

might have favoured the construction of a small stone church[58]. Guntbert was confirmed as the administrator of all possessions of Steneland – including, therefore, the quarry –, a task that he could perform from the abbey[59].

Another record concerns northern Italy. An inventory dating to 905-906, but referring to a previous period, attests that, already in the 8th century, to the possessions of the monastery of S. Giulia at Brescia pertained

> [...] nine serfs, who only work the stone[60].

These stonecutters were located at the estate of *Summolaco*, at the northernmost end of Garda Lake. In the area – between the nowadays towns of Arco and Riva del Garda – there are actually a number of sandstone quarries already exploited, as many surviving sculptures show, in the Early Middle Ages[61] (**fig. IV.3**).

The patchy evidence at our disposal hardly allows to tell anything precise on the categories of workers who operated in the stone extraction points, or how they were organised. Nevertheless, some sparse hints suggest that different options were possible. For 11th-13 centuries Laach abbey, Meinrad Pohl assumed that the workforce could be composed of serfs or, as said, also of skilled lay brothers[62]. Monks could work as skilled craftsmen in the Early Middle Ages, for instance as goldsmiths – at times even being allowed to sell their products outside the cloister[63] – and it seems that in some cases the brothers took part to the construction or restoration of churches and monasteries, as masons or sculptors: in these cases, it is not impossible that some of the monks possessed the skills to extract the stone needed for the project, or at least to supervise the work of the stonecutters at the quarry, as hypothesised by Pohl for Laach abbey at a later period. Basing on the study of the traces of extraction in the abovementioned quarries at Bois de Lens, near Nîmes, Jean-Claude Bessac argued that during the Early Middle Ages the quarrying techniques were proper of non-specialised labour force[64], thus being possibly consistent with the work of non-specialised

[58] Huyghebaert 1959, 55, footnote 3. – Nègre 1991, 1188-1189, no. 22194.

[59] Coolen 1958, 219. – Mériaux 2006, 329.

[60] Pasquali 1979, 61.

[61] Colecchia 2001-2002, 7-8. – Ibsen 2013. – One of the largest groups of sculptures made in stone from this area is to be found at Tenno, S. Lorenzo (early 9th century): Vedovetto 2011.

[62] Pohl 2015, 257 and *passim*.

[63] Beghelli / De Marchi 2017, with literature.

[64] See Paragraph II.3.2.

serfs or farmers from someone's estate. Serfs are also mentioned in the testament of Goibert, though not specifically connected to the quarries. On the contrary, the nine serfs operating in S. Giulia's *Summolaco* during the 8th century seem to have been skilled labourers, as the document specifies that they *only* worked stone. In general, it seems unlikely that the sculptors themselves could procure the stone blocks, for, as Peter Rockwell observed, throughout history they rarely have proven to master quarrying techniques[65]. Also, in the Early Middle Ages sculptors and builders had a high degree of mobility[66], and residents were therefore more qualified to cut the stone needed for the sculptural project. Even if full-time stonecutters must have been rare – given the general sporadic character of extraction activities[67] – the locals, like the nine serfs of S. Giulia, had arguably a much better knowledge of the lithic resources of their area, and the of the best ways to exploit them, than the 'foreign' artisans. One can imagine that, on occasions, the mobile sculptors might have visited the quarries and outcrops of the area in order to get an idea of the stone types available locally, but then again, the written record is silent on this point.

Altogether, the sources are clearly too scanty to build a detailed picture of propriety and management of quarries, beyond the general notion that they appear to have pertained – as before and after the Early Middle Ages – to the secular and religious elites, and that the stonecutters could be more or less skilled and might belong to diverse groups: serfs, monks, but probably also workers normally devoted to different tasks, like farmers; these last may have acted as stonecutter occasionally, and especially when the type of item to be extracted did not imply difficult techniques or did not require specific competences and elaborate organisation of labour[68]. Precisely the silence of the sources, however, might actually be telling. Written in 1086 by order of William the Conqueror, the *Domesday Book* was the result of a survey conducted in England and parts of Wales, with the aim of listing all the men's lands, holdings, and possessions, and thus determine what taxes had to be paid to the Crown. In the whole manuscript, only seven quarries are mentioned, two of them producing millstones. This is of course unrealistic: even some major quarries surely functioning before the Norman Conquest are not cited. David Parsons has argued that this could depend on a combination of different reasons: on the one hand, the limited amounts of stone used in the Anglo-Saxon period – as opposed to the subsequent period – meant few running quarries[69], thus

[65] Rockwell 1993, 89, with literature.

[66] See Part III.

[67] See Part II.

[68] On the 'revival' of division of labour in the High and Late Middle Ages see Part II., esp. Chapter II.6.

[69] On this point for the rest of Western Europe, see Paragraph II.3.2.

turning them into a category that was not worth recording; on the other hand, it is possible that quarries were originally a royal prerogative, as well as forests, and, as such, under-recorded (or not needing recording at all) in the *Domesday Book*. But above all, the scarcity of references seems to reflect the fact that «the existing quarries may have been largely in the hands of those actually using the stone (in practice the major monasteries) and independent private ownership and commercial exploitation may not have been developed to a sufficient extent to produce any revenue worth recording. It was not until 1239 that a Council held in London decided that tithe should be paid on quarries, which could imply that they had not previously been regarded as revenue-producing enterprises»[70]. Such an explanation would appear to be a most convincing one for the rest of Western Europe too, where, as seen above, references to quarries' propriety and administration are likewise very scanty.

In sum, the available evidence indicates that in the 7th-9th century the patrons – or their deputy who directly administrated the money – were the ones responsible for procuring stone for buildings and their architectural sculpture, which of course was a spur to use the resources from their own estates, and which also explains the dearth of references to quarries' management in the written record. Despite their limited number, the sources suggest that the quarries were controlled by landowners, aristocrats, or ecclesiastical institutions who owned the lands where they lay, and therefore that stone was *not* at anyone's disposal. The same, as shall be seen in the next Paragraph, is true for reused stone from ancient monuments.

IV.2.2. **Stone from ancient monuments: precious material, official permissions (and specialised enterprises?)**

> A visitor today to an area of ruined classical buildings, such as the Forum in Rome, might legitimately assume that, once untended, the unused public buildings were ripped apart in anarchic fashion by whoever fancied doing so. The evidence is, I think, sufficient to show that this was not the case in Late Antiquity or the Early Middle Ages, since, even after any conservationist ideals had died, ruinous public buildings remained, as a source of building material, a government asset not to be squandered[71].

[70] Parsons 1991, 8-9 (for some examples of private individuals owing quarries from the 13th century onwards: 25). – In general, on the development of the stone industry and of the market for stone products in the High and Late Middle Ages see Paragraph II.3.2.

[71] Ward-Perkins 1984, 203.

The patrons, of course, took care of the procurement of stone for their architectural and sculptural projects not only when it was newly quarried, but also in the very common circumstance in which it was taken from earlier buildings. However, getting stone from a natural source away from inhabited areas, or from an old monument in the middle of a urban centre, are very different operations, which implied different procedures, both from a practical and from an administrative viewpoint. As seen in Chapter II.4, the prime motivation for reusing stone – besides the possibility to save money and, more rarely, ideological grounds – was the beauty and the value of the precious marbles employed in the earlier buildings. Ancient monuments could be a convenient source of construction materials, but above all they very often offered a range of diverse decorative stones, that were perfect to dress walls and floors of churches, or to carve their architectural decoration and liturgical furnishings. In the overwhelming majority of cases, the Early Medieval patrons' choice for reused material has left traces only in the archaeological record, namely in the stone items themselves[72]. And in the overwhelming majority of cases, the *spolia* to be reemployed came from the immediate surroundings of the building site. Few written sources, though, relate of kings and emperors who, as patrons for church building, obtained precious marbles from afar: as seen above[73], Liutprand got them from

> [...] Rome, the capital of the faith [...][74],

and Charlemagne

> managed to have [columns and marble for the Palatine Chapel] brought from Rome and Ravenna[75].

Some time earlier, as a 'major sponsor' of St. Riquier – to which he donated a substantial amount of money[76] – Charles had organised the sending of «strong wagons», heading

> [...] Rome, to bring back from that city marble and columns for the decoration of this church[77].

[72] See Part II.

[73] Paragraph II.1.2.

[74] In ecclesia beati Anastasii. See above, Paragraph II.1.2. Translation: Everett 2003, 248.

[75] Einhard, Vita Karoli 26. See above, Paragraph II.1.2. Translation: Noble 2009, 42-43.

[76] See Chapters III.2 and IV.1.

For a long while, the reemploy of stone from ancient buildings from the Post-Antique period onwards has been interpreted as a sign of decline in civilisation[78]. Even the scholarly works that strongly disagreed with this view, however, can sometimes give the impression that the reuse of *spolia* in the Early Middle Ages – as opposed to the previous and the subsequent centuries – was disorganised and chaotic. Thus the *spolia* – as well as the stone from quarries, as we have seen in the previous Paragraph – have been at times presented as a commodity which was free for 'plunderers' to take, differently from Late Antiquity or the High and Late Middle Ages, periods which appear to be treated with a higher degree of benevolence[79]. In 1999, for instance, in an otherwise thorough study on the practices of reuse, Arnold Esch reserved to the Early Middle Ages some rather unflattering words, stating that the accurate and «targeted reuse of the Romanesque period is to be distinguished from the reemploy in the Early Middle Ages, when people only lumped together antique pieces of stone, regardless of harmony or uniformity, in the same way of a child who plays with toy bricks»; this would have occurred because the Early Middle Ages were «a period of penury and poor organisation of work»[80].

A number of studies have addressed the Roman and Late Antique legislation that regulated the spoliation of earlier buildings, whereas no comparable efforts have been done for analysing the administrative framework of the use of *spolia* in the Early Middle Ages. Perhaps, this lack of literature is one of the factors which explains the persistent idea that the reuse of *spolia* in this period was always an uncontrolled or haphazard activity.

Following precedents going back to the reign of Vespasian, throughout the 4th-6th centuries a profusion of laws and edicts had been issued to regulate the use of stone taken from earlier structures – public monuments, cemeteries, abandoned private houses, and so forth, in both urban and rural areas[81]. These regulations thus dealt with different contexts – as the circumstances

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[77] Hariulfus, Chron. Centulense II, 6. See above, Paragraph II.1.2. Translation: M. Beghelli.

[78] See Chapter II.4.

[79] Constantine or Theodoric, for instance, are often quoted as examples of personalities concerned for the antiquities: see above, Paragraph II.4.2. – On this point see also Greenhalgh 2008, 47-50, with literature. – Illustrious examples apart, however, in some occasions the reuse of *spolia* during Late Antiquity has also been presented as a haphazard activity; as noted by Riccardo Santangeli Valenzani in 2007, «such operations cannot be considered merely as sporadic activities that happened without any regulation, as was widely assumed to have been the case until a few years ago» (Santangeli Valenzani 2007, 442).

[80] Esch 1999, 100, with literature. Original text in Italian.

[81] In general, see: Santangeli Valenzani 2007. – Baldini 2008. – Marsili 2016a. – Legislation on a given matter does not necessarily mean that everyone followed the rule, and infringements of the law are also documented. During Late Antiquity, the upper-classes (and especially the imperials officials) were the most prone to abuses, often with the intention of decorating their private properties with statues and precious marbles taken from public buildings. Isabella Baldini listed some cases in point: Ammianus Marcellinus, for instance, «condemned the behaviour of members of the imperial court 'sated by the spoils of temples'» (Baldini 2008, 220); in 458,

changed in each area and period –, but seem to have in common a few general principles. Restoration, rather than new building, was encouraged, and precise rules determined which types of monuments had to be protected and which ones could be used as a source of materials to be recycled[82]. One of the most important aims was to preserve the urban *decus* (decorum), especially when the stone was procured from public monuments, and prevent unplanned and casual plunder. Also, the granting of permission to take *spolia* for use in private contexts was generally an imperial prerogative, and from the 5th century onwards the emperors seem to have ensured the Christian clergy a rather easy access to public buildings: archaeological and written evidence suggest that, in many cases, the construction of ecclesiastical buildings was directly related to demolition campaigns of earlier monuments, expressly organised to procure various materials and decorative stone[83].

Judging from the much more limited and scattered documentation, it seems that these general principles survived in the Early Middle Ages. As for the concern for the *decus*, we mentioned above the 8th-9th centuries legislations which encouraged the restoration of buildings[84]: one might add that the widespread use of *spolia* in architecture and for architectural sculpture did not only depend on the economic benefit, but was probably also related to the intention of keeping the urban areas safe, orderly and 'decorous' through the removal of dangerous unstable buildings[85]. As for the permissions to get materials from ancient monuments, a number of records suggest that they were still necessary, and also that they were still depending on the most prominent political authority of each area. Thus, in the same way as their Late Antique counterparts, when in need of *spolia* for architectural and sculptural projects, the Early Medieval patrons had to turn to someone for authorisation. Bryan Ward-Perkins has collected some cases concerning Italy, arguing that «public control over all public buildings, including those no longer used, survived the fall of the

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«explicit censure is directed against the construction of private buildings with *spolia* taken from public places [of Constantinople], a practice made possible by lax magistrates. [...] It is clear that, at that time, the appropriation of *spolia* by the social elites (which also included the public magistrates) was a widespread phenomenon» (Baldini 2008, 221-222). Other bans concerned the transfer of materials from minor to bigger cities: despite in 321 Constantine had authorised a magistrate to carry marbles from one city to another, as long as the public *decus* was maintained, the same law forbade the transport from one urban residence to a country house, even if owned by the same person (Baldini 2008, 220-221); in 395, however, an imperial act was delivered to the prefect of Italy, «specifically criticising the behaviour of magistrates asking to remove statues, columns and marbles from lesser towns in order to embellish more important cities» (Baldini 2008, 221).

[82] For instance, Roman temples were originally protected, but later on their destruction was encouraged: Baldini 2008, 220-221.

[83] Baldini 2008, 219-224. Marsili 2016a, 152-153. Both with examples and literature.

[84] Paragraph II.3.2.

[85] Paragraph II.4.1 and Chapter II.6.

Ostrogothic kingdom»[86]. Shortly before 808, abbot Josue of S. Vincenzo al Volturno had to ask permission to Louis the Pious to take columns and marble from a temple in the neighbouring region of Capua[87]:

> The venerable father Josue and all the brothers, showing a pleading attitude, strenuously ask [Louis the Pious] to concede them the very ancient temple in the region of Capua, that was built in antiquity with large columns and diverse stones in the location called Edes Imperatoris or Cripte. [...] Gladly agreeing, [Louis] accepted the request, and [also] granted them everything which was useful or necessary[88].

As for the competent authority to decide on the use or reuse of ancient public buildings, a most interesting example concerns Rome, where, thanks to the *Liber Pontificalis*, we can follow some changes over time[89]. In the 7th century, the pope was still bound to ask the Byzantine emperor for using the monuments in the city. So, when Boniface IV (608-615) was planning to turn the Pantheon into the church of S. Maria ad Martyres,

> He asked the emperor Phocas for the temple called the Pantheon, and in it he made the church of the ever-virgin St Mary and all martyrs; in this church the emperor presented many gifts[90].

Later on, Heraclius gave permission to pope Honorius I (625-638) to cover St. Peter with bronze roof tiles taken from the temple «called that of Rome», and the rights of the Byzantine emperors on the Roman monuments are documented again in the 7th century, when Constans II visited the city in 664 and systematically «dismantled all the city's bronze decorations»[91]. In the 8th century, however, the situation appears quite different. A number of references from the *Liber Pontificalis* attest that the popes must no longer ask permission to demolish ancient monuments, to use *spolia* from them or to change their function. As the Byzantine political power was weakening and the papal power was strengthening, control over public buildings – both the ruinous ones and

[86] Ward-Perkins 1984, 204.

[87] See Ward-Perkins 1984, 206.

[88] Chron. Vulturnense, 220-221. Translation: M. Beghelli.

[89] Ward-Perkins 1984, 204-205.

[90] Lib. Pont. 69, II. Translation: Davis 1989, 62. – This is the first known example of a Roman temple transformed into a church.

[91] Lib. Pont. 72, II and Lib. Pont. 78, III: see Ward-Perkins 1984, 204.

the functioning ones, like city walls and aqueducts – had gradually passed into papal hands[92]. And this seemed to apply outside Rome, too. In the first half of the century, it is still the Byzantine exarch who grants six columns, probably Ravennate, to St. Peter's[93], but some decades later, in the year 787, Charlemagne had to ask pope Hadrian I for permission to take marbles from a palace in Ravenna – which, in that period, was claimed as a papal territory[94]. In his letter of reply, the pope wrote:

> We have received gleaming and honey-like letters of your Royal Power through the hand of Duke Arduin. In which it was mentioned that we should assign to you mosaics and marbles with other items situated both on the floor and on the walls in the palace of the city of Ravenna. We, truly, with willing spirit and pure heart with very great love of Your Excellency have given effect [to this] and we have conceded that the mosaics ad marbles and other items must be taken away from that palace [...][95].

However, written documents on the control over ancient buildings as a source of stone to be reused are of course not limited to Early Medieval Italy. For instance, if on the one hand Charlemagne, though he was king, had no authority on the *spolia* from Ravenna, on the other he had it, as by that time an emperor, in southern France: according to the abovementioned account of the construction of a church near Maguelone in the year 812[96],

> he gave order that [columns and marble] were brought from the city of Nîmes[97].

Around the year 820, the abovementioned Ebbo, archbishop of Reims[98], had to ask permission to emperor Louis to use the stone from the ancient walls of the city:

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[92] Ward-Perkins 1984, 205.

[93] These are the six twisted columns mentioned above, a gift from Eutychius to pope Gregory III (731-741): see Paragraph II.1.2.

[94] Ward-Perkins 1984, 205. – On this letter, see above, Paragraph II.1.2.

[95] Codex Carolinus 81, 614-615. Translation: Nelson 2010, 134.

[96] See above, Paragraph II.1.2.

[97] Chronicon Moissiacense, 309. Translation: M. Beghelli. – For the marbles and columns transported to Aachen, the source does not explicitly state whether Charles had to ask permission, or to whom. Similarly, the record about St. Riquier only asserts that Charles gave order to prepare «strong carts» (for both instances see above in this Paragraph). It is possible that in both cases previous arrangements with the pope had to be made.

[98] See Paragraph III.2.3.

> Desiring to repair the church of Notre-Dame [de Reims], which was unstable for its old age [...], archbishop Ebbo asked to emperor Louis [the Pious] to grant him [permission to take stone blocks from] the walls of the city, [to use them] to restore and enlarge that church. And since, back then, this prince was enjoying a [period of] serene peace [...] and he did not fear any raid by the barbarians [...], with great benevolence, for [his] love for God and for his holy Mother, he gave permission [to take the stone from the walls][99].

Some decades later, another Carolingian ruler is again attested as the person who can decide over the use of stone blocks from the city's walls as construction material for a church. This time, the king is himself the patron of the project: before 875, Louis the German constructed a new church in Regensburg; during the removal of the blocks, an unexpected find came to light[100]:

> He built new churches of admirable work in Frankfurt and Regensburg. When, on account of the size of the construction, there were not enough stones, he ordered the walls of the city to be torn down. In cavities in the walls he found the bones of ancient men surrounded with so much gold that he not only decorated the basilica with it but he also had whole books written and covered with the same material almost to the thickness of a finger[101].

In 858, Louis the German had also granted permission to Wenilo, archbishop of Sens, to take stone from the castle of Melun (Île-de-France), whose ancient Roman ramparts were by that time in ruins; the materials were possibly intended to be used in the abbey of St-Colombe at Sens[102]:

> [by order of Louis] Wenilo was allowed to take stones from the walls of the castle of Melun, because [the castle] is under the jurisdiction of the royal authority[103].

[99] Flodoardus Remensis, Hist. Remensis eccl. II, 19. Translation: M. Beghelli.

[100] On this point, see Schulze-Dörrlamm 2009, 198, A33. – It is the collegiate church of Unserer Lieben Frau zur Alten Kapelle, mentioned for the first time (as already finished) in a diploma of Louis the German dating to 875 (Notker Balbulus, Gesta Karoli Magni, page 69, footnote 3, with literature).

[101] Notker Balbulus, Gesta Karoli Magni II, 11. Translation: Noble 2009, 103. – Ancient graves have indeed been found on place: Notker Balbulus, Gesta Karoli Magni, page 69, footnote 4, with literature.

[102] Lot 1908, 46-47, footnote 3. – Melun and Sens are ca. 60 km far from each other, but waterways for the transport of stone were available.

[103] Libellus adv. Wenilonem 10-11. Translation: M. Beghelli.

Altogether, these sources show that, for an Early Medieval patron wishing to carry out a building or sculptural project, getting stone from ancient monuments was certainly not an action which could be carried out in «anarchic fashion»[104]. In early 10th century Italy, an official authorisation from the king was still needed in order to use *spolia* from ancient public buildings, but, from the second half of the century onwards, the first documents appear attesting private individuals who exploited ancient structures and made a profit from them. These public monuments, then, had passed from royal to private hands[105]. In Rome, too, an actual market in reused stone elements is only documented from the 11th century[106]. Interestingly enough, these first records of a private market in *spolia* are roughly contemporary to a conspicuous development of the market for newly made stone products from quarries in different European regions: both processes represent a sign of the growth in the demand for these goods[107].

Back to the Early Medieval patrons, getting a permission to take *spolia* was, of course, only the first step of the process, which required an appropriate organisation[108]. As for the practical aspects related to the removal of ancient stone items, a written record already seen in Part II. can provide a few hints[109]. In the mid 9th century, after having entrusted the construction of the crypt of Auxerre to his wife Adelaide[110], the promoter and patron Conrad I the Elder, count and lay abbot, sent his monks in Southern Gaul to procure *spolia* for the architectural decoration:

> They gathered a large quantity of precious marbles, obtained in part by excavating the ruins of ancient buildings in the surroundings, and in part for money, and once the ships were loaded

[104] See Bryan Ward-Perkins' quote at the beginning of this Paragraph.

[105] Ward-Perkins 1984, 206. The referred records concern, respectively: a request from Berengar I's chancellor, John, who in 913 asked his king for a large part of the theatre of Verona in order to build a hospice and church on the site; and a document from Lucca, which attests that in the second half of the 10th century the *grottae* of the amphitheatre were all in the hands of private individuals, but one, still in royal hands. – Napione 2001, 114, relates a later case of imperial rights on Roman public buildings: in the year 1000, Otto III donated the city theatre of Vicenza to bishop Geronimus, «for the use that most pleases him»; the document implies that the monument was substantially intact. The donation to the Church was renewed in 1084 by Henry IV, but at this time the theatre was already in ruins.

[106] Stasolla 2010, 84: after having gathered a substantial amount of money, Desiderius, abbot of Montecassino (1058-1086), bought columns, capitals, bases, and coloured marbles, which he brought to the monastery mostly on waterways, but also with wagons.

[107] In general, see above, Paragraphs II.2.3 and II.3.2.

[108] On the necessity of planning the acquisition of *spolia*, a fundamental phase in the building project, see Utrero Agudo / Sastre de Diego 2012, 312.

[109] Paragraph II.1.2.

[110] See Paragraph IV.3.3.

> with this much desired cargo, they [succeeded in having] led a double triumph, which was made memorable by the victorious success of a daring undertaking[111] [...].

The source does not explicitly tell which authority had given permission to take the marbles from the ancient monuments: yet, in the light of the documents so far analysed, one must assume that prior arrangements had been made. Also, this expedition, so far away from the monastery, and with more than one vessel to be loaded with stone, required a careful planning: it is therefore highly implausible that the monks faced such a journey only to arrive in the area and randomly wander in search for buildings to torn apart, without knowing exactly where to go or to whom to turn to – not to mention that such an action could have been a cause of possible 'diplomatic incidents' for Conrad and Adelaide. However, if on the one hand the chronicler does not provide us with details on the 'administrative' framework, on the other he cares to describe some practical issues. Namely, Heiric stresses that a part of the cargo had been gained through the work of the brothers (by digging the ruins of ancient monuments), and the other had been paid for. All the other sources about reemployed stone items seen in this Paragraph, and in other parts of this work[112], never mention a payment in exchange for the *spolia*. Generally, devout rulers are presented, who magnanimously consent to give stone from monuments in their jurisdiction for the construction, repair or decoration of a church or monastery. These circumstances alone suggest that the stone was a gift to the holy enterprise, and this seems to be confirmed in the frequent cases in which the reference to the stone items is accompanied by a list of other endowments, such as books or liturgical implements in precious metals[113]. At most, when one of the most prominent political personalities of the period gave permission to take materials for the private residence of another – note: *not* an ecclesiastical building – a gift in return might be expected: for instance, Charlemagne sent some horses to Hadrian I while asking for the marbles and mosaics from Ravenna[114] (although the pope was not completely satisfied with the royal present)[115]. In any case, an actual payment for the stone items – as a commodity to be sold – is never mentioned. This is unsurprising, as a conspicuous body if evidence indicate that an actual, larger market for stone items, both newly quarried and reused, did not start to develop before the 11th century[116]. As for the *spolia*, the available documentation seen

[111] Heiricus, Miracula sancti Germani II, 92. Translation: M. Beghelli.

[112] See especially Paragraph II.1.2.

[113] See above, Part III.

[114] See above.

[115] On this point see Nelson 2010.

[116] See above in this Chapter, Paragraphs II.2.3 and II.3.2 and Chapter II.6.

so far indicates that in different parts of Early Medieval Europe the rights on ancient public monuments pertained to kings, emperors, popes, or anyway to the most important political authority of each territory. Concessions to private individuals – running enterprises which profited from the extraction of *spolia* – are not attested before the late 10th-11th centuries. Similar concessions to exploit quarries are likewise not attested before the 11th-12th centuries[117].

Given this context, it is not very plausible that the monks from Auxerre gave their money to a stone merchant of the kind of those attested in the Late Middle Ages. Even if, however unlikely, this possibility cannot be completely ruled out (for the text does not openly state to whom the monks gave money to), the account provides a hint that points on a possibility which is more consistent with the general economic framework. The Latin text states that the marble was *partim obtentu* after having dug the ruins (*eruderatis aedificiorum ruinis*), and *partim* gathered for money (*pretio congregarunt*). Heiric, thus, does not oppose 'for money' (*pretio*) to 'for free'; rather, the *spolia* obtained for money are opposed to those obtained by the monks after having (themselves) excavated the ruins of ancient buildings. Hence the difference between the two groups of stones is the presence or absence of the monks' workforce: *spolia* presumably for free, donated to the cause, could be obtained provided that the brothers could take it themselves, but in the locations in which they could not work – for possible reasons that shall be seen in a moment – the labour of workers who extracted the *spolia* had to be paid for.

Rather than private merchants, the actors who received the money may have been some specialised craftsmen in dismantling ancient buildings. Albeit direct written evidence for this kind of workshops is currently lacking, several archaeologists have come to the reasonable conclusion that they must have existed. Dismantling an old monument could be very dangerous. Early Medieval texts are rich in accounts of accidents, which appear to have more often involved the unskilled labourers[118]. It has been noted that extracting *spolia* requires team work, specific skills comparable to those necessary to build, and appropriate machinery. These conditions are crucial in order to detach large blocks or load-bearing columns and their capitals without damaging the stone items, or endanger the stability of the structure and the safety of the workers[119]. In the case of

[117] See previous Paragraph.

[118] On accidents in ruinous buildings and within building sites see, in general: Ousterhout 2008, 146. – Stalley 1999, 106. – See also Schlosser 1896, 245, nr. 755: Remiremont abbey, construction of the new church. Schlosser dates the episode at «before 899» and quotes Guinot 1859 [see esp. 84-86], but the chronology of many relevant events related to the abbey is discussed: see Gaillard 2006, 174 and *passim*.

[119] On this point, and on the skills required to masons and sculptors to adapt the *spolia* into the new construction (for instance, to standardise the different heights of columns by cutting them, inserting newly made decorated bases, etc.), see: Rockwell 1993, 193. – Santangeli Valenzani 2007, 442. – Lomartire 2009, 184. –

standing monuments, the removal of the larger blocks and columns implied comparable methods to those used to set up the same elements in a construction site – with lifting machines, scaffoldings, systems of pulleys and ropes, and so forth[120]. However, some other ancient buildings had already collapsed, were in ruins, and were even partially or almost totally covered with ground: in these circumstances, despite the inevitable effort of digging or dragging them, individual pieces may have been easier to collect[121]. This second case seems to be the one of our brothers from Auxerre, in the sites where they «excavated the ruins». In absence of explicit reference, one might hypothesise that, conversely, in other locations there were still standing, large buildings, where the monks were not able to take the *spolia* themselves, and had therefore to pay some experienced craftsmen with their machinery. These specialised enterprises in dismantling ancient monuments may be comparable, for instance, to the ones attested in the Lombard kingdom, such as the abovementioned *magistri commacini* (who, likewise, were solely paid for their labour and did not sell, or provide for, lithic materials)[122]. It has been legitimately conjectured that, as well as their colleagues employed in the building sector, the 'dismantling enterprises' could travel from a location to the next, moving towards the places where their services were needed[123].

Whereas Early Medieval written sources do not directly refer to these craftsmen specialised in the extraction of *spolia*, there is documentary evidence on Late Antique lime-makers, whose activity in dismantling buildings seems implied as a first step of the manufacturing process (limestone and marble representing the most common raw material for lime production). In comparison to other types of construction workers, these *collegia* enjoyed significant privileges, and «seem, on occasion, to have been exempted from the restrictions imposed on despoiling public monuments, perhaps because lime production was implicitly understood as an activity conducted in close collaboration with the State. At the same time, the State had a vested interest in the lime-working industry because of its economic worth and organisational significance»[124]. Lime in allegedly large amounts must have been produced during the pontificate of Gregory III (731-741):

Caballero Zoreda / Utrero Agudo 2012, 432. – Utrero Agudo / Sastre de Diego 2012, 312-313 and 316. – Caballero Zoreda / Utrero Agudo 2013, 134. – Domingo Magaña 2015, 534. – Marsili 2016a.

[120] Utrero Agudo / Sastre de Diego 2012, 312-313. – Gregory of Tours describes some of the systems used to move or lift heavy stone elements; see for instance Greg. Turonensis, Lib. Confess. 59 and Greg. Turonensis, Lib. Martyrum 8. On these passages see Weidemann 1982, II, 384-385.

[121] Utrero Agudo / Sastre de Diego 2012, 312-313.

[122] See above.

[123] Caballero Zoreda / Utrero Agudo 2012, 432.

[124] Baldini 2008, 231, with sources.

> [...] the greater part of the walls of this city of Rome were restored; at his own expense he [i.e. the pope] gave the workers their rations and met the cost of procuring the lime [or lime mortar][125].

Producing lime mortar in such large quantities was surely a challenging task and required space, a good organisation and a considerable number of workers. Lime could be made by burning marble, limestone, or chalk: the first one was among the best materials and was abundantly available in the ancient monuments of Rome (which, as seen above, were by then in papal hands). Afterwards, lime needed to be mixed with the aggregate to produce mortar. One can easily figure the logistical effort faced by Gregory III, and the resultant remarkable costs borne by the pope for labour and the workers' meals, which the compiler found indeed worth recording. Exceptionally large projects as the restoration of the city walls of Rome must have stood out as for the quantity of lime produced. In most situations, however, smaller limekilns in the vicinity of the building sites would do: firing limekilns and mixers were indeed brought to light during archaeological excavations throughout Europe[126]. At Rome itself, they have been detected in the area of Crypta Balbi – presumably connected to pope's Adrian I (772-795) reconstruction of the neighbouring monastery of S. Lorenzo *in Pallacinis* – next to a repository of *spolia* ready to be burnt[127] (**fig. IV.4**). Another renowned example is that of Northampton, where circular mixers probably dating to the 9th century are supposed to have supplied mortar for the construction of a church, and varied in diameter from 2 to 3 metres[128]. Finally, one can quote the thoroughly studied Early Medieval mixers from Basel, cathedral hill, and from the monastery of Müstair[129].

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[125] Lib. Pont. 92, XV. Translation: Davis 2007, 27, who uses 'limestone' instead of 'lime mortar'. The Latin word, however, is *calx*, *calcis*, which is largely translated as 'lime'. A few lines above, in the same Life of pope Gregorius III (Lib. Pont. 92, XII), the same word *calx* is used in the description of the restoration of the roof of S. Maria ad Martyres (which is the Roman Pantheon, transformed in a church in the early 7th century). The passage reads «he had [the roof] cleaned spotless and freshly restored with a great quantity of *calx* [also translated by Davis as 'limestone'] and lead sheets». The use of limestone blocks is hardly conceivable in the context of the restoration of the external part of a roof which required lead sheets; also, the 2nd-century covering of the building (a concrete-dome) still survives, and Davis himself noted that «perhaps Gregory was responsible for some patching». Together with the lead sheets, the mortar might have been used to repair possible minor damages of the Roman concrete-dome, or to seal it. Most likely, then, in both occasions the word should be translated as lime or lime mortar rather than as limestone.

[126] In general, on Antique and Medieval lime and mortar production see: Cagnana 2000, 123-154. – Prigent / Sapin 2004, 137-138. – Cagnana 2012, 102-107.

[127] Cagnana 2000, 132. – Manacorda 2001, 52. – Saguí 2002, 21-22.

[128] Parsons 1991, 24.

[129] Hüglin 2019. – Hüglin / Caroselli / Cassitti 2020.

As repeatedly highlighted in this Part and in Part II., periods of extensive construction activities – at different scales and in different ways: the Early Imperial period, Late Antiquity, and the Late Middle Ages – usually correspond to a greater degree of specialisation of labour. The Late Antique market for building activities, often controlled by the State, could therefore sustain the existence of workshops exclusively specialised in lime making, and connected to the dismantling of ancient buildings, in the same ways as it could sustain, for instance, a sheer variety of skilled workers in the quarries. Many of these professions were no longer needed in the Early Medieval market, when the extent of construction activities had decreased. Thus on the one hand, for the reasons seen above, it seems legitimate to hypothesise the existence of specialised craftsmen in dismantling of monuments in the Early Middle Ages. On the other hand, the points in common with the construction enterprises – comparable skills, team work, mobility, ability to use tools and machinery – make wonder whether, in a different economic context, these crews could coincide. From the viewpoint of the patron carrying out a building or decorative project, using *spolia* in precious materials might imply some additional stages in comparison to freshly quarried stone, such as the request of permission to dismantle public monuments, and the search for – and payment of – skilled labourers to do this. However, given that the artisanal knowledge needed to extract blocks, columns and other items from a standing monument is akin to that needed in construction, it might be presumed that, on occasion, the crews of builders and sculptors hired for the project could have been as well involved in the procurement of *spolia*: they surely knew what stones, among those 'offered' by the ancient building, were the best for the new one's structures and architectural decoration, and they also knew the techniques to get them.

Chapter IV.3.

Recruiting workforce: budget, contact networks, fashions, availability of craftsmen

The selection of workforce to accomplish a building or sculptural project depended of course on the specific circumstances of each case. In general, however, the process of recruitment of skilled and unskilled labour force appears to have been determined by four main factors, namely: the amount of money available for the project; the personal contacts of the patron; and, obviously, the patron's personal tastes (as regards the aesthetics of buildings, architectural sculpture, and decoration); and the availability of workforce, i.e. the possibility, for the selected group of craftsmen, to start working, in that specific moment, at the patron's project (**fig. IV.5**). These factors were not unrelated, but rather depended from one another.

As for the budget, it could determine not only the level of the artisans – more skilled, more expensive – but also, for instance, the extent of unskilled labour, whose number could influence the speed of the works. Budget could also direct the choice between higher or lower quality materials – among the locally available resources, and additionally, for a very few patrons, for having *spolia* transported from afar[130] –, which could, in turn, also affect the choice of workforce, namely of the types of professionals involved. For instance, having or not lithic materials at disposal could make the difference between a stone or a wooden church, and having or not stone suitable to be carved could make the difference between a church abundant in architectural sculpture and one adorned almost only with frescoes.

Finances and contact network are generally connected to each other, both growing larger as the social status is higher: thus Early Medieval high ranked patrons had usually both more resources to invest in workforce, and a broader range of personal contacts, which allowed to reach out to, and recruit, the most skilled craftsmen (**figs IV.5** and **IV.6**).

[130] See Part II.

IV.3.1. **Skilled craftsmen**

As seen in Part III., and especially Paragraph III.2.5, the elite-networks were also the main 'driving force' for the mobility of skilled artisans, while the unskilled workforce was usually recruited in the surroundings. The main motivations for recruiting craftsmen from other locations were the lack of certain professional competences in the region or, even when having artisans nearby, the intention to get the very best ones of each kind (often, not available locally). Of course, at the highest social levels, the options were almost limitless: in the same way as emperor Charles could get marbles from Rome and Ravenna for the Palatine Chapel[131], he could also select and summon the best artisans «from all lands lying on this side of the sea»[132]. On a different scale, yet still a remarkable one, his cousin and friend William of Gellone (or William of Orange) could attract masters from the whole Aquitaine[133]. Conversely, Early Medieval popes had 'close at hand' almost all they needed for their churches: the skilled artisans were certainly not lacking in Rome, as shown for instance by hundreds of well-preserved elements of stone furnishings, which still speak of the quality of their work[134]. Besides operating in Rome, these craftsmen were summoned in other locations[135], hence the role of the popes consisted more in sending artisans away than in receiving them. Yet, for the restoration of the ceiling of St. Peter's, Hadrian I asked for masters to Charlemagne: in this case, though, the pope was most likely not driven by the lack of professionals in his domains, but rather by the conviction that the king could provide the most excellent ones[136].

Thus the written records on the mobility of craftsmen allow to observe the contact networks of the patrons, and sometimes mirror the relevance of individual historical characters (see the **tables** in Paragraph III.5.1, and **fig. IV.5**). It is worth reminding, as stressed above, that the social network of secular and ecclesiastical elites had almost always an 'international' nature, and that skilled masters of all kinds travelled, accordingly, on 'trans-diocesan' and 'trans-national' routes. At times, it took more than just one 'passage' between 'elite-network nodes' to find the right artisans: Cuthbert of Wearmouth-Jarrow, for instance, wrote to Lull of Mainz to ask for glassmakers, but, in

[131] Einhard, Vita Karoli 26: see above, Paragraph II.1.2.

[132] Notker Balbulus, Gesta Karoli Magni I, 31: see Chapter III.2.

[133] See Chapter III.2.

[134] Melucco Vaccaro 1974. – Pani Ermini 1974. – Pani Ermini 1974a. – Trinci Cecchelli 1976. – Melucco Vaccaro / Paroli 1995. – Broccoli 1981. - Barsanti / Flaminio / Guiglia 2015.

[135] See above, Paragraph III.2.3.

[136] Codex Carolinus 65, 592-593. See above, Chapter III.2.

case he did not have any direct contact to such masters, he urged him to 'ask around' to some other bishops who could dispatch them[137] (**fig. IV.6**).

Often, the sources do not exactly state how the artisans were contacted, who were the possible intermediaries, and so forth, but, in most cases, the patron's rank is directly proportional to the size of the geographical area where he gets masters from («all the lands...» for Charlemagne; Aquitaine for William; etc). In some occasions, contacts between two specific elite members prior to the beginning of the works can only be guessed at, but are not explicitly reported[138]. In yet other cases, the names of the actors involved are recorded, thus providing more precise information on the extent and the nature of the contact networks of different characters, as highlighted in the following table:

Source	Sends artisans	Receives artisans	Building
Beda Venerabilis, Hist. Eccl. Gentis Anglorum V, 21 (710)	**Abbot** Ceolfrid (Jarrow)	**King** Nechtan (Pictland)	Church / monastery
Vita Ricmiri (700 .ca)	**Bishop** Aigilbert (Le Mans)	**Abbot** Ricmer (Saint-Rimay)	Church / monastery
Codex Carolinus 65 (779 / 780)	**King** Charles	**Pope** Hadrian I	Church / monastery (roof)
Hariulfus, Chron. Centulense II, 6 (790)	**King** Charles	**Abbot** Angilbert (Saint Riquier)	Church / monastery
Will of Fortunatus II (803-826 ca., most probably before 814)	**King** / **emperor** Charles? ('Francia')	**Patriarch** Fortunatus (Grado)	Church / monastery
Sansovino, Venetia 1581 (before 820)	**Byzantine emperor** Leo V	**Doge** Giustiniano Partecipazio (Venice)	Church / monastery
Flodoardus Remensis, Hist. Remensis eccl. II, 19 (820 .ca)	**Emperor** Louis the Pious	**Archbishop** Ebbo (Reims)	Church / monastery
Annales regni Francorum (821)	**Patriarch** Fortunatus (Grado)	**Duke** Ljudevit (Pannonian Croatia)	Castle

[137] See Paragraph III.2.5.

[138] For example, the case of the restoration of S. Apollinare at Ravenna, when pope Leo III sent artisans to work at the church. As usual, the passage in the *Liber Pontificalis* of Rome seems to present this project as a papal initiative; though it is possible that previous contacts between bishop Martin (who might have asked for artisans) and pope Leo (who sent them) had taken place, both the *Liber Pontificalis* of Rome (Lib. Pont. 98, CVI) and of Ravenna (Agnellus, Lib. pont. eccl. Rav. 168) are silent on this point. For these sources see above, Chapter III.2.

Source	Sends artisans	Receives artisans	Building
Conversio Bagoariorum et Carantanorum 11 (850 ca.)	**Archbishop** Liupram (Salzburg)	**Prince** Priwina (Mosaburg/Zalavár)	Church / monastery

For instance, while Ricmer, abbot of Saint-Rimay, had artisans sent by the bishop of Le Mans, abbot Angilbert of Saint Riquier could have them sent by king Charlemagne[139]. Despite in the Early Middle Ages the buildings requiring the work of masons, sculptors, painters, and so forth, were almost always churches[140], it is interesting to notice that direct contacts between clergymen who sent craftsmen to one another appear to be less frequent than contacts with members of the secular elites. These are, in our table, the most 'active' actors in sending artisans to build and decorate churches and monasteries; in just one case there is a contact between two members of the ecclesiastical ranks (Aigilbert - Ricmer), and in another case the actors are both laymen (Leo V - Giustiniano Partecipazio). The two occurrences attesting the dispatching of builders and decorators from a clergyman to a layman (and not vice versa) to construct a church are in all likelihood related to the lack of artisanal knowledge on stone building in the area of destination (early 8th-century Pictland and early 9th-century Mosaburg/Zalavár)[141]. At last, another occurrence concerns a clergyman, the patriarch Fortunatus, who sends artisans to a layman, but they were supposed to build castles in the context of the rebellion of duke Ljudevit: this record of a contact between two high-ranked individuals, thus, was probably much conditioned by the circumstances, being the need of craftsmen urgent and their choice narrowed down to the possibilities offered by selected political allies[142].

It seems logical that, the larger was a patron's contact network, the wider the range of construction workers and decorators that was possible to summon. And, of course, the higher the social status, the larger the contact network (**figs IV.5** and **IV.6**). It is not always clear, however, to

[139] For all the sources quoted in the table see above, Part III.

[140] On this point see above, Paragraph II.3.2.

[141] See above, Chapter III.2.

[142] See above, Chapter III.2. – One last remark on the elite-networks concerns the mobility of objects: judging from a mention, very rare in its kind, contained in the *Will of Fortunatus II*, contact networks were important not only when in need to get builders and other artisans related to construction works, but also when in need of specialised craftsmen in restoring small items such as the liturgical implements. Of course, in this case the items could be moved, rather than the persons. The *Will* refers to a chalice sent in *Francia* to be enhanced and repaired: probably, it was sent to the workshops working for, or related to, Charlemagne, in a period in which the relations between the patriarch and the Carolingian court were still good. This choice might have partly depended on the lack of artisans of the desired level in Fortunatus' entourage, but was in all likelihood also influenced by the very opportunity to have the work done in one of the best existing workshops – thanks precisely to the direct relations with Charlemagne. See Beghelli 2017, 248-252.

what extent the choice was 'free', in a spectrum ranging from 'completely intentional selection of specific workshops' to 'completely involuntary, depending on someone else's decision'. At one end of the spectrum, one can place cases like the Palatine Chapel and patrons like Charlemagne. At the other end, may be placed the cases of secondary ecclesiastical buildings and patrons belonging to the lowest ranks of the ecclesiastical and secular elites: a priest willing to renew the stone furnishings of a rural church, for instance, may not have enough personal contacts, or no other possibility, as to reach individuals higher in rank, and trust them with the selection of craftsmen. In the middle, there are instances of high-ranked patrons – thus theoretically less conditioned in their choices than a countryside *presbiter* – obtaining the dispatch of artisans from other high-ranked individuals. When asking for help for the restoration of St. Riquier, was Angilbert entitled to some kind of choice among the stonemasons, sculptors, carpenters, and glaziers that Charlemagne could possibly send, or had he to simply accept – along with other gifts – the masters the king had chosen for him? The same, of course, applies to other similar cases. Both possibilities are likely: on the one hand, there could have been conversations – or lost exchanges of letters – in which some preferences had been previously expressed; on the other, the 'receiver' of artisans may, as said, simply trust the 'sender', either because he wanted to, or because he had to. Although written evidence is, in most cases, too scanty to be conclusive, the question remains relevant, for it concerns an important point in the selection of skilled workforce: the patron's aesthetical tastes (**fig. IV.5**).

The shape of a building, and the nature and appearance of its decorations, could greatly change depending on what team of skilled craftsmen had worked on it. As seen above, forms, types, styles and fashions were generally not determined by the commissioners, but were rather deeply rooted in the traditions and artisanal knowledge of individual groups of craftsmen: not any architect, mason or sculptor could reproduce any type of building, masonry or shape in carving, for techniques and workshop practices differed from one group to another[143]. As for architectural sculpture, while the 'mainstream fashion' of the period consisted in geometrical and vegetal patterns[144], the overall look of the carved items could significantly vary in the general structure of the design, in the motifs chosen and their associations, in the proportions of free spaces between ornaments, and so forth[145]. In short, there were several artistic models and, probably, the contemporaries could appreciate differences and aesthetical qualities better than we do today. Thus, as well as the budget and the contact network, the awareness of different fashions in architecture,

[143] See Paragraphs III.1.2, III.2.6, and III.4.11.

[144] In general, see above, Part I.

[145] See Part III.

sculpture and decoration – and the personal tastes in this matter – must have played an important role in the selection of skilled labour force, at least in some cases and especially for the patrons belonging to the highest social ranks (**fig. IV.5**). Individual tastes as regards architectural and sculptural fashions could therefore make the choice falling on a specific workshop instead of another. Personal preferences may be met even when patrons could not themselves directly summon the desired artisans: provided a sufficiently large budget and contact network, these patrons could specifically address their request for 'foreign' masters to the person who could send that particular workshop, as it might have possibly been the case of a number of records collected in the **table** above.

Finally, after having 'identified' the favourite style and the right person to contact to get the suitable workshops, for the recruiting to be successful one last condition – as obvious as it may sound – must be fulfilled: that the craftsmen able to realise the project in the desired fashion were actually available, free from ongoing work commitments (**fig. IV.5**). Especially the best artisans must have been often busy, and this was something to take into consideration, as it could possibly affect the timing of the project.

This whole process, however, implies the patron's direct knowledge of different fashions in architecture, sculpture, decoration, and so forth (**fig. IV.5**). For those who were privileged enough to take into account personal aesthetical tastes, how could the choice among different working crews be made in practical terms? Or, in other words, by what means could Early Medieval patrons know diverse artistic models? As for the sculpture, it has been already observed that the so-called *Musterbücher* (or books of models) are a most unconvincing hypothesis to explain the transfer and spread of distinct carving fashions[146]. Perhaps, this notion would be even more unconvincing – and likewise unproven – if applied to buildings in general: it seems hardly possible that the patrons chose the construction workers by browsing through some sort of catalogues. Plausibly, in most occasions, the explanation lies again in the mobility of people. The abovementioned remarks of Michael McCormick on the remarkably high number of individuals of all conditions who used to travel[147] are especially true for the ecclesiastical and secular elites. It is well-known that Early Medieval chronicles, annals, biographies, hagiographical texts, letters and other documents are overflowing with mentions of abbots, bishops, aristocrats, kings, emperors moving from a place to another over short and very long distances. Whatever the motivation of the displacement, during the journey, the stopovers and the stays in one or more locations, these actors surely got in contact both

[146] See above, Paragraphs III.1.2 and III.1.3.

[147] McCormick 2001, 397. – See above, Paragraph III.2.7 and Chapter III.5.

with several ecclesiastical monuments – visits at churches to pray and pay homage to holy relics are indeed plentifully attested – and with other high-ranked individuals, including of course their hosts[148].

Thus for the elites, travelling and meeting other elite members might offer the possibility to admire ecclesiastical buildings and, at the same time, the opportunity to make acquaintance with counterparts who knew the craftsmen who had constructed or decorated them. Something similar may have occurred, for instance, to Benedict and Wilfrid during their long journeys to Rome and through Gaul: besides being probably among the best available[149], the artisans they brought back home with them had been possibly singled out after having personally seen some of their works[150]. This principle can also apply to other projects than constructing an ecclesiastical building, like the renewal of the stone furnishings of an already existing church[151]. An aspiring patron for this kind of undertaking who happened to travel, for instance, throughout Italy or France in the late 8th or early 9th century, had surely the possibility to see a number of relatively recently made ciboria, chancel screens, and so forth. The connection between high-ranked status, frequency of travelling, and consequent broader knowledge of sculptural fashions has been also highlighted in the case of Roman sarcophagi[152].

Once recruited the artisans, it could have been worth making the most of their presence, especially if they did not come from close by, and if the budget allowed this. Thus the same patron could promote the addition or replacement of stone furnishings in more than one building within the same refurbishing 'campaign', as it is sometimes attested by the material evidence. For instance, this appears to have been the case of S. Vigilio and S. Maria Maggiore in Trento, and possibly also a third church located ca. 30 km away from the city: the commissioner of this project might have been bishop Hiltigarius in the first years of the 9th century[153]. Other examples concern the Piedmontese-Provençal workshop, in the cities where the atelier operated in two different churches[154].

[148] On travelling in the Early Middle Ages see: McCormick 2001, 123-280. – Peyer 2009.

[149] Wood 2005, 763.

[150] See above, Chapter III.2.

[151] In several parts of this work it has been noted that, in the Early Middle Ages, this was one of the most common projects related with churches.

[152] Russell 2013, 285.

[153] Beghelli 2013. – Beghelli / Dalba 2019.

[154] See Part III.

Unfortunately, at present, the problems related to the chronological assignment of the sculptures (seen in Part I.) do not allow to precisely establish, for most of the European territory, how many workshops were contemporarily active in a given macro-area, and thus to estimate the range/number of workshops among which it was theoretically possible to choose. In all likelihood, in and around the most important cities, in periods of economic and political stability, there was more than one sculptural atelier, but how many exactly? And in different contexts than this, was a choice even possible, namely: could a single group of craftsmen have 'monopolised' the market in certain periods and regions, serving all the 'nodes' of a given elite network? (**fig. IV.6**) Systematic studies, carried out with appropriate methods, enable to identify diverse workshops having worked in several locations of the same macro-area[155]: not always, though, there are elements to securely date their production, so all one can say is, for instance, that a particular group of artisans must have operated for a certain period within a time-span of fifty, or more, years. Which, of course, frustrates any attempt to evaluate the possible contemporary work of other ateliers, and thus the extent of choice for the patrons. However, whether or not their chronology is defined with accuracy, the sculpted artefacts referable to the same workshop remain a most significant document. Seen by the perspective of the makers, the sculptures are of paramount importance to study the mobility of craftsmen, and from this to understand a number of other aspects related to the economic context of the period[156]. Seen by the viewpoint of the patrons, since the recruitment almost always implied a direct contact between two high-ranked individuals, the sculptures may also be considered as a 'materialisation' of the elite networks which existed in a given territory – with a certain number of skilled masters tending to operate within the same circle of patrons, bound by political or religious relations (**fig. IV.6**).

To summarise, Early Medieval monuments could inspire high-ranked individuals who sought for skilled labour force to employ in their projects. These patrons could contact a counterpart able procure the artisans who had worked at that specific building and decorations: provided, of course, an appropriate budget – especially in case of very skilled craftsmen who had to travel long distances – and acquaintance of, and good political relations with, the counterpart. However, these ideal circumstances must have occurred in a limited number of cases: probably, as seen above, even influential elite members were not always allowed to follow personal preferences in the process of recruiting skilled labour force. In general, however, for the personal aesthetical tastes to play a role in the choice of artisans, both a suitable amount of money and a wide contact network – besides of

[155] See above, Chapters III.3 and III.4.

[156] Part III.

course the availability of the requested craftsmen – were essential conditions to be fulfilled (**figs IV.5** and **IV.6**). For as much as minor characters travelled throughout Europe and saw recently constructed beautiful buildings, with their sculptures and decoration, when it came to their own project, their range of choice of labour force may be limited by the lack of the 'right' contacts, or by restricted financial resources. In these cases, patrons may have to confine their selection to less qualified artisans; and these cases, as shall be seen in the next Paragraph, are the most difficult to approach under an archaeological and historical viewpoint, but this does not mean that they are less worthy of consideration.

IV.3.2. **Unskilled workforce and non-professional craftsmen**

Every building site, both the grand and the modest ones, needed unskilled workforce in order to function: therefore, the patrons belonging to both the highest and the lowest ranks of ecclesiastical and secular elites had to care for the recruitment of unqualified, or little qualified, labourers. They performed a number of tasks which depended on the size and type of project, for instance carrying materials or mixing lime. Unsurprisingly, despite their importance, these workmen are rarely recorded in the written sources. Rather, as seen in Part III., Early Medieval chroniclers tended to mention the skilled artisans, who represented a 'sign of prestige' for the patron[157]. According to the same logic, the few references to unskilled labour are often meant to excite admiration towards the promoter of the project.

Organising, feeding, and accommodate the workmen was an impressive task, worth recording, only when they were needed in large numbers, in occasion of large projects. Thus it is probably not accidental that the scanty records of unskilled labourers tend to be related to very high ranked patrons. A case in point is the abovementioned restoration of the city walls of Rome, which must have involved a multitude of workers – both in masonry and for lime production – whose meals were paid by pope Gregory III (731-741) himself[158]. Similarly, the «crowd of people» gathered from the whole Campania for the restoration of the Claudian aqueduct, and the implicit organisational effort that their displacement and presence in Rome entailed, surely put Hadrian I (772-795) in a good light. According to the chronicler, the pope even «personally came to take his turn in building and restoring this aqueduct»[159]. A statement that, not to be taken literally, may contain a kernel of truth: after all, there is no reason to think that the Early Medieval promoters of

[157] See Paragraph III.2.7.

[158] Lib. Pont. 92, XV. See above, Paragraph IV.2.2.

[159] Lib. Pont. 97, LXII. See above, Paragraph III.2.3.

large projects did not take pleasure in showing themselves on the building site, especially in public occasions – something which still happens today (**fig. IV.7**). The «crowd» of workmen who may have witnessed the pontiff's display of zeal were probably mainly employed – as well as those summoned by Gregorius – in masonry. An even larger number of labourers was needed for the abovementioned construction of Leopolis-Cencelle under Leo IV (847-855), so that it was necessary to summon them «from the individual cities and all the estates, whether public or belonging to monasteries». Their work on site was accordingly organised in crews depending on their location of provenance[160]. Unskilled labourers are also indirectly referred to in the accounts of the repairs of S. Apollinare at Ravenna (814) and of the Palatine Chapel at Aachen (796-804 ca.). In both occasions, their larger groups are opposed to the smaller teams of skilled artisans who had come from afar. As for Ravenna, there are on one side Crisafus and his stonemasons sent from Rome by pope Leo III, and on the other the «Ravennate citizens working in turns with ropes and other devices»[161]. As for Aachen, while the prefect Liutfrid took care of the masters «who came from a long way away», the more numerous unskilled (or less skilled) local workmen probably required more resources for their management, so that this task had to be fulfilled by «any magnates established nearby»[162].

Despite their scantiness, these records provide some hints on the role of patrons in hiring unskilled workers, and on the challenges implied. The skilled artisans always represented a minority of the total workforce, especially in occasion of large projects. While a few letters might have been sufficient for recruiting the skilled craftsmen – the patron's job being more of 'diplomatic' kind –, gathering the much more copious ranks of unskilled labourers entailed an effort of logistical nature. Word must be sent in all the locations where the workers were supposed to be summoned from, and, once they arrived on site, the patron or his delegates must provide a place for them to stay and adequate supplies of food. The rations offered by pope Gregorius III, «at his own expense», to the persons working at the restoration of the walls of Rome, are a hint that the meals must have often been included in the hiring arrangements – not only of skilled, but also of unskilled workmen. As for the accommodation, the Early Medieval written sources seem silent on this matter, but later evidence suggests that the unskilled labourers, particularly if numerous, could be located in special structures in the vicinity of the building site[163]. Unlike the skilled artisans, the unskilled labourers

[160] Lib. Pont. 105, LXX. See above in this Part and Paragraph III.2.3.

[161] Agnellus, Lib. pont. eccl. Rav. 168. See above, Paragraph III.2.3.

[162] Notker Balbulus, Gesta Karoli Magni I, 31. See above, Paragraph III.2.2.

[163] Bernardi 2014, 54. – On these points as regards skilled artisans see above, Paragraph III.2.2.

were generally locally recruited. Among the written records listed above, the workers who covered the longest distances were those summoned for the restoration of the Claudian aqueduct – from the region South-East of Rome, back then called Campania – and for the construction of Cencelle. In this second case, the estates mentioned by the *Liber Pontificalis* probably correspond to both the papal *domuscultae*, and former imperial Byzantine lands in the Roman duchy, while the monasteries involved were «those whose property was otherwise juridically exempt», like St. Saviour's (Rieti), St. Mary's (Farfa), and St. Andrew's near Mount Soracte[164]. On the contrary, at S. Apollinare, only the inhabitants of Ravenna and surroundings took part to the works and, presumably, the workmen employed for the restoration of the walls of Rome, and for the construction of the Palatine Chapel at Aachen, came likewise from nearby. In this kind of large projects, experienced artisans and building site foremen – such as the «most skilled» abbot at Aachen, or Agatho at Cencelle – supervised the unskilled workforce[165].

Today we tend to think to the job of unskilled worker in a construction site as a full-time profession: however, this was not always true in the past. The records about Ravenna and Cencelle are significant testimonies in this sense. In the first case, it is to be assumed that many of the (free) «Ravennate citizens» working at the repairs of S. Apollinare – which may have had the additional appeal of a holy enterprise – had normally other occupations. In the second case, the actual regular occupation of the crews operating at Cencelle can be guessed at, for we know that Leo IV had the authority to summon them not only from the cities, but also from «all the estates, whether public or belonging to monasteries». These labourers, then, must have been normally occupied in agriculture, cattle farming, food production, and so forth. A similar mixed system has been envisaged for crafts other than building: for instance, a part of the Medieval North-European free peasants, who were normally practising subsistence farming, could turn into comb-makers for limited periods of the year[166]. As in the case of the rural comb-makers, it can be assumed that the chance to supplement the ordinary income was the main reason driving people to work temporarily as unskilled workforce in building sites – though we have no details on the nature and amount of the payment, whether in goods or money. Yet it is also possible that, on occasions, the labourers were 'forcibly' summoned, according to procedures similar to the military conscription: at Cencelle, the groups of workers

[164] Davis 1995, 140.

[165] See above, Paragraphs III.2.2 and III.2.3.

[166] See above, Paragraph III.2.4.

from the *domusculta Capracorum* and from *Saltisine* were indeed organised into military units, and designated as *militia*[167].

The cases seen so far concerned very high-ranked patrons and large projects, where skilled craftspeople were employed along with unskilled labourers. Not always, however, there were rigid boundaries between skilled and unskilled workforce. Less prominent or less powerful patrons for small building or sculptural projects may have had to be content with the services they could pay with a modest amount of money: namely, the locally available labour force, little talented artisans, non-professional craftsmen, or workers who only mastered some rudiments of masonry, sculpture, and other crafts. Humbler patrons, as well as humbler workers, tend to be neglected by the written sources, and almost only archaeology and art history allow to address this subject. Yet this is not a simple task: archaeological features and materials, such as sculptures, that betray an inexperienced hand, are indeed the most difficult to date and contextualise, precisely because they generally have no convincing parallels, or their poor technique hampers this step of their study (**Fig. IV.8**).

In sum, one might say that at least two of the four factors seen above, which determined the selection of skilled craftsmen, functioned for unskilled labour force, too. The quality of the work and the number of unskilled labourers possibly available for a given project increased in parallel with the budget and the extent of the patron's contact network (**fig. IV.5**).

IV.3.3. **Patrons and makers: negotiating the project, organising and supervising the building site**

Once having raised the funds, gathered the appropriate materials, engaged skilled and unskilled workforce, the next commitment for patrons (and / or their delegates) consisted in discussing the project with the building masters and the decorators, and in organising the building site. Many of the points concerning these stages of construction and restoration works have already been addressed in Part III. (when examining the process from the viewpoint of the artisans), and do not need to be repeated here. A few issues, however, are worth discussing in more detail, analysing them from the viewpoint of the patrons.

Heiric's chronicle of the construction of the crypt in the abbey of Saint-Germain d'Auxerre has proven to be a very valuable source of information for a number of aspects related to the procurement of *spolia*, their transport, and the workers specialised in dismantling old buildings[168]. The text, however, also includes one of the extremely rare, and exceptionally detailed, accounts of

[167] On this point see Davis 1995, 140.

[168] See Paragraphs II.1.2. and IV.2.2.

the early phases of a building project. After his miraculous recovery from illness, Conrad I the Elder had entrusted his wife Adelaide with the construction of the crypt:

> averse to any delay, she hurried on the prince's orders to the monastery of the blessed Germanus and arrived there. After having first inspected the situation of the place quite carefully, she had seen that everything was suitable for her project; and one cannot put into words the great passion with which she devoted herself to the work […] The place was naturally suitable for the project, which was entrusted to craftsmen highly skilled in such matters […] They make a model of the building from small pieces of wax, a [model] that somehow evokes the future greatness of the construction, of such beauty and elegance as to be worthy of the king of angels and men […] After having collected the necessary sums, the building site supervisors and foremen are chosen; through their tireless efforts and utmost diligence the immense work is completed with incredible speed: things were so easy, the spirits had such ardour, that it was obvious to all that divine favour accompanied the whole undertaking[169].

A noteworthy point is that it is a woman, not a man, who is at the head of the operational side of the project. Certainly, cases as such must have been rare, but, together with (likewise uncommon) occurrences as the existence of female building masters[170], they show that women had, on occasion, prominent roles in construction activities, even in the 'Dark Ages'. In Heiric's narration, the success of the undertaking is due to God's intervention; however, divine forces apart, the text provides a rather precise description of the tasks of a patron prior to the beginning of a construction project: in many respects, the do not differ much from our contemporary practices. First of all – in the same way as we do today when planning a new building – Adelaide evaluates carefully the characteristics of the site. She already has, of course, a fairly clear idea of what she wishes to build (at the site, «everything was suitable for *her* project»): then, she recruits skilful makers accordingly. Once the craftsmen are on the spot, she discusses the project with them and she gets a precise calculation of costs. Finally, after having appointed the building site foremen and supervisors, the works can start.

A number of Early Medieval – as well as earlier and later – written sources portray the commissioner as the deviser and the designer of the project. One renowned example, already mentioned, is the Palatine Chapel at Aachen, built on Charlemagne's «own plan» in Notker's

[169] Heiricus, Miracula sancti Germani II, 88; 89. Translation: M. Beghelli.

[170] See Paragraph III.2.2.

words[171]: on the one hand, scholars tend to be prompt in dismissing such statements as mere encomiastic hyperboles, but on the other, some studies have interpreted the visual characteristics of Early Medieval jewels, sculptures, mosaics, and so forth, as the sole outcome of the design of an 'omniscient patron'[172]. If it is implausible that commissioners dictated the style of a building (or of any object) to the last detail, one should neither believe that they did not have a precise idea of the work they wanted to be carried out: as seen above, patrons could exert their 'stylistic influence' by choosing the workshop which most closely matched their personal aesthetic tastes, but the finished building or artefact was the result of a negotiation with the artisans[173].

Most situations must have been similar to the one at Hexham (with Wilfrid presenting his ideas but also «learning from the advice» of expert master masons[174]), but Heiric's account tells us exactly how this kind of negotiations could take place, i.e. with the help of a wax model. If Late Antique and Late Medieval representations of commissioners offering similar miniature models (at times in wood) to the titular of the church are quite numerous[175], Early Medieval mentions or depictions of these *media* are absolutely exceptional. Heiric's passage, then, could represent additional evidence that similar practices were used for architectural decoration, too: in the same way as builders and architects, carvers were probably using wax (or wooden) tablets to show to their clients preparatory sketches for sculpture and sculpted furnishings[176]. However, as noticed above[177], one should always bear in mind that, differently from today, Medieval commissioners were well aware that «the design would take shape along with the building»[178] (including its sculpted decoration) and that «numerous buildings were altered during construction»[179], therefore resulting in minor or major changes in comparison to the original project or sketches.

A last point to be mentioned about the planning phase of sculptural decoration concerns, again, the patron's expectations. One the one hand, the workshops' custom of combining in different ways the same set of ornaments (that emerges very clearly in the case of the Piedmontese-

[171] See Paragraph III.2.2.

[172] See Paragraph III.1.2.

[173] See Paragraph III.1.2.

[174] See Paragraph III.2.1.

[175] Among the most renowned examples one can quote, for instance, the apse mosaic at S. Vitale, Ravenna (Angiolini Martinelli 1997).

[176] On these points see Paragraphs III.1.2 and III.1.3.

[177] See Paragraph III.1.3.

[178] Rockwell 1993, 131.

[179] Ousterhout 2008, 86. – On this point, see also Paragraphs III.1.3 e III.2.6.

Provençal and other ateliers[180]) is to be interpreted as a way to vary the production from a place to another, and to 'personalise' the offer to each commissioner[181]. On the other hand, about the Roman sarcophagi, it has been stressed that «there was room for adaptation and individualisation […]. Originality, though, was by no means the primary requirement of most commissioners. The sarcophagi were statements of wealth and cultural belonging and arguably the more stereotypical the decoration the more forcefully these messages could be communicated»[182]. Similarly, one can assume that, at least in some occasions, Early Medieval patrons must have also wanted for their buildings architectural sculpture which was 'recognisable' to the observer as the product of a specific, 'renowned' group of carvers.

Before the works could start, the last task was setting up the building site. At times, the administrative management of projects (e.g. the financial management and organisation of the artisans) was carried out by the patrons themselves[183], just as in the case of Adelaide at Auxerre, or Wilfrid of York at Hexham[184], or William of Aquitaine at Saint-Guilhem-le-Désert[185]. Especially when the project was relatively small, it was sufficient for commissioners to appoint a few experienced masters to supervise their own personnel, who only had generic skills: similar arrangements are described in the Edict of Rothari[186]. Conversely, for very large enterprises, patrons usually needed an administrative manager and, additionally, a technical manager or building site foreman[187]; the latter was physically present at the building site and was the responsible person for organising the workers' activities, of both the skilled and the unskilled ones. At Aachen, as seen above[188], the fist position was held by Liutfrid, and the second by an abbot. Now as then, however, commissioners should be careful in choosing a trusted individual, something Charlemagne seem to have failed in «because he was occupied with the business of the kingdom»: despite the abbot was the «most skilled of all», he proved to be a quite dishonest man, who, in exchange for money,

[180] Chapters III.3 and III.4.

[181] See Paragraph III.1.2.

[182] Russell 2013, 285.

[183] Binging 1999, 17.

[184] See above, Paragraph III.2.1.

[185] See above, Paragraph III.2.2.

[186] Roth. 145. – See Santangeli Valenzani 2007, 445.

[187] Binding 1999, 17-18.

[188] Paragraph IV.2.1.

allowed some workers to shorten their shifts, while «oppressing» those who did not pay «with immense labours, and never permitted them to rest even a little»[189].

[189] Notker Balbulus, Gesta Karoli Magni I, 28. See Noble 2009, 83.

Conclusions

Early Medieval architectural sculpture: an economic indicator and an 'index-fossil' for construction activities. Architectural sculpture represents, in many ways, a thread that allows us to address general questions concerning construction activities and their economic background during the Early Middle Ages. In many ways, studying the production of architectural sculpture means analysing the market for stone products and public building as a whole, for, in this period, new monuments in stone almost exclusively consisted of churches and monasteries, and, in turn, architectural decoration was almost exclusively related to ecclesiastical architecture[1]. Also, the work of sculptors and other craftsmen – masons, carpenters, painters, architects, etc. – was strongly interdependent, not only because the manufacturing and placement of stone furnishings required different professional skills, but also because all artisans worked side by side at the construction site, and because they led a very similar professional life, a point in common being for instance the high degree of mobility. It is also probable that diverse professionals were 'joining forces' in different sorts of corporations.

Therefore, 'following' the sculpture involves following a much larger group than just sculptors, and this is all the more important because other categories of professionals (e.g. painters, carpenters, glaziers) did not leave a comparable body of evidence in terms of quantity of archaeological heritage. Hence this significant archaeological indicator – sculptures – can be used as a real index-fossil, that can provide a valuable insight into the functioning, and better understanding, of a whole field of human activity in the Early Middle Ages, i.e. monumental building, the economic relevance of which was second only to food production[2].

Since about the Fifties, a number of studies have addressed aspects related to the manufacturing of Early Medieval architectural sculpture. In many cases, the aim was to explain the most prominent characteristic of the sculpted materials, namely the presence, on a European-wide scale, of stone objects decorated in a quite similar way. Was this phenomenon due to the circulation

[1] On these points see Part I and Part II.

[2] Part III.

of sculptures, people, or models? In other words: did a well-established trade in stone items exist, or rather was it the sculptors who moved, or did the ornaments spread through media as drawings, books of models and *cartoni* / cartoons?

Rarely have these questions been discussed from an overall perspective, and with a systematic approach – the 'Croatian school' being probably the most quoted example in this work. Generally, these issues related to production have been instead debated in just a few lines of books and articles, or have been considered from a local viewpoint, concerning small territories[3]. Thus a number of hypotheses were put forward, but necessarily remained in the sphere of speculation: this occurred precisely because of the lack of a comprehensive and transdisciplinary study of the production of Early Medieval stone items, and with a *longue durée* approach[4]. Following these guidelines, different categories of evidence have been considered in this work: the stone items themselves, petrographic data, written testimonies, inscriptions, and finds from archaeological excavations in quarry sites, in ecclesiastical buildings, in ancient urban centres, and underwater. All of these sources are independent from one another, but have proven to be very consistent: all of them point in the same direction, each one conveying information about diverse aspects of the same phenomena.

A statistical survey: locally procured raw materials and the absence of long-distance trade in decorative stone. Raw materials, their provenance, the ways they were sourced, and the circumstances in which they were worked can tell us a great deal about the economics underlying the production of a given object. In Part II., we have seen that some scholars observed that stone used for carving was *usually* locally procured, but they also maintained that it is equally plausible that it was imported from afar[5]. A statistical survey on the provenance of stone, conducted over a large territory, appeared as an appropriate tool for turning that '*usually*' into exact percentages. The chosen sample-area – South-Eastern France, Northern Italy, Austria, Switzerland and Southern Germany – comprised ca. 430 churches that yielded Early Medieval carved fragments, and was characterised by different political frameworks over the 7th to the 9th centuries. By means of this survey, it has been possible to ascertain that the stone used for producing Early Medieval architectural sculpture was locally procured to the striking ratio of circa 90% of cases, whether freshly quarried, or taken from ancient buildings close by: the percentage increases to ca. 94% when considering only the most reliable cases, i.e. those provided with an assessment on the

[3] Part III.

[4] See the Introduction.

[5] II.1. See also III.1.2.

stone type (and its origin) made by a geologist. The remaining 6-10% consists almost entirely of examples where the stone was deployed relatively short distances from the source, of about 50-80 km, almost always in the vicinity of waterways that could facilitate the transport. Less than 2% of cases involved stone which had been procured from 100-200 km away[6].

This low percentage is completely consistent with the dearth of 7th-9th c. written sources attesting the long-distance movement of stone items. These undertakings involved commissioners at the very top of the political and religious ranks – such as kings, emperors, and popes – but the majority of the records, very limited in number, refer to just one single person, Charlemagne, who, like his Roman predecessors, could count on enormous assets in terms of workforce and resources to expend on stone transport. Also, it must be stressed that the few cases of the long-distance transport of stone items in the documentary evidence always concern *spolia* from ancient buildings, never freshly-quarried stone or newly-manufactured finished carved elements. These *spolia* – the chroniclers are at times explicit on this point – were generally sought after for utilitarian reasons (e.g. in the case of items that were no longer produced, such as the monolithic load-bearing column shafts), and only rarely conveyed symbolic meanings. Anyway, the written sources clearly express the wonder of the contemporaries for these rare cases of the long-distance transport of stone, which confirms the exceptional character of such operations[7].

In the Roman period, too, the long-distance transport of decorative stone concerned limited quantities of materials in comparison to the total used in building activities: yet a well-established production-distribution system allowed the movements of raw lithic materials, part-finished, and near-finished items across the whole empire, for both public projects and private customers[8]. Conversely, the percentages referring to the Early Middle Ages indicate an almost exclusive use of locally procured stone. Also, the longest distances covered by the lithic materials (ca. 100 / 200 km, representing less than 2% in the survey) are not even remotely comparable to the several hundreds and thousands of kilometres that decorative stone could cover in the Roman and Early Byzantine periods. Thus – contrary to what has been, at times, tentatively hypothesised – the information provided by the statistical survey and by the written record indicates that a long-distance trade of decorative stone for building and sculptural projects was practically non-existent in the Early Middle Ages: the same is also attested outside the survey's sample-area, for instance in the Byzantine empire, in the Iberian Peninsula, and in Northern Europe, thus suggesting a

[6] II.1.2 and II.5.

[7] II.1.2.

[8] II.2.

macroeconomic phenomenon stretching over the whole period (7th-9th century) and independent from specific political circumstances in each territory[9].

Early Medieval and Roman production of architectural sculpture: the dwarf and the giant? The absence of long-distance trade of decorative stone is mirrored by further archaeological evidence. Shipwrecks with stone cargoes meant for architectural usage – among the best indicators of a prosperous trade – are abundantly attested in the first three centuries of the Roman empire, then dramatically decrease in number, until reaching *zero* occurrences in the Early Middle Ages. Vice versa, remains of other Early Medieval crafts (including logboats or monoxyla) have been documented, carrying an entirely different type of stone cargo, more useful to everyday life, i.e. hand-quern-stones and soapstone vessels[10].

Everywhere in Europe and in the Mediterranean regions, the archaeological evidence shows a sharp decline in the amount of quarried stone: traces of extraction become sporadic, mostly centred on natural outcrops, and limited to small amounts of materials, cut in small blocks. Quarry workshops (the former preferential centres of the standardised production of architectural sculpture, columns, and sarcophagi, at or near the extraction points) completely vanish from Early Medieval archaeological layers, along with the complexity of the administration system and division of labour that they implied. The only exceptions are represented by quarry workshops for the manufacturing of sarcophagi in Merovingian Gaul (but only up to the late 7th century, when demand dropped dramatically), and of utilitarian goods indispensable to everyday life, like hand-quern-stones (for instance, in the Eifel region), or soapstone vessels (in the Alps), i.e. relatively small items which continued to be traded on a significant scale[11].

At a first look, these data may appear as an anomaly in comparison to not only the previous, but also to the subsequent periods, because, starting from about the 11th century, the long-distance transport of stone and sustained extraction activities are again attested. However, the apparent anomaly becomes intelligible when analysed in the long run. Diverse categories of archaeological evidence clearly show that the downturn in quarrying, and in the long-distance transportation and trade of architectural elements had already begun in the West in the mid 3rd / early 4th century, and by the late 6th century in the East, too: all of this depended of course on a well-known phenomenon to archaeologists and historians, i.e. the progressive contraction of the stone building industry. Thus the situation in the Early Medieval West corresponds to the ‘natural’ consequence of a general

[9] II.1.4 and II.2.

[10] II.2.3.

[11] II.2.1 and II.3.

phenomenon occurring over a long period, and involving the whole former Roman empire: a whole sector of the ancient construction industry – theatres, *thermae*, *fora*, etc., mainly fostered by the emperors – had gradually disappeared. Also, the intense demand of private individuals that, in the Roman period, used to feed a vast non-imperial market – for products like sarcophagi, statues, revetment panels, column shafts, capitals and other architectural sculpted items – had slowly faded away. By the Early Middle Ages, the incidence of new building work had become much lower, churches had practically become the only expression of public monumental architecture – if generally smaller in size than in Late Antiquity – and sculpted items in decorative stone were therefore almost exclusively used in the context of ecclesiastical architecture[12]. A number of decisive factors that brought about this new situation seem to have occurred, or to have reached an apex, during the late 6th / 7th century: among others, political instability, territorial fragmentation, a decrease in population due to plagues and climatic calamities, have been all connected to the downturn in construction activities, and had of course caused a contraction in the demand for not only stone products, but for a variety of additional goods. During the 8th century (sooner or later according to the region), many European areas enjoyed the first signs of economic recovery[13].

In the past few decades, despite some glaring countertrend-exceptions, scholarship has started to abandon a narrative of decadence about Early Medieval artworks, at least as for the qualitative aspects: artisanal and artistic production, and the implied techniques (including sculpture and carving), are in most cases no longer branded as 'inferior'[14]. Yet, as for the quantitative aspects, emphasis continues to be placed on the shrinkage of the market for stone items: while Romanists themselves have moved away from a strict comparative perspective on historical economies, the volumes of production of architectural stone elements in the Early Middle Ages have been almost inevitably examined in contrast to a Roman brighter 'golden age'. A straightforward comparison as such, however, entails a significant risk of reaching misleading conclusions, for, as stressed in a number of studies, the Roman economy was in many ways atypical, and so were the «disproportionately high demand» for stone products, the enormous amounts of lithic materials quarried and consumed, and the extent of architectural projects. When seen under this perspective, the gradual drop in demand for stone products which occurred in the post-Roman period, or the reduction in building activities in the Early Middle Ages, lose much of their catastrophic aura[15].

[12] II.2 and II.3.

[13] III.2.8.

[14] III.1.2 and III.3.2.

[15] II.3, II.3.2 and III.1.2.

Early Medieval uses of stone: adaptability, innovation, rationalisation. Far from being a sign of decline in civilisation, several aspects of the 7th-9th-century construction industry and sculpture manufacturing were simply an obvious response to the circumstances, appearing as intelligent strategies to rationalise production (some of which would indeed persist over subsequent centuries), and were, in many respects, related to the very presence of older still standing buildings and infrastructures. Some of the Classical ones could be still used (for example, bridges) or adapted to new uses (for example, theatres for public executions, basilicas transformed into churches, and a myriad of different small and large buildings turned into houses, by common people as well as by rulers), while the more recent Late Antique churches and cathedrals still satisfied the religious communities of many cities and towns. As for the 'unwanted' ancient buildings, in aggregate terms they provided a truly immense quantity of stone – often of excellent quality – close at hand: thus they could be transformed in very convenient quarries in the open, with the double advantage of saving conspicuous amounts of money in the procurement and transport of stone, and, at the same time, freeing the urban areas from the dangers of possible collapses of old structures[16].

While the reuse of pervasively present *spolia* (attested in about half of the cases in our survey[17]) was the most logical way to exploit the available resources, and was one of the factors which made pointless a long-distance distribution system of stone, other, interdependent aspects traditionally associated with technological decay (e.g. the disappearance of intensive quarrying and quarry workshops, the practice of cutting small instead of very large blocks, or the lower incidence and smaller scale of building) were also, in fact, simply a response to a changed context.

Intensive quarrying (as well as long-distance transport of sone products) is only cost-effective when the amounts of lithic materials involved are significant, and private or public demand is relatively stable, a meaningful example being some types of Roman sarcophagi, or some types of Roman or Early Byzantine capitals. With the abovementioned decrease in the quantity of stone extracted in the Early Middle Ages, quarrying the lithic materials from nearby the construction site allowed for the remarkable reduction in the freight costs, which have always represented one of the most expensive items in building projects[18]. Also, the average smaller scale of buildings – and the consequent smaller quantities of stone needed for architectural and sculptural projects – must have allowed, in many instances, the exploitation of new, and previously insufficient, extraction points and outcrops, which were often found very close to the construction

[16] II.3.2, II.4, II.6, and III.2.8.

[17] II.1. and II.4.1.

[18] II.5.

site[19], and frequently belonged to the commissioner's possessions[20]. In the absence of an economic background that allowed – as in the 1st-3rd centuries – the constant, standardised production of large architectural elements and sarcophagi, quarry workshops were no longer necessary. Moving the carving from the extraction points to the surroundings of the building sites represented the best way to reduce the risks related to the possible breakage of near-finished stone items[21]. Other Early Medieval practices, like the extraction of small stone blocks instead of large ones, corresponded to useful innovations that would also be adopted during the High and Late Middle Ages, as this method substantially eased the transport of stone items[22].

The lower incidence, and smaller size, of new buildings in comparison to other periods was only in part determined by factors like more limited availability of funds (in absolute value) than before and after the Early Middle Ages, and surely did not depend on a lack of technological skills[23]: a narrower market implied of course fewer masons, sculptors, carpenters, and so forth, but some exceptionally well-preserved monuments of the period still stand to show the excellence of their work (and the self-evident fact that their High and Late Medieval successors must have actually learnt the craft from previous generations)[24]. New stone building work was, for sure, a rarer occurrence, but some scholars have pointed out that most of the infrastructures in stone – roads, aqueducts, bridges, etc. – already existed, and hence there was simply no need to build them, and thus to quarry stone for them. Maintenance of these and other public facilities during the 7th-9th centuries, and/or the continuity of their use, are abundantly attested by archaeological and written sources. The same applies to ecclesiastical buildings and their apparent shrinkage in size: in the overwhelming majority of the most prominent European cities, large and relatively recent 5th-6th-century churches in stone were already at the disposal of the communities, which, moreover, in some areas were smaller than before, due to population decline[25]. Also, the smaller scale depended in many cases on the function of the building: monastic churches, for instance, represented a substantial part of new foundations in the 7th-9th centuries, but were meant to accommodate a limited number of persons[26].

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[19] II.3.2.

[20] IV.2.1.

[21] II.3, II.6 and III.1.4.

[22] II.3.2 and II.5.

[23] II.3.2.

[24] III.2.2 and III.2.8.

[25] III.2.8. See also the introduction to Chapter II.4.

[26] II.3.2 and II.6.

Sculptors, artists, building craftsmen: transfer of people, transfer of ideas. Probably, the abovementioned lack of an overall study was also among the reasons that favoured the formulation of the most varied hypotheses on Early Medieval sculptors and building craftspeople, yet in many cases without the support of a solid body of evidence. In this instance too, transdisciplinarity and an approach over the *longue durée* represented the key factors that have allowed this work to challenge long-established assumptions. The beginning of Part III. described different scholarly explanations for the diffusion – on a European-Mediterranean wide scale – of sculptures characterised by a rather homogeneous decorative style, mainly consisting in vegetal and geometrical patterns, interlace ornaments, and so forth.

Some studies claimed that the propagation of this sculptural fashion in the Early Middle Ages depended on the movement and trade of near-finished stone items, manufactured in the quarries within sedentary workshops: yet, as the evidence collected in Part II. shows, this was surely not the case. It is worth stressing that this theory was purely shaped by analogy with the previous periods: however, Romanists and Early Byzantinists based their reconstruction of the production processes upon massive archaeological evidence in the form of unfinished, faulty or broken architectural stone elements and sarcophagi abandoned in the quarries. On the contrary, there is nothing comparable for the Early Middle Ages: to this day, it seems that *none* of the thousands of 7th-9th-century sculpted fragments found in Western Europe was ever recovered in a quarry. Instead, the unfinished, damaged pieces are plentifully attested in or near to ecclesiastical buildings, usually reemployed as construction material, showing that the blocks (as also confirmed by the iconographic evidence provided by the illuminations) were carved in the vicinity of the construction site[27].

According to another hypothesis, the circulation of drawings, 'books of models' (*Musterbücher*), and *cartoni* / cartoons, copied by local carvers in different regions, played a major role in the dissemination of fashions in sculpture. This assumption, too, is not supported by any piece of actual evidence: moreover, it is inconsistent with, or even in sharp contrast to, the sculpting practices documented over centuries in the European continent[28].

Conversely, what is actually widely attested by the archaeological and written evidence is the circulation of masons, sculptors, painters, glaziers, and so forth. This also represents a logical way to respond to the characteristics of the Early Medieval market for stone products: in a context where demand decreased, a reduced number of artisans moved to the building sites where their

[27] II.3.2 and III.1.4.

[28] III.1.2 and III.1.3.

work was needed. Furthermore, documentary sources and inscriptions on architectural stone elements cast light on a number of aspects related to the craftsmen's mobility. For instance, the artisans were not in perpetual movement but travelled for limited periods, when summoned by the commissioners of specific projects. They tended to live in the most prominent cities, where the demand for their services was greater. Their displacement almost always occurred as a consequence of a previous contact between high-ranked individuals, who were at times bound by 'transnational' relations, and sent craftsmen to one another: indeed, contrary to what was surmised in some studies, craftsmen frequently moved across political and diocesan boundaries. Although servants and monks are sometimes attested as 'sedentary' makers of stone items, the artisans who travelled were mostly lay freemen, actual entrepreneurs running a workshop with employees and apprentices, who often belonged to the master's progeny. The best craftsmen were the ones who had more chances to move for work, and their skills were highly appreciated – and adequately remunerated – by the elites that hired them, to the point that, in the literary sources, the most talented and 'expensive' artisans from afar seem to have replaced the exotic stone from distant lands as a status symbol for the patrons. Actually, a number of records refer to the masters as rich landowners, holding a quite respectable position in their communities. The costs for the artisans' wages, however, were not always met by the commissioners: often, just like in Late Antiquity, emperors and sovereigns 'offered' skilled workforce as a part of the gifts and endowments they gave to new ecclesiastic foundations[29].

Sculpted fragments, correspondence analysis & seriation: a promising new method. Archaeology and art history provide us with the fascinating possibility to follow the movement of the same group of sculptors between different locations, but only when the sculpted materials are analysed with an appropriate, and systematic, method. Even though such a systematic method represents the standard approach used for studying other classes of objects – from Prehistoric pottery to Late Medieval frescoes – almost inexplicably it has only very rarely been applied to Early Medieval sculpture. Sculpted fragments from a given find-spot should be considered in their whole, and not individually, as this is the only way to identify the original stone furnishings – altars, chancel screens, ciboria, etc., not necessarily coeval to each other – to which they pertained.

Of course, considering the pieces of furnishings in their entirety involves analysing their decoration in its entirety, although the ornaments comprised in such decoration have arrived to us 'scattered' in different fragments. On the contrary, in most of the studies dealing with Early Medieval sculpture, the fragments (and the ornaments carved on them) are catalogued and analysed

[29] III.2., III.5, IV.1, IV.2.5.

separately. Examining individual units isolated from their context, however, can not only result in the obvious absence of reconstructive hypotheses for the original Early Medieval furnishings, but can also lead to major problems when it comes to determining the chronology of the sculptures: this is usually achieved by comparison with similar finds from other locations, but searching for connections and artistic relations on the basis of single ornaments often leads to misleading conclusions, or, at the very least, to approximate, broad dating (typically, to the '8th-9th centuries', i.e. a time-span of two hundred years)[30].

When analysing a Greek black-figure vase broken into pieces, no archaeologist would ever start to search for analogous specimens before getting an idea, as precise as possible, of the original form of the vase and all of its decorative features. Even less, he or she would search for parallel finds taking into consideration only a single fragment or two among the many that pertained to the same vessel. In the same way, Early Medieval sculpted fragments from a given find-spot should be considered in their whole, and compared only with entire *groups* of fragments from other find-spots: it is thus possible to detect not single and sporadic, but multiple points in common. The studies which adopted this systematic approach (increasing in number in recent years, but to this day, still uncommon), have provided more precise chronologies and very interesting results – among which is, in some cases, the abovementioned possibility of recognising the work of the same mobile team of carvers in different locations[31].

Some archaeologists have expressed a certain mistrust towards the use of art-historical methods for this purpose. However, on a very general level, one might say that both archaeologists and art historians analyse the material remains of a given human action occurring in the past (carving, painting, …), and try to contextualise it. Although the research goals can differ, some of the most accurate studies on Early Medieval sculpture, whether conducted by archaeologists or art historians, have adopted an ultimately very similar approach, which produced scientifically verifiable results, based on well-organised evidence[32].

In this work, the method has been applied to a group of sculptures from find-spots distributed on both sides of the Western Alps, and has been 'modulated' in a particular way, i.e. with the use of correspondence analysis and seriation. This statistical method has been successfully employed with other classes of archaeological materials – e.g. grave goods – but never before on

[30] I.2.5 and III.3.

[31] III.3.

[32] III.4.11.

Early Medieval sculpted fragments[33]. In plain words, the seriation allows us to verify the existence of, and examine, *patterns of association* of *qualitative variables*: in our case, the ornaments (or 'types') and their components. These have been inserted into typological tables before processing the data with a specific software, in order to consider whole contexts in a systematic way, by comparing *all* the sculptures from a site (and not individual fragments) to *all* the sculptures from other sites[34]. The underlying idea is that in Early Medieval Europe there was a 'mainstream fashion' in sculptural decoration – floral motifs, scrolls, interlaces, etc. – but every group of sculptors used just a limited number of these 'fashionable ornaments', and interpreted them in a unique way[35]. Obviously, the typical decorations of a given workshop are more easily recognisable when they are complex: the more details and components are included in a pattern, the wider the basis for comparison and for the identification of the production of that specific team of sculptors. These peculiar motifs are sometimes so unique that they correspond to actual 'signature motifs', which are the most meaningful sign of the work of the same mobile sculpting atelier in different churches[36]. Vice versa, simpler ornaments, or motifs characterised by a strictly geometrical structure – plaits, bead-and-reel mouldings, etc. – are easier to replicate in the same way, are used over prolonged periods of time, and are therefore less significant for recognising the places where the same carvers have operated. However, the selection of just a certain set of these simpler ornaments – over a number of potentially 'available' ones – is also indicative of the *repertoire* of the workshop[37]. The seriation was also of great help for easily detecting the fragments with motifs / types which, in all likelihood, did not belong to the production of the workshop: therefore, this method is also very useful for identifying possible earlier or later pieces of stone furnishings in a given church (obviously, made by different workshops), just as in the case of Ventimiglia[38].

Eventually, the seriation enabled the recognition of the work of the same sculpting atelier – called Piedmontese-Provençal workshop – in fifteen churches. As indicated by the securely dated sculptures from one of the find-spots (Nice-Cimiez, 777-787), these carvers operated in the late 8th century, and the nearly identical characteristics of many decorated fragments in several sites suggest that they were produced in a relatively short period of time, of at most one generation. As for the provenance of the masters – who worked for high-ranking members of the ecclesiastical elites – the

[33] III.4.

[34] III.4.6.

[35] III.2.6, III.4.5 and III.4.6.

[36] III.4.5, III.4.6 and III.4.7.

[37] III.4.6 and III.4.7.

[38] III.4.8 and III.4.10.

distribution of the find-spots, which are concentrated in modern North-Western Italy, seems to indicate that this was the region where they came from; the existing evidence, however, is not conclusive on this point[39].

Masters on the move. Distances and practical aspects. To remain in the sphere of comparison between academic disciplines, it seemed interesting to contrast the data provided respectively by archaeological and written-historical evidence as for the distances covered by the mobile sculpting workshops. According to both categories of sources, medium- and short-distance journeys were more frequent than long-distance movements. Yet the cases of long-distance displacement of skilled workforce are more numerous in the documentary than in the material evidence. In all likelihood, the explanation for this discrepancy resides in the very nature of the two datasets: on the one hand, the written sources tend to focus on the highest ranks of political and ecclesiastical elites (i.e. on the individuals who had the means to summon craftsmen from the farthest regions), and on their most spectacular architectural enterprises; on the other hand, archaeological evidence concerns in many cases the sculpted remains from small or minor churches: hence the statistical bias towards the longest distances in the case of literary evidence, and towards the shortest distances in the case of material sources. Also, in the studies on Early Medieval sculpture, the propensity to favour a local, or regional, perspective, might hamper the possibility of detecting the work of the same artisans in distant locations[40].

According to a long-established *topos* of the scientific literature, during the Early Middle Ages people travelled very little, or not at all: however, some authoritative studies dealing with economics and social history of the period have clearly shown that this assumption is far from being true. Calculating the duration of a journey is certainly not an easy task, but the average was between 15 and 30 km per day overland, depending on the mode of transport and the weather: with favourable conditions, however, the length of a daily segment of the journey could significantly increase. Therefore, one can assume that 'our' sculptors may have covered distances of 200-300 km – well attested by the written documents and the archaeological evidence – in about 8-10 days and, in some particularly fortunate cases, in 'only' 5-6 days[41]. As scant as it may be, the written evidence also allows us to reconstruct some practical aspects of travelling in the Early Middle Ages, such as

[39] III.4.9.

[40] III.5.1.

[41] III.5.1.

its costs (and who paid them), the kinds of accommodation available, the rules of hospitality, and so forth[42].

The patrons and their tasks. In the fourth and last Part of this work, the building activities and the production of architectural sculpture have been addressed from the perspective of the patrons. Also in this case, a collection of different categories of sources, conducted considering a broad area and with an approach in the long run, enabled us to suggest plausible answers to questions previously debated in the scholarship.

The first step of the construction project, including the addition or renewal of decorated stone furnishings, consisted of course in fund raising. Rarely the commissioners paid for the works out of their own pocket: this is indirectly confirmed by the emphasis placed on this by the chroniclers when they did so, the most prominent examples being attested in the *Liber Pontificalis*. Normally, the funds were taken out of the taxes collected from the community. However, the practice of donation was also widespread: stone furnishings, as attested by some inscriptions on the sculpted fragments, could be donated by kings, princes, or aristocrats, and noblemen and emperors frequently financed building projects partly or entirely[43].

Supplying materials was another task for the Early Medieval patrons. This point is quite clearly shown by a number of written records, contrary to what has been hypothesised in some previous studies – that assumed that the sculptors, or in general the building craftsmen themselves took care of the procurement of stone and everything else necessary for their work. By contrast, the first documents attesting architects or master builders in charge of the acquisition of materials only date to the late 10th and 11th centuries[44].

Supplying stone: anarchic operation or organised procedure? The organisational aspects of stone supply in the Early Middle Ages is a rather neglected issue. Only a few scholars have addressed this subject, at times even assuming that behind this stage – a fundamental one for carrying out a project – there was practically no organisation at all, as if anyone who wanted to do so, could go to a quarry and cut parts of the rock faces, or could go to an ancient building and detach from it marbles, stone blocks, or bricks. Once again, such simplistic views of a somewhat 'anarchic' Early Middle Ages are disproved by the written evidence. Sources on this point are, as usual, certainly not numerous, but they agree upon the fact that, even though the market for stone

[42] III.5.2.

[43] IV.1.

[44] IV.2.

products was no longer as broad as it used to be in the Roman period, quarries and ancient buildings were still a very valuable resource.

As for the quarries, they were controlled and administrated by secular and ecclesiastical elites. As the Christian religion spread in Europe, and as the monasteries were growing as central points of the respective regions, an increasing number of wealthy believers donated their possessions to the Church. From the 11th century onwards, a number of documents attest that the estates pertaining to the monasteries often included quarries, and a few records dating back to the 8th and 9th century bear witness to the same fact[45]. The statistical survey presented in Part II. has shown a ubiquitous use of local stone: this, in addition to the data on the patrons' responsibility for procuring the materials, might explain the dearth of references to quarries' propriety and management in the written sources. Since freight costs for stone represented one of the most expensive items in a building and sculptural project, patrons must have been motivated to use the resources from their own possessions: a circumstance that may have been given for granted or considered not worth recording, and thus omitted, by the compilers. During the Early Middle Ages, and until about the early 11th century, the documentary evidence seems to suggest that the quarries were mostly used for own, internal needs, but High and Late Medieval sources attest a gradual opening to the external market, in parallel with the growth of the trade in stone products. In this period, the commercial exploitation of extraction points was not always directly managed by the owners: monasteries, for instance, could rent out the quarries to private individuals[46]. A similar mechanism is attested for the administration of ancient buildings to be used as a source of raw materials.

Precisely the fact that High and Late Medieval documents mention private individuals obtaining the rights to trade in *spolia*, led a few scholars to hypothesise that this could have also occurred in the Early Middle Ages. On the contrary, this practice seems not attested by any piece of evidence from the 7th-9th centuries. As mentioned above, another quite widespread *topos* of the scholarship, likewise purely conjectural, states that the procurement of stone from ancient buildings could take place in a haphazard way. Its persistence in the scientific literature was probably favoured by the lack of specific studies on the administration of ancient buildings in the Early Middle Ages – whereas research exists as for the Roman period and Late Antiquity. Unsurprisingly, collecting the scattered evidence on the subject was again not the easiest of tasks. Yet the information that it was possible to gather clearly suggests that in the Early Middle Ages the rights to

[45] IV.2.1.

[46] IV.2.1.

take materials from ancient public monuments pertained to kings, emperors, popes, or anyway to the highest political authority in each territory. Every patron willing to carry out a project with stone taken from Roman temples, city walls, and other structures, had to turn to this authority for permission: these circumstances appear as a continuation of the Roman and Late Antique tradition, when the rights to use materials from earlier monuments were generally an imperial prerogative. Dismantling an old building was a complex operation and entailed very specific professional skills and machinery, both in order to detach elements like large columns without compromising the stability of the rest of the structure – and the life of the workers – and in order to acquire the materials without breaking them. Therefore, some scholars hypothesised that specialised craftsmen for this purpose may have existed. Among the written sources collected in this work, none directly mention these artisans; a passage of Heiric about some monks from Auxerre, however, very probably refers to the payment of such a specialised workforce: in all likelihood, many of these professionals were also mobile ones, circulating among different locations where their services were needed, just like their sculptors and masons colleagues. Machinery for dismantling must have been very similar, or identical, to that required for building: thus it is possible to imagine that, at least in some cases, construction craftspeople were the ones in charge of detaching *spolia*[47].

Hiring artisans. Obviously, patrons selected the craftsmen according to the extent and type of work to be carried out. The choice of skilled workforce depended on many interdependent factors, among which one can distinguish four main ones. The budget – i.e. the amount of money available for the project – determined of course the professional level of the artisans, as the most talented ones were more expensive. The capital to pay the workers, however, was not necessarily disbursed by the commissioners: when organising the reconstruction of St. Riquier, for instance, abbot Angilbert received materials and «the most skilful» sculptors, builders, and glaziers as an endowment by Charlemagne. This and other examples also make clear that a second factor of paramount importance in the recruitment of the workforce was the patron's social network: as seen in Part III., the artisans almost always moved from one place to another in consequence of a previous contact between two individuals. The more talented a craftsman, the higher his wage, and the higher his odds of being summoned to distant locations. Therefore, patrons from the highest social ranks had the best chances to get the best artisans: not only because they could afford them, but also because they had a wider contact network than the lower ranks of the elites, hence a wider range of potentially recruitable masters. Architectural and sculptural fashions were another factor that influenced the selection of craftsmen. The knowledge of different styles and the personal tastes,

[47] IV.2.2.

though, only played a role if the commissioners had the financial means and/or the appropriate contact network to specifically hire the desired artisans. At last, as obvious as it may sound, a relevant condition to be fulfilled was the actual availability of the 'targeted' masters in that precise moment: building projects (with their sculpted and painted decoration) could last for several years, and the best craftsmen, in particular, must have been often busy.

Craftsmen's movement and elite-networks. When considering these points, a significant consequence for the subject we are concerned with, is that identifying the locations where the same mobile sculpting workshops have operated (as has been done in the present work with seriation) allows us to literally draw a map of the elites-networks that have existed in a given territory and period: since, as seen, skilled craftsmen tended to be hired by individuals who knew one another, and 'exchanged' the best masters, the movements of the latter mirror the relations between secular and ecclesiastical elites, whose members were often bound by 'transnational' and 'trans-diocesan' alliances[48].

Whether mobile or not, skilled sculptors, masons, carpenters, painters, and so forth, represented however just a minority of the labourers on the building site, especially in the case of large projects. Usually, the unskilled workforce was locally hired, often composed by persons who were otherwise occupied in food production, cattle farming, and similar activities. In this case, the main challenge for the patron was of logistic nature. Reaching out, organising, lodging and feeding – as meals were often part of the payment – large numbers of unskilled workers, at times coming from several surrounding locations, required an effort that was in some ways bigger than taking care of the lesser numbers of specialised craftsmen, and that was accordingly highlighted by the chroniclers.

The forgotten makers. In the category of unskilled workforce one can include the non-specialised artisans, who only mastered some rudiments of masonry, sculpture, and other crafts: these tended to be employed by commissioners who had limited amounts of money to spend, and did not have a broad contact network. From an archaeological and historical perspective, less talented sculptors are of course no less important than the very skilful ones, and have also left a conspicuous heritage in terms of carved stones. Yet these actors – together with further types of unskilled workers at the building site – are the most difficult to study. On the one hand, the written sources tend to be silent on them, and on the other, the sculpted items they produced are almost always problematic: precisely the fact that they were made by non-professionals turns them very often into unique pieces. The lack of similar specimens prevents us from pinpointing a precise

[48] IV.3.1.

chronology – as shown by objects that have been dated from the 7th to the 12th centuries – which, in turn, frustrates any attempt to say anything concrete about their production framework and, more generally, their historical context. However, it is to be hoped that future research – maybe backed by the possible development of new techniques and research methods – will provide more information on these almost forgotten makers[49].

An economic model. In a paper dealing with marble trade, Bryan Ward-Perkins wrote that a great deal of misunderstanding would be avoided if scholars would cease trying to squeeze past practices into a single mould[50]. By definition, every model has its exceptions: of course, this also applies to the economic model presented in this work. Proximate supply of stone did not occur, for instance, in the cases of the *spolia* transported by the will of Charlemagne from Rome to Aachen, of those taken at Arles and Marseille by the monks from Auxerre, or of the stone coming from Vinschgau Valley and used to manufacture the sculptures at Chur. Quarry workshops for non-utilitarian goods, otherwise unattested in Early Medieval Europe, continued to function throughout the 7th century in Merovingian Gaul, for the manufacturing of sarcophagi. Especially in the areas which were far from central places, local, sedentary and non-mobile builders and sculptors must have existed, too: their work, as mentioned, is possibly identifiable in a number of items devoid of precise parallels, and clearly made by non-professionals, who only mastered the basis of masonry and carving.

All this being said, it is a fact that the local supply of stone, carving of stone items at or nearby the building site, and the mobility of skilled craftsmen – over short and long distances – appear by far as the most common practices in the Early Middle Ages, attested by abundant evidence of various types. The differences between the Early Medieval system and those of the previous periods were not caused by sudden breaks, but were the result of gradual transformations, and responded to the changes in the market for stone products: both the extensive use of locally procured stone, and the circulation of artisans, are attested earlier than the 7th-9th centuries, but in this period these trends intensified, and represented new strategies to adjust to a changed economic, political, and cultural context. Some of the features of the Early Medieval model – especially, but not solely, the mobility of masons, sculptors, and builders – would further develop in the High and Late Middle Ages, confirming the key-role that the Early Middle Ages had in the transition from the Ancient production system to the Medieval one. The elements of continuity, though, would find a place in yet another production framework – where, for instance, sustained quarrying resumed,

[49] IV.3.2.

[50] Ward-Perkins 1980.

together with the long-distance transport of stone, and roughing out (or manufacturing) of stone items at the extraction points. But this is another story, one that is right before our eyes, every day, when we pass by our beautiful Romanesque and Gothic cathedrals.

Appendix 1.

Table with provenance of lithic materials

In the table contained in this Appendix are listed all the find-spots included in the statistical survey on the provenance of the stone used for Early Medieval sculpture presented in Chapter II.1. The sample-area encompasses present-day Northern Italy, Austria, Switzerland, South-Eastern France, and Southern Germany. The table includes groups of Early Medieval objects of several types[1]: architectural elements (capitals, lintels, doorposts, window jambs, etc.), stone furnishings (altars, chancel screens, ciboria, ambos, baptismal fonts, etc.), and some richly decorated sarcophagi and tombstones. The size of the dataset, however, requires some explanations on how the data were collected and organised. Here follows a description of the main items composing the table.

– *Find-spot (church, monastery, or other contexts)*. In the table, the places where the sculpted items were found are arranged in alphabetic order, first according to *Country*, then – also in alphabetic order – according to *Region*, *District / province / department*, *Municipality*, and *Find-spot*, keeping every location name in the original language. Some stone objects come from archaeological excavations performed in the last decades with modern scientific methods, some others have been preserved in Museums for a long period of time, at times since the 19th century. Within the considered area, only the samples provided with sufficient documentation about their provenance have been included in the table, whereas the groups of objects of very uncertain or completely unknown origin have been excluded from the survey. In some cases, the sculpted items belong to collections coming from (either very old or even relatively recent) excavations that were never systematically published. In other occasions, groups of sculpted objects were accidentally recovered (typically, during agricultural works or maintenance works for roads or buildings in cities) and acquired by Museums or State departments for Cultural Heritage, in absence of specific data on their archaeological and stratigraphic context. As a result, the location where the objects were found can be known for certain (e.g. a city, a small town, a road, a farmland, etc.), whereas the

[1] The time-span considered has been 7th-9th centuries, although the overwhelming majority of the items date to 8th and 9th centuries. On the 'scarcity' of architectural sculpture ascribable to the 7th century in Europe see Chapter I.1. and Paragraph III.2.8.

exact find-spot may be uncertain: for instance, there might be a doubt about which of two churches in a settlement, or which section of a large cultivated field, the sculptures come from. These (seldom) cases have been anyway included in the dataset, as the aim was to determine the distance from the stone sources on a scale of a few kilometres – which is the relevant datum in the context of a general survey as such.

– *Stone type*. It has been chosen to keep the designations as simple as possible, using common names of stones (marble, limestone, sandstone, etc.), occasionally followed by specifications (colour, grain, etc.) if these were available.

– *Distance (from the stone source)*. Even when the sculptures' find-spot and the quarry (or ancient city, in case of reuse of old materials) of provenance of stone are very well-known, calculating distances more precisely than in a range of 5/10 kilometres is not only pointless, but almost always impossible. As for freshly quarried stone, quarries can occupy a very large area, and quarry faces change substantially over time (i.e. a geologist can recognise the area or quarry of origin, but the exact rock face where a stone block was cut might have been gone for centuries). As for the stone recycled from ancient buildings or stone items – e.g., the very frequent reuse of Roman sarcophagi – many ancient monuments in the same city may be pinpointed as a potential source of raw materials for the Early Medieval sculptures in a given church. When calculating distances from the source of stone, one might also take into consideration other variables: for instance, even within the ancient and medieval road network, there can be different possible routes for the transport of stone (including waterways). In the table, the distances are therefore rounded off to the nearest 5 km. A range of kilometres (e.g. 0-35 km; 0-10 km; 0-50 km) is indicated, instead of a figure, when there were more than one possible extraction point of the same stone type in the same area.

– *Proximate supply of materials* / *Medium range (50-100 km)* / *Imported materials*. In the table, the materials employed in each find-spot can fall under four categories: *local stone*, *reused stone*, stone procured on a *medium range (50-100 km)* and *imported stone*. The first two attest short-range-supply of raw materials, either freshly extracted in a local quarry (*local stone*), or taken from an ancient building in the surrounding area (*reused stone*). Usually, the stone is recognised as reemployed when there are tangible traces of a previous use: for instance, there can be a Roman or Late Antique carving or inscription on the back side (or anyway a surface hidden from view) of an Early Medieval chancel screen slab. Obviously, the stone can be *both locally supplied and reused*, if

it comes from a portion of an ancient monument built with local stone[2]: in this case, both the box *local stone* and *reused stone* have been flagged. Whenever possible, Early Medieval sculptors and their patrons preferred to use, as source of materials, the parts of ancient buildings that were made with decorative stones, first and foremost the precious marble[3]. Decorative stones used in the Roman and Late Antique periods could be imported from afar: logic consequence of their reuse at a later time is, for example, that an Early Medieval sculpted item found at Torino, in the westernmost part of Northern Italy, can prove to be made in Greek marble, coming from thousands of kilometres away[4]. Of course, these are not the distances to be taken into account in the survey on provenance of raw materials: for the Early Medieval sculptors working at Torino, the 'real' stone source was not a remote quarry in Greece, but a much closer Roman building within the city. As mentioned above, when ancient imported stone is reused, it is often difficult to pinpoint precisely the monument the stone originates from: however, hypotheses concerning one or more possible cities / locations of provenance are almost always provided in literature, and they virtually never exceed 15/30 km away. In other occasions, authors refer in general to a reuse from older buildings in the surroundings / surrounding cities, which are also to be found in a radium of 0-35, most often in 0-5 km. Given this uncertainty, in many cases of reemploy, the distance from the source of stone indicated in the table is not expressed in number of kilometres, but with the abbreviation '*i.s. / s.a.*', meaning 'immediate surroundings' / 'surrounding area' and approximately quantifiable as 0-35 km. When only 'i.s.' appears, the stone has been taken in the immediate surroundings, in a radium of circa 0-5 km: for instance, the marble used at Marseille Saint-Victor came from the Roman and Early Christian monuments of the city, most probably in a range of 0-5 km circa[5]. 'Surrounding area' ('s.a.') must be intended as an approximate range of 0-60 km. All three – *i.s.*, *i.s. / s.a.*, and *s.a.* – can be used to designate distances not only in the cases of reuse, but also in some cases of presumably freshly quarried stone. Sometimes, the rock formations where the stone is taken from extend over considerably large areas with unvarying geological features, being impossible to pinpoint the exact spot where the lithic materials were extracted. In these cases too, the distance is designated as *i.s. / s.a.* or *s.a.*. One must course assume that, within a rock formation that extends for 50 / 60 km or more, the stone was taken in the closest possible location, for there is hardly a reason to travel dozens of kilometres to get materials that can be procured 2 or 3 km away from the

[2] See below, Paragraph II.4.1.

[3] In general, see Part IV.

[4] Table, Torino, Episcopal complex (San Salvatore).

[5] Table, Marseille, Saint-Victor.

building site. Anyway, the data in the table have been kept 'faithful' to the information reported in literature, thus preferring, in the cases of large rock formations, the labels *i.s. / s.a.* (0-35 km circa) or *s.a.* (0-60 km circa) – even if, most likely, the stone was procured from a very close location to the find-spot.

The stone that was not procured locally has been qualified as either *medium range* (by convention, between 50 and 100 km away) or *imported* (when it was supposedly freshly quarried in a source that lye 100 or more km away). These are, as seen above, relatively short ways if compared to the distances lithic materials could cover in the Roman and Late Antique periods, but still remarkable for the Early Middle Ages[6].

– *Origin of the stone and stone analysis*. The location of provenance of stone (column *Origin*) is not always discussed in the scientific literature. When available, the data on the quarry or area of origin of the stone have been inserted in the table, whereas in the cases of reuse, for the reasons discussed above, the provenance of stone is simply indicated as 'ancient monument' (meaning not only Roman or Early Christian buildings, but also gravestones, *arae*, etc.). When the assessment on the type of stone employed and its provenance was made by a geologist or petrographer, the box *geological assessment* (abbreviated '*Geol.*') is flagged in the table; additionally, the box *petrographic analysis* (abbreviated '*Petr.*') is flagged when this laboratory analysis has been performed[7]. At times, the appraisal on stone types and locations of provenance was made by the archaeologists and historians of art who studied the sculptures. In general, however, these data have proven to be very reliable, as they were generally confirmed when followed, at a later time, by petrographic analysis[8].

[6] See Chapter II.2.

[7] In some occasions, the observation of the macroscopic characters of the stone are sufficient to determine the location of provenance. In some others, it is necessary, or preferable, to perform laboratory analyses on a small sample taken from the sculpture. It is thus possible to acquire data on the microscopic characteristics of the rock and on its chemical composition, which are then compared to the samples coming from quarries, rock faces or outcrops.

[8] See for instance, in the table, Albenga (baptistery) and Cividale del Friuli (sculptures in several churches).

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
AT	Kärnten	Klagenfurt	Sankt Peter am Bichl	Sankt Peter	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Klagenfurt-Land	Karnburg	Church	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Klagenfurt-Land	Magdalensberg	Sankt Lorenzen an der Gurk	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Klagenfurt-Land	Sankt Peter bei Moosburg	Sankt Peter	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Sankt Veit an der Glan	Liebenfels	Sankt Johannes in Zweikirchen	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Sankt Veit an der Glan	Sankt Veit an der Glan	Ossuary of Sankt Veit	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Kärnten	Spittal an der Drau	Millstatt am See	Monastery of Millstatt	Marble	x				Gummern	30		x	Karpf 2001, 23; personal communication by Kurt Karpf, 21.08.17
AT	Kärnten	Spittal an der Drau	Molzbichl	Sankt Tiburtius	Marble	x				Gummern	25		x	Karpf 2001, 23; personal communication by Kurt Karpf, 21.08.17
AT	Kärnten	Spittal an der Drau	Seeboden am Millstätter See	Sankt Wolfgang am Fratres	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.			Karpf 2001, 23
AT	Kärnten	Völkermarkt	Völkermarkt	Sankt Martin bei Niedertixen	Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
AT	Tirol	Leinz	Oberleinz		Marble	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Karpf 2001, 23
CH	Canton of Aargau	Brugg	Windisch	Church (?)	Limestone					not discussed (local quarry in the Roman period)	i.s. / s.a. ?			Moosbrugger-Leu 1959; Faccani 2013, 129, 132

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
CH	Canton of Bern	Jura bernois	Moutier	Former monastery of Moutier-Grandval	Molasse					not discussed				Quiquerez 1861; Stékoffer 1996; Faccani 2013, 128-129
CH	Canton of Geneva	Genève	Genève	St.-Pierre (cathedral)	Sandstone	x				Quarries in the area	0-50		x	Faccani 2012a, esp. 235, 237, 262; Faccani 2013, 130; personal communication by Guido Faccani, 20.08.2016
					Marble		x			Ancient monument / stone item	i.s. / s.a.		x	
					Limestone	x				Local stone (probably from Seyssel)	45		x	
CH	Canton of Grisons	Inn	Müstair	Sankt Johann (monastery)	Marble	x				Lasa/Laas	25	x	x	Unterwurzacher / Goll 2009; Unterwurzacher / Obojes 2012; Faccani 2013, 130; Roth-Rubi 2015; Unterwurzacher 2015
CH	Canton of Grisons	Plessur	Chur	Sankt Florinus-Kapelle (Hof)	Marble				x	Val Venosta (Lasa/Laas)	150 / 200			Sulser 1975, 223; Sulser 1980, footnote 3

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
CH	Canton of Grisons	Plessur	Chur	St. Mariä Himmelfahrt (cathedral)	Marble				x	Val Venosta (Lasa/Laas)	150 / 200		x	Sulser 1975, 228-229; Sulser / Claussen 1978, 65; Sulser 1980, footnote 3; Sennhauser / Roth-Rubi 2009; Faccani 2013, 130
CH	Canton of Grisons	Plessur	Chur	Sankt Stephan; Sankt Luzius/Luzi; Cemetery between the two churches	Marble				x	Val Venosta (Lasa/Laas)	150 / 200		x	Sulser / Claussen 1978, 65 and 69; Sulser 1980, footnote 3; Sennhauser 2009
CH	Canton of St. Gallen	See-Gaster	Rapperswil	Reuse in a house wall (Webergasse 10; 1 fragment)	Limestone					not discussed				Anderes 1966, 433, 477, and fig. 549; Faccani 2013, 129 (map); Goll 2013
CH	Canton of St. Gallen	See-Gaster	Schänis	Sankt Sebastian	Marble				x	Lasa/Laas	190			Sennhauser / Roth-Rubi 2009; Faccani 2013, 130; Faccani 2013, 130 and 131, fig. 9 (1 capital, limestone)
					Limestone					not discussed				
CH	Canton of St. Gallen	Sankt Gallen	Sankt Gallen	Monastery of Sankt Gallen, cathedral	Sandstone	x				Quarries in the area	0-30		x	Faccani 2013, 130; personal communication by Guido Faccani, 20.08.2016
CH	Canton of Ticino	Locarno	Ascona	Santi Fabiano e Sebastiano	Marble (1 fr.)		x			Ancient monument / stone item	i.s. / s.a.			Roth-Rubi 2011, 235-236; Faccani 2013
					Limestone (different types)		x			Ancient monument / stone item	i.s. / s.a.			

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
CH	Canton of Ticino	Lugano	Lugano, quarter Sonvico	San Martino	Marble					not discussed				Roth-Rubi / Sennhauser 2007, 285
CH	Canton of Ticino	Mendrisio	Castel San Pietro	Chiesa Rossa (San Pietro)	Marble			x		Musso	50			Roth-Rubi / Sennhauser 2007, 286
CH	Canton of Ticino	Mendrisio	Riva San Vitale	San Giovanni (battistero)	Limestone (different types)					not discussed				Roth-Rubi / Sennhauser 2007, 288; Faccani 2013, 131-132
CH	Canton of Valais	Martigny	Martigny	Notre-Dame	Limestone	x				Quarries in the area	0-50			Faccani 2010 Katalog, 146; Faccani 2013, 129; personal communication by Guido Faccani, 20.08.2016
CH	Canton of Valais	Saint-Maurice	Saint-Maurice	Monastery of Saint-Maurice	Limestone	x				Jura mountains (exact provenance not discussed)				Sharman 1862; Faccani 2013, 130
CH	Canton of Valais	Sion	Sion	Notre-Dame (cathedral)	Limestone	x				Quarries in the area	0-50			Antonini / Dubuis / Lugon 1989; Faccani 2013, 130; personal communication by Guido Faccani, 20.08.2016
CH	Canton of Vaud	Broye-Vully	Avenches	Avenches, exact findspot uncertain and so-called "Insula 57"	Limestone	x				Quarries in the area	0-30			Faccani 2001, 224 and footnote 151; Faccani 2003; Faccani 2013; personal communication by Guido Faccani, 20.08.2016

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
CH	Canton of Vaud	Jura-Nord Vaudois	Baulmes	Baulmes, exact findspot uncertain	Limestone	x (?)				not discussed (very probably local stone: quarries in the surroundings)	i.s. / s.a. (?)			Morlot 1861; s.n. 1862; Faccani 2013, 128-129
CH	Canton of Vaud	Jura-Nord Vaudois	Romainmôtier-Envy	Monastery of Saint-Pierre-et-Saint-Paul	Limestone	x				Jura mountains (exact provenance not discussed)	i.s. / s.a.			Pfaff 1984, 99-101; Faccani 2013, 129
CH	Canton of Vaud	Lausanne	Lausanne	Notre-Dame (cathedral)	Marble (1 fr.)					not discussed				Huguenin / Cassina / Lüthi 2006, 142; Faccani 2013, 129
					Limestone					1 fr. (tombstone, 875): Jura mountains, South, foot (exact provenance not discussed); Other limestone fragments: not discussed			x (1 fr.)	
CH	Canton of Zürich	Zürich	Zürich	Fraumünster	Sandstone					not discussed				Faccani 2012, 101, footnote 23; Faccani 2013, 130
DE	Baden-Württemberg	Calw	Calw / Hirsau	St. Aurelius Monastery	Sandstone					not discussed				Baum 1958; Putze 1991, 19-26
DE	Baden-Württemberg	Esslingen	Esslingen	St. Dionysius	Sandstone (Stubensandstein)					not discussed				Strobel 1995
DE	Baden-Württemberg	Konstanz	Reichenau Mittelzell	SS. Maria und Markus	Sandstone	x				Reichenau or surroundings	0-5	x	x	Information Romina Schiavone; Hecht 1928, 71-89; Doberer 1965
DE	Baden-Württemberg	Konstanz	Reichenau Niederzell	SS. Peter und Paul	Sandstone	x				Reichenau or surroundings	0-5	x	x	Information Romina Schiavone; Zettler 1993; Ruck 2001; Untermann 2001; Schiavone forthcoming
DE	Bayern	Augsburg	Augsburg	Mariä Heimsuchung Cathedral	Limestone					not discussed				Johannson-Meery 1993, 31-32
DE	Bayern	Augsburg	Augsburg	Sankt Ulrich und Afra	not discussed					not discussed				Johannson-Meery 1993, 33-34

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
DE	Bayern	Bad Tölz-Wolfratshausen	Benediktbeuern	Benediktbeuern Monastery (nowadays Sankt Jakob parish church)	Sandstone (molasse)	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Dannheimer 1980, 39; Johannson-Meery 1993, 34-35
DE	Bayern	Eichstätt	Eichstätt	Willibald's cathedral	Sandstone					not discussed				Johannson-Meery 1993, 44
DE	Bayern	Landsberg am Lech	Sandau	Sandau Monastery (nowadays Sankt Benediktus parish church)	Rätkalk limestone					Northern Alps	s.a.		x	Dannheimer 1980, 62, 64
					Sandstone (coarse grains)					Northern Alps	s.a.		x	
DE	Bayern	Miesbach	Tegernsee	Tegernsee Monastery (nowadays parish church)	Gault-Flysch sandstone	x				Sankt Quirin	2		x	Dannheimer 1980, 71
DE	Bayern	Ostallgäu	Westendorf		Limestone					not discussed				Johannson-Meery 1993, 66-69
DE	Bayern	Pfaffenhofen an der Ilm	Ilmmünster	Ilmmünster Monastery (nowadays Sankt Arsatius parish church)	Sandstone (lime and dolomite)	x				Alps			x	Dannheimer 1980, 56; Johannson-Meery 1993, 45-62
DE	Bayern	Pfaffenhofen an der Ilm?	Ilmmünster?		Sandstone					not discussed				Johannson-Meery 1993, 63-65
					Limestone					not discussed				
DE	Bayern	Rosenheim	Gstadt am Chiemsee	Sankt Petrus	Sandstone					not discussed				Dannheimer 1980, 50
DE	Bayern	Rosenheim	Chiemsee	Fraueninsel	Flysch sandstone (quartzitic)	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Dannheimer 1980, 44, 46-47; Johannson-Meery 1993, 37-41
					Marble (white)					not discussed			x	
					Untersberg marble (white)	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	
DE	Bayern	Rosenheim	Chiemsee	Herreninsel	Limestone	x				Helvetic nappes	i.s. / s.a.		x	Dannheimer 1980, 53-54; Johannson-Meery 1993, 42-43
					Oligocene sandstone (light yellow)	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	
DE	Bayern	Weilheim-Schongau	Bernried am Starnberger See	Bernried Monastery (nowadays Sankt Martin parish church)	Reiselsberg Sandstone	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Dannheimer 1980, 42; Johannson-Meery 1993, 36
DE	Rheinland-Pfalz	/	Mainz	St. Alban Monastery	Sandstone		x			Ancient monument / stone item	0-5		x	Schulze-Dörrlamm 2007, 644 and 647-648; Schulze-Dörrlamm 2013

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
DE	Rheinland-Pfalz	/	Mainz	St. Johannis	Sandstone					not discussed				Schulze-Dörrlamm 2006; Schulze-Dörrlamm 2013
FR	Auvergne-Rhône-Alpes	Ardèche	Alba-la-Romaine	Saint-Pierre	Limestone					not discussed				Buis 1975, I, 52
FR	Auvergne-Rhône-Alpes	Ardèche	Bourg-Saint-Andéol	Saint-Polycarpe	Limestone					not discussed				Buis 1975, I, 54
FR	Auvergne-Rhône-Alpes	Ardèche	Bourg-Saint-Andéol	Parish church	Limestone					not discussed				Buis 1975, I, 54-56
FR	Auvergne-Rhône-Alpes	Ardèche	Larnas	Saint-Pierre	Limestone					not discussed				Buis 1975, I, 57-58
FR	Auvergne-Rhône-Alpes	Ardèche	Ruoms	Saint-Pierre	Limestone					not discussed				Buis 1975, I, 59-62
FR	Auvergne-Rhône-Alpes	Ardèche	Saint-Marcel-d'Ardèche / Trignan	Saint-Sulpice	Limestone					not discussed				Buis 1975, I, 63-66
FR	Auvergne-Rhône-Alpes	Ardèche	Soyons	Parish church	Limestone					not discussed				Buis 1975, I, 69
FR	Auvergne-Rhône-Alpes	Ardèche	Valvignères	Parish church	Limestone (so-called "pierre de lévrou")					not discussed				Buis 1975, I, 67-68
FR	Auvergne-Rhône-Alpes	Ardèche	Viviers	Saint-Ostian	Limestone					not discussed				Buis 1975, I, 70-71
FR	Auvergne-Rhône-Alpes	Drôme	Chantemerle-lès-Grignan	Saint-Maurice	Limestone (white)					not discussed				Buis 1975, I, 97
FR	Auvergne-Rhône-Alpes	Drôme	Chastel-Arnaud	Saint-Moirans	Limestone, local	x				s.a.	0-10			Buis 1975, I, 98
FR	Auvergne-Rhône-Alpes	Drôme	Die	Notre-Dame (cathedral)	Sandy molasse	x				Creyers / Gas quarries	20		x	Buis 1975, I, 99-108; Buis 1975, II, 189-190 (map); Buis 1976, 234
FR	Auvergne-Rhône-Alpes	Drôme	Donzère	Parish church	Limestone (white)					not discussed				Buis 1975, I, 108-109
FR	Auvergne-Rhône-Alpes	Drôme	Donzère	Parish church or chapel of the castle (?)	Limestone (white)					not discussed				Buis 1975, I, 109-110
FR	Auvergne-Rhône-Alpes	Drôme	Montélimar	Castle, chapel of Sainte-Guitte	Calcareous molasse					not discussed				Buis 1975, I, 110-111
FR	Auvergne-Rhône-Alpes	Drôme	Montbrison-sur-Lez	Reused in the graveyard's wall (from the ancient church of Notre-Dame-des-Eglises)	Limestone					not discussed				Buis 1975, I, 111
FR	Auvergne-Rhône-Alpes	Drôme	La Motte-de-Galaure	Sainte-Agnès	Sandy molasse					not discussed				Buis 1975, I, 112

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
FR	Auvergne-Rhône-Alpes	Drôme	Saint-Bonnet / Châteauneuf-de-Galaure	Saint-Bonnet	2 of the 5 frr.: plaster cast (original, lost, in molasse from Isère); 3 frr.: stone type not discussed	x				Châteauneuf-sur-Isère	30			Buis 1975, I, 112-113; 153-154; Buis 1976, 235
FR	Auvergne-Rhône-Alpes	Drôme	Saillans	Saint-Géraud	Limestone					not discussed				Buis 1975, I, 116-118
FR	Auvergne-Rhône-Alpes	Drôme	Sainte-Jalle	Notre-Dame-de-Beauvert	Limestone					not discussed				Buis 1975, I, 115
FR	Auvergne-Rhône-Alpes	Drôme	Taulignan	Saint-Martin	Limestone					not discussed				Buis 1975, I, 114
FR	Auvergne-Rhône-Alpes	Drôme	Valence	Saint-Etienne	Molasse	x				Châteauneuf-sur-Isère	10		x	Blanc 1957; Buis 1975, I, 119-121
FR	Auvergne-Rhône-Alpes	Drôme	Vesc	Chapel of the graveyard	Limestone					not discussed				Blanc 1957; Buis 1975, I, 122-123
FR	Corse	Corse du Sud	Zonza / Paccionitoli	Ruins of a church	Limestone (grey)					not discussed				Buis 1975, I, 95
FR	Corse	Haute Corse	Prato-di-Giovellina	Ruins of the church "La Tribuna" or "Pieve"	Granite (green)	x				Prato-di-Giovellina	0-5			Buis 1975, I, 96; Buis 1976, 234
FR	Occitanie	Gard	Nîmes	Chemin de Monmaury, house Bénédettini	Limestone					not discussed				Buis 1975, I, 129; Buis 1976, 234
FR	Occitanie	Gard	Nîmes	Rue de la Madeleine	Limestone "bois des Lens"	x				Bois des Lens quarries	0-20		x	Buis 1975, 127, nr. 153; Buis 1976, 234, 240
FR	Occitanie	Gard	Nîmes	Nîmes, exact findspot unknown	Limestone "bois des Lens"	x	x			Bois des Lens quarries / ancient monument / stone item	0-20		x	Buis 1975, I, 125-128, nrr. 150, 151, 152, 154; Buis 1976, 234, 240
FR	Occitanie	Gard	Nîmes	Nîmes, exact findspot unknown	not discussed					not discussed				Rey 1957
FR	Occitanie	Gard	Ribaute-les-Tavernes	Castle (Mrs Chamska)	not discussed					not discussed				Buis 1975, I, 130
FR	Occitanie	Gard	Saint-Christol-de-Rodières	Parish church	Limestone (grey)					not discussed				Buis 1975, I, 131-132
FR	Occitanie	Gard	Vers-Pont-du-Gard	Saint-Pierre	Limestone "bois des Lens"	x	x (?)			Bois des Lens quarries	30 (or i.s.)			Buis 1975, I, 124-125; Buis 1976, 234 and footnote 9; Bessac 2002.
FR	Provence-Alpes-Côte d'Azur	Alpes-de-Haute-Provence	Digne-les-Bains / Gaubert	Saint-Michel de Cousson	Limestone					not discussed				Buis 1975, I, 45
FR	Provence-Alpes-Côte d'Azur	Alpes-de-Haute-Provence	Mane	Notre-Dame de Salagon	Calcareous molasse	x				Mane	0-5			Buis 1975, I, 47; Buis 1976, 234-235

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
FR	Provence-Alpes-Côte d'Azur	Alpes-de-Haute-Provence	Oppedette / Gleio	Ruins of a church next to the graveyard	Calcareous molasse	x				Carluc	10			Buis 1975, I, 48; Buis 1976, 234
FR	Provence-Alpes-Côte d'Azur	Alpes-de-Haute-Provence	Riez	Exact find-spot uncertain	Limestone		x (?)			Ancient monument / stone item (?)	i.s. (?)			Buis 1975, I, 49-50; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Alpes-Maritimes	Antibes	Church (Cathédrale Notre-Dame-de-la-Platea d'Antibes?)	Marble (white)					not discussed				Buis 1975, I, 15-16
					Limestone (cream-coloured)					not discussed				
FR	Provence-Alpes-Côte d'Azur	Alpes-Maritimes	Nice / Cimiez	Saint-Pons	Marble (white, grey)		x			Ancient monument / stone item	i.s.	x	x	Buis 1975, I, 17-30; Buis 1976, 234, 240
					Limestone	x				La Turbie	15	x	x	
FR	Provence-Alpes-Côte d'Azur	Alpes-Maritimes	Vence	Parish church (old cathedral)	Limestone		x			Ancient monument / stone item	i.s.			Buis 1975, I, 31-42; Buis 1976, 240
					Marble (white)		x			Ancient monument / stone item	i.s.			
FR	Provence-Alpes-Côte d'Azur	Alpes-Maritimes	Vence	Rue de l'Evêché	Limestone (grey / yellow)					not discussed				Buis 1975, I, 31-42
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Aix-en-Provence	Rue Victor Leydet (reused)	Marble (white)		x			Ancient monument / stone item	i.s.			Buis 1975, I, 72-76; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Aix-en-Provence	Aix-en-Provence, exact findspot unknown	Marble (grey)		x			Ancient monument / stone item	i.s.			Buis 1975, I, 72-76; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Aix-en-Provence	Vicinity of Notre-Dame-de-la-Seds (reused in a cellar)	Limestone		x (?)			Ancient monument / stone item (?)	i.s. (?)			Buis 1975, I, 72-76; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Aix-en-Provence	Saint-Sauveur (cathedral)	Limestone		x (?)			Ancient monument / stone item (?)	i.s. (?)			Buis 1975, I, 72-76; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Arles	Arles (from the Rhône river)	Limestone		x (?)			Ancient monument / stone item (?)	i.s. (?)			Buis 1975, I, 80; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Arles	Arles, exact findspot unknown	Marble		x			Ancient monument / stone item	i.s.			Buis 1975, I, 80-81; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Arles	Saint-Honorat des Alyscamps	Limestone		x (?)			Ancient monument / stone item (?)	i.s. (?)			Buis 1975, I, 82-83; Buis 1976, 240
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Lançon-Provence	Oppidum de Constantine, chapel	Limestone	x				Surroundings of the Oppidum	0-5			Buis 1975, I, 91

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Marseille	La Major / Sainte-Marie-Majeure (cathedral)	Marble (from Greece and Italy)		x			Ancient monument / stone item	i.s.			Buis 1975, I, 84-86; Buis 1976, 240; Excavations 2000, 1 fragment Musée Marseille; Pédini 2013, 127, 224-226
					Limestone	x	x			Martigues / La Couronne (or ancient monument in Marseille)	25 / i.s.			
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Marseille	Saint-Victor	Marble (withe and grey)		x			Ancient monument / stone item	i.s.			Drocourt 1973; Buis 1975, I, 87-94; Buis 1976, 240; Excavations 1970, fragments at Musée Marseille; Pédini 2013, 127, 224-226
					Limestone (1 fr.)	x	x			Martigues / La Couronne (or ancient monument in Marseille)	25 / i.s.			
FR	Provence-Alpes-Côte d'Azur	Bouches-du-Rhône	Marseille	Marseille, uncertain findspot	Marble (white)		x			Ancient monument / stone item	i.s.			Drocourt 1973, nr. 51; Buis 1975, I, 94; Buis 1976, 240; Pédini 2013, 127, 224-226
FR	Provence-Alpes-Côte d'Azur	Hautes-Alpes	Gap	Cathedral (?)	Limestone					not discussed				Buis 1975, I, 51
FR	Provence-Alpes-Côte d'Azur	Var	Les Arcs	Les Arcs, reused in a private house	Marble (white)					not discussed				Buis 1975, I, 133
FR	Provence-Alpes-Côte d'Azur	Var	Aups / Valmoissine	Notre-Dame-Saint-Jean-Baptiste	Limestone (white)					not discussed				Buis 1975, I, 138, nr. 166
FR	Provence-Alpes-Côte d'Azur	Var	Carcès	Saint Jean	Limestone					not discussed				Buis 1975, I, 134
FR	Provence-Alpes-Côte d'Azur	Var	La Celle	La Gayolle chapel	Limestone					not discussed				Buis 1975, I, 135-136
FR	Provence-Alpes-Côte d'Azur	Var	Fréjus	Saint-Léonce (cathedral)	Marble (white, 1 fr.)		x			Ancient monument / stone item	i.s.	x	x	Buis 1975, I, 139-143; Buis 1976, 234
					Sandstone	x	x (?)			Fréjus, surroundings	0-5	x	x	
FR	Provence-Alpes-Côte d'Azur	Var	Saint-Julien-le-Montagnier	Parish church	Marble (white)					not discussed				Buis 1975, I, 144-145
FR	Provence-Alpes-Côte d'Azur	Var	Saint-Raphaël	Saint-Raphaël (old Saint-Pierre)	Marble (white)					not discussed				Buis 1975, I, 137-138
					Sandstone	x				s.a.	0-30			
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Apt	Sainte-Anne (cathedral)	Limestone					not discussed				Buis 1975, I, 146-148
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Avignon	Rue Bonaparte, House Morenas	Limestone					not discussed				Buis 1975, I, 150

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Beaumes-de-Venise	Chapel of Notre-Dame d'Aubune						not discussed				Buis 1975, I, 151-152
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Beaumont-du-Ventoux	Chapel of Sainte-Marguerite	Molasse (yellow)	x				Surroundings of Beaumont-du-Ventoux	0-5			Buis 1975, I, 152
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Carpentras	House next to Saint-Pierre hospital (reused as a step)	Limestone					not discussed				Buis 1975, I, 43
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Cavaillon	Notre-Dame-et-Saint-Véran (old cathedral)	Limestone					not discussed				Buis 1975, I, 155
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Lagarde-d'Apt	Notre-Dame de Lamaron (or Lamaron)	Calcareous molasse					not discussed				Buis 1975, I, 46-47
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Piolenc	"Croix Saint-Martin" (old route d'Uchaux)	Molasse					not discussed				Buis 1975, I, 155-156
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Saint-Martin-de-Castillon	Chapel of Notre-Dame-de-Courennes	not discussed					not discussed				Buis 1975, I, 156-157
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Vaison-la-Romaine	Notre-Dame-de-Nazareth (cathedral)	Limestone	x				Crestet	5			Buis 1975, I, 157-162; Buis 1976, 236
FR	Provence-Alpes-Côte d'Azur	Vaucluse	Fontaine-de-Vaucluse	Notre-Dame-et-Saint-Véran	Limestone					not discussed				Buis 1975, I, 162-167
IT	Friuli Venezia Giulia	Gorizia	San Canzian d'Isonzo	Early christian basilica and chapel (San Proto?), archaeological excavations	Limestone (white, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Gorizia	Grado	Santa Eufemia	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Gorizia	Grado	Lapidarium of Santa Eufemia (from Grado - Santa Eufemia or other churches of the town)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Limestone (grey, porous)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Limestone (crystalline)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Aurisina limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Limestone (greyish)	x	x			Ancient monument / stone item	i.s. / s.a.			
IT	Friuli Venezia Giulia	Gorizia	Grado	Santa Maria delle Grazie	Sandstone (grey, compact) (Istrian stone)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
					Aurisina sandstone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			
IT	Friuli Venezia Giulia	Gorizia	Grado	Baptistery	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			
IT	Friuli Venezia Giulia	Gorizia	Grado	Campo Santi Ermagora e Fortunato (close to Santa Eufemia), re-used in a house's wall	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Gorizia	Grado	Campo dei Patriarchi (Campo Patriarca Elia? Close to Santa Eufemia), re-used in a house's wall	Limestone (whitish)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
IT	Friuli Venezia Giulia	Gorizia	Grado, isola di Barbana	Madonna di Barbana, sanctuary	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
IT	Friuli Venezia Giulia	Pordenone	Sesto al Reghena	Santa Maria abbey	Greek marble (white; probably from Mount Pentelicus)		x			Ancient monument / stone item	i.s. / s.a.		x	Gaberscek 1983, 197-199; Lambert 1999, esp. pages 77, 91, and footnote 6 (stone identification and re-use)
					Luni marble (white)		x			Ancient monument / stone item	i.s. / s.a.		x	
					Aurisina stone (?)			x (?)		Aurisina (?)	80 (?)		x	
					Cansiglio limestone	x				Cansiglio plateau	45-50		x	
					Limestone (white)	x				Caneva	35		x	
IT	Friuli Venezia Giulia	Trieste	Duino Aurisina, fraz. San Giovanni al Timavo	San Giovanni in Tuba	Aurisina limestone (grey, compact)	x	x			Aurisina / ancient monument / stone item	0-5			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Trieste	Trieste	San Giusto	Aurisina limestone (white)	x				Aurisina	20			Cammarata 1978-1979
					"Aurisina stone"	x				Aurisina	20			
					Marble					not discussed				
IT	Friuli Venezia Giulia	Trieste	Muggia	Santa Maria (and surroundings)	"Aurisina stone"	x				Aurisina	35			Cammarata 1978-1979
					Marble (white)					not discussed				

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Udine	Aquileia	Santa Maria Assunta	Marble (white)	x	x			Ancient monument / stone item	i.s.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
					Limestone (greyish)	x	x			Ancient monument / stone item	i.s.			
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s.			
IT	Friuli Venezia Giulia	Udine	Aquileia	Santa Maria Assunta, 'chiesa dei Pagani' and baptistery	Marble (white)	x	x			Ancient monument / stone item	i.s.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
					Limestone (whitish)	x	x			Ancient monument / stone item	i.s.			
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s.			
IT	Friuli Venezia Giulia	Udine	Aquileia	former church of San Martino alla Beligna (demolished)	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s.			Lavers 1974, 123-124; Tagliaferri 1981, 16, footnote 22; Lusuardi Siena 1997, 188, footnote 4
IT	Friuli Venezia Giulia	Udine	Artegna	Santo Stefano in Clama	Limestone (reddish)	x				Local stone (exact provenance not discussed)	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Basiliano, fraz. Basagliapenta	Santa Maria Assunta	Limestone (greyish)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Santa Maria Assunta (maybe also San Giovanni Battista, belonging anyway to the same basilical complex)	Carso limestone (grey, compact)	x	x			Carso quarries / ancient monument / stone item	0-60		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue); Borzacconi et al. 2003
					Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.		x	

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	San Giovanni Battista in Valle	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Santa Maria in Valle, oratory	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.		x	
					Limestone (white, saccharoid)	x	x			Ancient monument / stone item	i.s. / s.a.		x	
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	former church of San Salvatore (most probably)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Via Ristori, via IX Agosto (church of San Salvatore?)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.		x	
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Borgo Vittoria, next to the former church of San Domenico (belonging to San Salvatore?)	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli, fraz. Rualis	found in 1822 during some excavations	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Stretta Tommasino Cerchiari	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Santa Maria in Corte (?)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Regio Museo Archeologico (today Museo Archeologico Nazionale, Library)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Via Michele della Torre (or via della Torre)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Borgo Cavour (via Cavour?)	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Cividale del Friuli	Piazza Paolo Diacono	Limestone (grey, arenaceous)	x	x			Ancient monument / stone item	i.s. / s.a.		x	Tagliaferri 1981, 16, footnote 22 (re-use); Lusuardi Siena / Piva 2001, 493, footnote (geological analysis) and 542-589 (catalogue)
IT	Friuli Venezia Giulia	Udine	Colloredo di Monte Albano, fraz. Mels	Sant'Andrea (or San Salvatore, 5,4 km away?)	Marble (white, veined)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Cormons, fraz. Brazzano	San Giorgio	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Flaibano, fraz. Sant'Odorico	Sant'Uldarico	Limestone (grey-reddish)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Nimis	Santi Gervasio e Protasio	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
					Limestone (dark grey, fossiliferous)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Sandstone (fine grain, calcareous cement)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Udine	Premariacco, fraz. Azzano di Ipplis	Villa Micheloni (re-used in a wall: probably from San Giovanni Battista)	Limestone (white, friable)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Ragogna, fraz. San Giacomo	San Lorenzo in Villuzza	Limestone (greyish, friable)	x	x			Local stone (exact provenance not discussed)	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Ragogna, fraz. San Pietro	San Pietro apostolo	Limestone (compact)	x	x			Local stone (exact provenance not discussed)	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Rive d'Arcano	San Martino	Proconnesus (?) marble (white)		x			Ancient monument / stone item	i.s. / s.a.	x	x	Lusuardi Siena 1997, 145-147 and 188-189, footnotes 4 and 12; Spadea 1997 (on Carso limestones: esp. Page 314: probably found in the area and re-used, because they come frome several quarries)
					Carso limestone		x			Carso quarries / ancient monument / stone item	i.s. / s.a.	x	x	
					Arenite (pinkish)	x				Julian Alps foothills or surrounding hills (e.g. Buia hill)	10-15	x	x	
IT	Friuli Venezia Giulia	Udine	San Daniele del Friuli	San Daniele in Castello	Limestone					not discussed				Lusuardi Siena 2000
IT	Friuli Venezia Giulia	Udine	San Vito di Fagagna	Santi Vito, Modesto e Crescenzia	Istrian limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Sedegliano, fraz. Turrida	Pieve di San Martino	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Torreano, fraz. Togliano	San Mauro	Sandstone	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
IT	Friuli Venezia Giulia	Udine	Udine	Santa Maria del Castello	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
					Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			
IT	Friuli Venezia Giulia	Udine	Villa Santina, fraz. Invillino	Santa Maria Maddalena	Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
					Limestone (greyish)	x	x			Ancient monument / stone item	i.s. / s.a.			

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Friuli Venezia Giulia	Udine	Zuglio	San Pietro apostolo	Marble (white)	x	x			Ancient monument / stone item	i.s. / s.a.			Tagliaferri 1981, 16, footnote 22
					Marble (grey)	x	x			Ancient monument / stone item	i.s. / s.a.			
					Limestone (grey, compact)	x	x			Ancient monument / stone item	i.s. / s.a.			
IT	Liguria	Savona	Albenga	Baptistery	Sandstone	x				Finale Ligure	25		x	Verzone 1945; Frondoni 1994 (geol. analysis, p. 257 ss.); Frondoni 1987, 41; Marcenaro 1994, 196 and 234, footnote 6 (geol. analysis and provenance)
					Limestone	x				Finale Ligure	25		x	
					Apuan marble (white, from Luni?)		x (?)			Ancient monument / stone item (?)	i.s. / s.a.		x	
IT	Liguria	Savona	Albenga	San Michele (cathedral)	Apuan marble (white, from Luni?)		x (?)			Ancient monument / stone item (?)	i.s. / s.a.		x	Verzone 1945; Sciarretta 1966, 27-45; Frondoni 1994 (geol. Analysis, p. 257 ss.)
IT	Liguria	Savona	Albenga	San Calocero (archeological area)	Marble					not discussed				Verzone 1945
IT	Liguria	La Spezia	Luni	Santa Maria (cathedral)	Marble (white, from Luni)	x (?)	x			Ancient monument / stone item	0-5			Verzone 1945 (esp. page 60); Lusuardi Siena 1985; Lusuardi Siena 2008, 318
IT	Liguria	Savona	Noli	San Paragorio	Limestone (white)					not discussed				Verzone 1945; Frondoni 2004
IT	Liguria	Savona	Vado Ligure	San Giovanni Battista (old Santa Maria)	Marble					not discussed				Verzone 1945

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Liguria	Imperia	Ventimiglia	Santa Maria Assunta (cathedral)	Limestone from La Turbie	x	x			La Turbie and ancient monument / stone item	0-25			Verzone 1945; Buis 1976, 235; Gandolfi 1995, 90, footnote 41
					Limestone (pinkish; 1 fr. according to Verzone)					not discussed				
					Limestone (whitish; 1 fr. according to Verzone)					not discussed				
IT	Liguria	Genova	Genova	San Nazario	Marble (white)					not discussed				Dufour Bozzo 1966
IT	Liguria	Genova	Sestri Levante	San Nicolò	Marble (white)					not discussed				Dufour Bozzo 1966
IT	Liguria	Genova	Genova	(former church of) Santa Sabina - preserved in Palazzo Reale	Marble (white)					not discussed				Dufour Bozzo 1966
IT	Liguria	Genova	Genova	Santa Maria di Castello	Marble (white)					not discussed				Dufour Bozzo 1966
IT	Lombardia	Bergamo	Bergamo	Cattedrale di San'Alessandro	not discussed					not discussed				Ibsen 2013, 50, footnote 5
IT	Lombardia	Bergamo	Bergamo	Sant'Alessandro in Colonna	Sandstone	x				Local stone (exact provenance not discussed)	i.s. / s.a.			Ibsen 2013, 59-60
IT	Lombardia	Bergamo	Capriate San Gervasio	Santi Sinigoldo e Siro	not discussed					not discussed				Ambrosioni / Lusuardi Siena 1986, 224-225
IT	Lombardia	Bergamo	Castelli Calepio	?	not discussed					not discussed				Ibsen 2013, 50, footnote 5
IT	Lombardia	Bergamo	Chiuduno	Santa Maria Assunta	Marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Poggiani Keller 1992, 68, nr. 216
IT	Lombardia	Bergamo	Credaro	San Fermo	not discussed					not discussed				Ibsen 2013, 59-60
IT	Lombardia	Bergamo	Rogno	Santo Stefano Protomartire	not discussed					not discussed				Ibsen 2013, 52-53
IT	Lombardia	Brescia	Bedizzole, loc. Pontenove	Pieve di Santa Maria	Fine-grained sandstone					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Bione	Santa Maria	Limestone (grey)					not discussed				Panazza / Tagliaferri 1966

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Brescia	Brescia	Santa Afra	Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966, 11-14
IT	Lombardia	Brescia	Brescia	San Faustino Maggiore	Limestone (white, compact)	x				Botticino	5-10			Panazza / Tagliaferri 1966, 11-14
					Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			
					Oolitic limestone with microcrystalline cement					not discussed				
IT	Lombardia	Brescia	Brescia	San Giorgio	Oolitic limestone with microcrystalline cement					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Brescia	Santa Maria Maggiore (or Santa Maria del Dom)	"Medolo" limestone (grey, compact) (AKA Domaro limestone)	x				Monte Domaro	15-20			Panazza / Tagliaferri 1966, 11-14 (stones from Verona listed among the re-used ones)
					Limestone (microcrystalline, saccharoid)					not discussed				
					Limestone (grey, type Gallina Veronese stone)		x			Ancient monument / stone item	i.s. / s.a.			
IT	Lombardia	Brescia	Brescia	San Pietro in Oliveto	Carrara marble		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966, 11-14

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Brescia	Brescia	Basilica of San Salvatore (complex of the monastery of Santa Giulia)	Apuan marble (white)		x			Ancient monument / stone item				Panazza / Tagliaferri 1966, 11-14
					Limestone (microcrystalline, saccharoid)					not discussed				
					Oolitic limestone (grey, with microcrystalline cement)			x		Verona area	70			
					Soft limestone (type Gallina Veronese stone)		x			Ancient monument / stone item	i.s. / s.a.			
					Sandstone (grey, fine grained)	x				Bergamo area (Sarnico)	40			
					"Medolo" limestone (grey, compact) (AKA Domaro limestone)					Monte Domaro	15-20			
					Oolitic limestone (white, very fine grained)			x (?)		Verona area (?)	70 (?)			
					Limestone (compact)	x				Botticino	5-10			
IT	Lombardia	Brescia	Brescia	Monastery of Santa Giulia (Panazza / Tagliaferri 1966, nr. 60-61) or Leno (Sgarzi 2005), slab with inscription, plaits and cross	Limestone (compact) (Panazza / Tagliaferri 1966); limestone (Sgarzi 2005)	x				Botticino (according to Panazza), 10 km .ca from Brescia or 35 km .ca from Leno; Rezzato (according to Sgarzi), 17 km .ca from Brescia or 28 km .ca from Leno	10-30 (depending by the author)		x	Panazza / Tagliaferri 1966, 70-72; Sgarzi 2005, 122; 127 (geological analysis)
IT	Lombardia	Brescia	Brescia	Area of the Roman theatre: church of San Remigio? (Panazza / Tagliaferri n. 59, fig. 60)	Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966, 13-14

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Brescia	Brescia	Piazza Duomo, West of Calegari fountain (Panazza / Tagliaferri n. 80, fig. 78)	Pseudoolitic limestone (grey)					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Brescia	Via S. Urbano, 15	Limestone (compact)	x				Botticino	5-10			Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Brescia	Monastery of Corpus Domini	Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966
					Oolitic limestone (compact)			x (?)		Verona area (?)	70 (?)			
IT	Lombardia	Brescia	Carpendolo	Pieve di Santa Maria	Oolitic limestone with microcrystalline cement					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Cemmo	Pieve di San Siro	Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966, 11-14
IT	Lombardia	Brescia	Cividate Camuno	via Porta Cestello 12 (reused as an architrave in a private house)	Permian sandstone (fine grains)	x				Val Camonica	i.s. / s.a.			Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Corte Franca, fraz. Colombaro	Santa Maria	Permian quartz sandstone (coarse grains)					not discussed				Panazza / Tagliaferri 1966
					Limestone (pinkish, compact)					not discussed				
IT	Lombardia	Brescia	Desenzano del Garda	San Girolamo	not discussed					not discussed				Ibsen 2013, 57-58
IT	Lombardia	Brescia	Erbusco	Santa Maria	Sandstone (grey, fine grains, type Sarnico stone)	x				Bergamo area (Sarnico)	10			Panazza / Tagliaferri 1966
					Quartz sandstone (type Sarnico)	x				Bergamo area (Sarnico)	10			
					Limestone (white, compact)	x				Botticino	35			
IT	Lombardia	Brescia	Gussago	Santa Maria Assunta	Apuan marble (white)		x			Ancient monument / stone item	i.s. / s.a.			Panazza / Tagliaferri 1966, 11-14
					Microcrystalline limestone (pinkish)					not discussed				

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Brescia	Leno	Abbazia di San Benedetto	Oolitic limestone, compact limestone, Botticino stone, marble					not discussed				Panazza / Tagliaferri 1966, 11-14; Ibsen 2006; Panazza 2006;
IT	Lombardia	Brescia	Limone sul Garda	San Pietro in Vincoli	Marble (white)		x (?)			Ancient monument / stone item (?)	i.s. / s.a. (?)			Panazza / Tagliaferri 1966; Ibsen 2008 ("possible re-use", p. 38)
					Oolitic limestone		x (?)			Ancient monument / stone item (?)	i.s. / s.a. (?)			
IT	Lombardia	Brescia	Lonato del Garda, loc. Maguzzano	Santa Maria Assunta	not discussed					not discussed				Ibsen 2013, 57-58
IT	Lombardia	Brescia	Ospitaletto, fraz. Lovernato	Santa Maria	Sandstone (compact, very fine grains)					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Maderno	Sant'Andrea	Microcrystalline limestone (grey)					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Manerbio	San Lorenzo	Limestone (cristallyne, saccharoid)					not discussed				Panazza / Tagliaferri 1966
					Oolitic limestone (grey, with microcrystalline cement)					not discussed				
IT	Lombardia	Brescia	Nave	San Cesario	Limestone (grey)					not discussed				Panazza / Tagliaferri 1966
					Oolitic limestone with microcrystalline cement					not discussed				
IT	Lombardia	Brescia	Nuvolento	Santa Stefania	Limestone (grey, microcrystalline, saccharoid)					not discussed				Panazza / Tagliaferri 1966

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Brescia	Rodengo	Santo Stefano	Oolitic limestone with microcrystalline cement					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Serle	San Pietro in Monte Ursino	Limestone (white)	x				Local stone (exact provenance not discussed)				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Sirmione (lago Garda)	San Pietro in Mavinas	Limestone (white and ivory-white, fine and half-fine grains)	x				Area between Brescia and Garda lake (most likely Botticino)	35		x	Lusuardi Siena 1989; Bugini 1989
IT	Lombardia	Brescia	Sirmione (Brescia, lago Garda)	San Salvatore	Limestone (white and ivory-white, fine and half-fine grains)	x				Area between Brescia and Garda lake (most likely Botticino)	35		x	Lusuardi Siena 1989; Bugini 1989
IT	Lombardia	Brescia	Sirmione (Brescia, lago Garda)	Santa Maria Maggiore	Limestone (white and ivory-white, fine and half-fine grains)	x				Area between Brescia and Garda lake (most likely Botticino)	35		x	Lusuardi Siena 1989; Bugini 1989
IT	Lombardia	Brescia	Sirmione (Brescia, lago di Garda)	Sirmione (without exact findspot)	Limestone (white and ivory-white, fine and half-fine grains)	x				Area between Brescia and Garda lake (most likely Botticino)	35		x	Lusuardi Siena 1989; Bugini 1989
IT	Lombardia	Brescia	Toscolano Maderno (lago di Garda)	Old parish house (canonica)	Limestone (white, scaccharoid)					not discussed				Panazza / Tagliaferri 1966
IT	Lombardia	Brescia	Tremosine (lago di Garda)	San Giovanni e Tremosine(without exact findspot)	Sandstone	x				Local stone (exact provenance not discussed)	i.s. / s.a.			Panazza / Tagliaferri 1966, 140-141, nr. 177; 187-191, nr. 234-239
					Limestone (grey, microcrystalline)					not discussed				
					Oolitic limestone with microcrystalline cement					not discussed				

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Como	Como	Sant'Abbondio	Musso marble and white marbles (also from Musso?) (only some fragments have been analyzed)	x	x			Ancient monument / stone item	0-5	x	x	Alemani 1978, 16 Zastrow 1981, 165 Casati 2000, 141 Lomartire 2009, 160; Martin / Piatti / Tumiati 2009, 611-614 Casati 2015, 57-58, 63, 190
					Talc-schist (soapstone), 1 fr.		x			Ancient monument / stone item	0-5	x	x	
IT	Lombardia	Como	Como	San Fedele	Musso marble and white marbles (also from Musso?) (only some fragments have been analyzed)	x	x			Ancient monument / stone item	0-5	x	x	Casati 2001, 146-152; Martin / Piatti / Tumiati 2009, 611-614 Casati 2015, 57-58, 63, 190
IT	Lombardia	Como	Como	San Giovanni Pedemonte (?)	Marble (from Musso?)		x			Ancient monument / stone item	0-5		x	Casati 2015, 57-58, 63, 190
IT	Lombardia	Como	Lenno (nowadays Tremezzina)	Santo Stefano	not discussed					not discussed				Arslan 1950
IT	Lombardia	Cremona	Cremona	San Michele	not discussed					not discussed				Voltini 1994
IT	Lombardia	Cremona	Genivolta	Genivolta, re-used in a wall of the town-hall	Istrian stone (from Aurisina Cave)		x			Ancient monument / stone item	i.s. / s.a.			Pontiroli 1974, 177, nr. 259
IT	Lombardia	Lecco	Civate	Monastery of San Calocero	not discussed					not discussed				Caramel / Mirabella Roberti 1976, 221-222; Piva 2002, 131, 133
IT	Lombardia	Lecco	Lecco	Santi Gervasio e Protasio	not discussed					not discussed				Marcora 2013, 124-125
IT	Lombardia	Mantova	Mosio	San Filastrio	Oolitic limestone (grey)	x (?)				Oglio river area (?)	i.s. / s.a.			Panazza / Tagliaferri 1966
IT	Lombardia	Mantova	Mantova	Rotonda di San Lorenzo	not discussed					not discussed				Calzona 1991, 201-204; Crosato 2013a
IT	Lombardia	Mantova	Mantova	Cattedrale di San Pietro Apostolo	not discussed					not discussed				Ibsen 2013, 55-56
IT	Lombardia	Mantova	Castel Goffredo, loc. Bocchere	Santa Margherita	Limestone					not discussed				Crosato 2013a; Ibsen 2013, 57
IT	Lombardia	Mantova	Ceresara, loc. San Martino Gusnago	San Martino	Oolitic limestone					not discussed				Crosato 2013a

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Mantova	Goito, fraz. Sacca	Early Medieval oratory / pieve di San Martino	Sandstone					not discussed				Crosato 2013a
IT	Lombardia	Mantova	Marcaria	San Giovanni Battista	not discussed					not discussed				Crosato 2013a
IT	Lombardia	Mantova	Rivarolo Mantovano	Chiesa dell'Annunciata	"Stone" (light olive grey)					not discussed				Banti 1993, 265, footnote 1; Crosato 2013a
IT	Lombardia	Mantova	San Benedetto Po	Abbazia di San Benedetto	not discussed					not discussed				Crosato 2013a
IT	Lombardia	Milano	Milano	Santa Maria near San Satiro	not discussed					not discussed				Chierici 1942, 19
IT	Lombardia	Milano	Milano	Santa Maria d'Aurona	Dolostone ('Angera stone') = Dolomia (Angera stone)			x		Angera	65			Dianzani 1989, 25 (determinazione pietra); Grassi 2009, 313-314
					Sandstone					not discussed				
IT	Lombardia	Milano	Milano	San Vincenzo in Prato	not discussed					not discussed				Arslan 1950
IT	Lombardia	Milano	Milano	Monastero Maggiore, tower	not discussed					not discussed				Arslan 1950
IT	Lombardia	Milano	Milano	Sant'Ambrogio	not discussed					not discussed				Hubert 1968, 33; Lomartire 2013, 349-353
IT	Lombardia	Milano	Milano	Santa Maria alla Porta	Sandstone					not discussed				Ceresa Mori 1983; Fiorio 1986, 55
IT	Lombardia	Monza e Brianza	Monza	San Giovanni Battista	Marble (white)					not discussed				Caramel / Mirabella Roberti 1976, 222-223 and footnote 42
IT	Lombardia	Monza e Brianza	Carate Brianza, fraz. Agliate	San Pietro	Marble (white)					not discussed				Caramel / Mirabella Roberti 1976, 223 and footnote 45
IT	Lombardia	Pavia	Corteolona	Cascina Castellaro (area of the former Chiesa regia di Sant'Anastasio: church of Liutprand palace)	Marble (white)					not discussed				Panazza 1953, 285-286, nr. 119; Lomartire 2000b

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Pavia	Pavia	Santa Maria del Popolo	Sandstone (yellow)					not discussed				Panazza 1953, 220-221 and 289-293, nr. 129-131, 136-138, 141
					Sandstone (grey)					not discussed				
					Marble (white)					not discussed				
IT	Lombardia	Pavia	Pavia	Monastery of Santa Maria Teodote (also known as Santa Maria della Pusterla)	Marble					not discussed				Panazza 1953, 288-289, nr. 128; 256-259, nr. 66; Peroni 1972; Calderini 1984, 62-66; Lomartire 2000
IT	Lombardia	Pavia	Pavia	former monastery of San Tommaso	Marble					not discussed				Panazza 1953, 244-245, nr. 43-46; Lomartire 2000a
IT	Lombardia	Pavia	Pavia	former church of San Giovanni in Borgo (demolished)	Marble					not discussed				Panazza 1953, 284, nr. 117
IT	Lombardia	Pavia	Pavia	San Pietro in Ciel d'Oro	Marble					not discussed				Panazza 1953, 286, nr. 120-122 ("marble"), 123 ("stone")
					not discussed					not discussed				
IT	Lombardia	Pavia	Pavia	Monastery of Sant'Agata al Monte	Marble (white)					not discussed				Panazza 1953, 259-265, 269-270, nr. 67-73, 75-76, 82-83; Lomartire 2000c; Lomartire 2000d
IT	Lombardia	Pavia	Pavia	Santa Maria alle Pertiche	Marble					not discussed				Panazza 1953, 265, 267, nr. 77, 80; Lomartire 2000e; Lomartire 2000f
IT	Lombardia	Pavia	Pavia	Sant'Eusebio, crypt	Sandstone (light colour)					not discussed				Panazza 1953, 282-283, nr. 113-114
IT	Lombardia	Pavia	Pavia	San Lanfranco	Sandstone					not discussed				Panazza 1953, 287, nr. 125
IT	Lombardia	Pavia	Pavia	San Pantaleone (?)	Marble					not discussed				Panazza 1953, 126, nr. 127
IT	Lombardia	Pavia	Pavia	Santi Gervasio e Protasio	Marble (dark grey)					not discussed				Panazza 1953, 290-291, nr. 135
IT	Lombardia	Varese	Sesto Calende	San Donato abbey	Marble (crystalline, coarse grains)			x		Val d'Ossola / Candoglia	50-60		x	Guerroni 1982; Marcora 2009a; Martin / Piatti / Tumiati 2009, 614-617

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Lombardia	Varese	Somma Lombardo, loc. Mezzana	Pieve	Marble (white)					not discussed				Marcora 2009b
IT	Lombardia	Varese	Castelseprio	San Giovanni	not discussed					not discussed				Ibsen 2013a De Marchi 2014, 187-188
IT	Lombardia	Varese	Arsago Seprio	San Vittore	not discussed					not discussed				De Marchi 2013
IT	Lombardia	Varese	Angera	Old town centre	Dolostone ('Angera stone') = Dolomia (Angera stone)	x				Angera or surrounding area	i.s. / s.a.			Marcora 2009; De Marchi 2013
IT	Piemonte	Alessandria	Acqui Terme	San Pietro	not discussed					not discussed				Crosetto 1998, 319; Crosetto 2002; Crosetto 2005, 176-177
IT	Piemonte	Alessandria	Gavi	Pieve	not discussed					not discussed				Crosetto 1998, 317
IT	Piemonte	Alessandria	Libarna (archaeological area, Serravalle Scrivia)	Pieve	Marmo bianco		x			Ancient monument / stone item	i.s. / s.a.			Crosetto 1998, 317; Crosetto 2006, 218-219
IT	Piemonte	Alessandria	Tortona	Santi Simone e Giuda	Sandstone	x				Tortona	0-5		x	Crosetto 1998, 316-317; Crosetto 2007; Gomez Serito 2007, 339 ("Inventario" nr. 304)
IT	Piemonte	Alessandria	Viguzzolo	Pieve	not discussed					not discussed				Crosetto 1998, 317
IT	Piemonte	Alessandria	Villamiroglio	Santi Filippo e Michele	Marble					not discussed				Crosetto 2014
IT	Piemonte	Asti	Asti	San Secondo	not discussed					not discussed				Crosetto 1994
IT	Piemonte	Asti	Asti	Episcopal complex of Santa Maria e San Giovanni	Marble		x			Ancient monument / stone item	i.s. / s.a.			Crosetto 1998, 316-317; 319; Crosetto 1995, 259-261; Crosetto 2007a, 366; 649
IT	Piemonte	Asti	Asti	Monastero di Sant'Anastasio	not discussed					not discussed				Crosetto 1998, 316-317
IT	Piemonte	Asti	Cunico	Santa Maria in Valle (graveyard church)	not discussed					not discussed				Crosetto 1998, 319
IT	Piemonte	Cuneo	Alba	Cattdrale di San Lorenzo	Marble		x			Luni and Val Varaita	0-5		x	Crosetto 2013, 368; Gomez Serito 2009; Gomez Serito 2009a
IT	Piemonte	Cuneo	Alba	Santi Frontiniano e Cassiano	Marble		x			Luni and Val Varaita	0-5		x	Crosetto 2013, 368; Gomez Serito 2009; Gomez Serito 2009a

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Piemonte	Cuneo	Borgo San Dalmazzo	San Dalmazzo	Marble (bardiglio)	x				Valdieri	10	x	x	Crosetto 1999; Frisa Morandini / Gomez Serito 1999; Frisa Morandini / Gomez Serito / Marini 2000, 311-312; Crosetto 2013, 368
					Marble (1 fr.)		x			Ancient monument / stone item	i.s.	x	x	
IT	Piemonte	Cuneo	Caraglio	Pieve di San Lorenzo	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 78-79; Debenedetti 1974, 232
IT	Piemonte	Cuneo	Cavallermaggiore	San Pietro	not discussed					not discussed				Crosetto 1998, 315
IT	Piemonte	Cuneo	Centallo	San Gervasio	not discussed					not discussed				Crosetto 1998, 315
IT	Piemonte	Cuneo	Cherasco	San Martino	not discussed					not discussed				Crosetto 2005, 174
IT	Piemonte	Cuneo	Dronero	Parish church (chiesa parrocchiale) of San Costanzo	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 130-131; Debenedetti 1974, 232
IT	Piemonte	Cuneo	Dronero	San Costanzo sul Monte San Bernardo (San Costanzo al Monte)	Granitic gneiss	x				Surroundings of Dronero	0-10		x	Casartelli Novelli 1974, 131-145; Debenedetti 1974, 232; Frisa Morandini / Gomez Serito 1999, 149; Crosetto 2013, 368
					Marble (bardiglio)	x				Valdieri	30		x	
IT	Piemonte	Cuneo	Mombasiglio	Sant'Andrea (archaeological site; church demolished in 1923)	not discussed					not discussed				Crosetto 1998, 316
IT	Piemonte	Cuneo	Mondovì	Sant'Arnolfo	not discussed					not discussed				Crosetto 1998, 319
IT	Piemonte	Cuneo	Monticello d'Alba	San Ponzio	Marble		x (at least 1 fr.)			Ancient monument / stone item	i.s. / s.a.			Crosetto 1998, 316; Crosetto 1999a, 171 (citaz. Marmo)
IT	Piemonte	Cuneo	Morozzo	Pieve di Santa Maria	not discussed					not discussed				Crosetto 2005, 174

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Piemonte	Cuneo	Pagno	Abbey of Santi Pietro e Colombano	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 145-146; Debenedetti 1974, 232
IT	Piemonte	Cuneo	Piobesi d'Alba	San Pietro in Vincoli	Marble					not discussed				Crosetto 1998, 320; Accigliaro 1995, 23; Crosetto 2005, 186
IT	Piemonte	Cuneo	Pollenzo (Bra)	San Vittore	Marble (bardiglio)			x		Valdieri	80		x	Crosetto 2004, 417, nota 13
IT	Piemonte	Cuneo	Pollenzo (Bra)	Reused in modern buildings	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 152-155; Debenedetti 1974, 232
IT	Piemonte	Cuneo	Santa Vittoria d'Alba	Chiesa parrocchiale dell'Assunta	not discussed					not discussed				Crosetto 1999a, 183-184
IT	Piemonte	Cuneo	Savigliano	San Pietro abbey	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 158-165; Debenedetti 1974, 232; Crosetto 1998, 351
IT	Piemonte	Cuneo	Savigliano	Santa Croce	Soft limestone (greyish blue)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 158-165; Debenedetti 1974, 232
					Marble (white)	x				Alps	i.s. / s.a.		x	
IT	Piemonte	Novara	Cureggio	Chiesa plebana	not discussed					not discussed				Crosetto 2005, 166, footnote 3, and 174.
IT	Piemonte	Novara	Fontaneto d'Agogna	Santi Fabiano e Sebastiano	not discussed					not discussed				Crosetto 1998, 319
IT	Piemonte	Novara	Novara	San Gaudenzio (?)	Marble (white, veined)					not discussed				Minguzzi 1984-1985; Crosetto 1998, 318
IT	Piemonte	Novara	Novara	San Pietro al Rosario	not discussed					not discussed				Crosetto 1998, 318
IT	Piemonte	Novara	Novara	Santa Maria Assunta (Duomo)	not discussed					not discussed				Crosetto 1998, 319
IT	Piemonte	Torino	Belmonte	Sacro Monte Belmonte, sanctuary Santa Maria	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974; Debenedetti 1974, 232
IT	Piemonte	Torino	Bollengo	Santi Pietro e Paolo	not discussed					not discussed				Crosetto 1998, 317
IT	Piemonte	Torino	Cavour	Avvey of Santa Maria	Sandstone (dark grey, red grains)	x				Local stone (exact provenance not discussed)	i.s. / s.a.		x	Casartelli Novelli 1974, 80-87; Debenedetti 1974, 232
					Marble (white)	x				Alps	i.s. / s.a.		x	
IT	Piemonte	Torino	Chieri	Chieri (?)	Marble (white)	x				Piedmont Alps	i.s. / s.a.			Casartelli Novelli 1974, 87-89; Debenedetti 1974, 232

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Piemonte	Torino	Collegno	San Massimo	Marble (white)	x				Piedmont Alps	i.s. / s.a.	x	x	Casartelli Novelli 1974, 94-130; Debenedetti 1974, 232
					Limestone (grey)	x				Piedmont Alps	i.s. / s.a.	x	x	
					Limestone	x				Gassino	30	x	x	
					Sandstone	x				Piedmont Alps	i.s. / s.a.	x	x	
IT	Piemonte	Torino	Germagnano	Santo Stefano (demolished)	not discussed					not discussed				Crosetto 2001, 59
IT	Piemonte	Torino	Ivrea	Santa Maria Assunta (cathedral)	not discussed					not discussed				Crosetto 1998, 317; Crosetto 2005, 177 (e fig. 7, p. 188)
IT	Piemonte	Torino	Macello	Località Stella, old graveyard	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 150-151; Debenedetti 1974, 232
IT	Piemonte	Torino	Moriondo	Chiesa parrocchiale	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 175-177, nr. 102, 103; Debenedetti 1974, 232
IT	Piemonte	Torino	Novalesa	Santi Pietro e Andrea abbey	Microcrystalline limestone (different types)		x (?)		x (?)	Val d'Ossola? Apuan Alps?	200 / 300 (?) i.s. / s.a. (?)		?	Aimone 2010 (esp. 118, footnote 10); Uggé 2004, 70; Cantino Wataghin 2007
					Pentelic marble		x			Ancient monument / stone item	i.s. / s.a.		x (?)	
IT	Piemonte	Torino	Pinerolo, Museo civico	Pinerolo (?)	Marble (white)					not discussed			x	Casartelli Novelli 1974, 151-152; Debenedetti 1974, 232
IT	Piemonte	Torino	Rivoli	Villa Lanzo (reused in the walls of the villa, maybe from Collegno, San Massimo)	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 155-156; Debenedetti 1974, 232; Crosetto 2005, 172
IT	Piemonte	Torino	Salassa	San Ponso	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 156-158; Debenedetti 1974, 232
IT	Piemonte	Torino	Sangano	Pieve di Santa Maria	not discussed					not discussed				Crosetto 1998, 315

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Piemonte	Torino	Torino	Episcopal complex (church of San Salvatore)	Marble (white)	x	x			Piedmont Alps (Foresto, Val Varaita, Valle Germagnasca); Ancient monument / stone item	i.s. / s.a.	x	x	Casartelli Novelli 1974, 184-228; Debenedetti 1974, 232; Crosetto 2013, 368 (with unbublished results of the thin sections, A. Frisa Morandini and M. Gomez Serito)
					Marble (grey)	x	x			Piedmont Alps (Foresto, Val Varaita, Valle Germagnasca); Ancient monument / stone item	i.s. / s.a.	x	x	
IT	Piemonte	Torino	Torino	Episcopal complex (church of San Salvatore, surroundings)	Marble (white)	x				Piedmont Alps	i.s. / s.a.	x	x	Casartelli Novelli 1974, 184-228; Debenedetti 1974, 232; Crosetto 2013, 368 (with unbublished results of the thin sections, A. Frisa Morandini and M. Gomez Serito)
IT	Piemonte	Torino	Torino	San Vito	Marble (white)	x				Piedmont Alps	i.s. / s.a.		x	Casartelli Novelli 1974, 228-229; Debenedetti 1974, 232
IT	Piemonte	Vercelli	Santhià	Sant'Agata	Marble					not discussed				Crosetto 2014
IT	Piemonte	Vercelli	Vercelli	San Salvatore (?)	Marble					not discussed				Pantò 1986, 125, footnote 13
IT	Trentino - Alto Adige	Bolzano/Bozen	Burgusio/Burgeis (Serces/Zerz)	San Martino	Marble (white)	x				Lasa/Laas	20		x	Rasmo 1981, 79; Unterwurzacher / Obojes 2012, 28
IT	Trentino - Alto Adige	Bolzano/Bozen	Glorenza/Glurns	Re-use in a house	Marble (white)					not discussed				Rasmo 1981, 39; Johannson-Meery 1993, 114, nr. 97

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Trentino - Alto Adige	Bolzano/Bozen	Lasa/Laas	Chiesa parrocchiale di San Giovanni Battista	Marble (white)	x				Lasa/Laas	0-10		x	Rasmo 1981, 9-11; 78; Unterwurzacher / Obojes 2012, 28
IT	Trentino - Alto Adige	Bolzano/Bozen	Malles/Mals	San Benedetto / St. Benedikt	Marble (white)	x				Lasa/Laas	15			Rasmo 1981, 9-11; 41-45
IT	Trentino - Alto Adige	Bolzano/Bozen	Malles/Mals	San Giacomo / St. Jakob	Not discussed (and fragment lost)					not discussed				Rasmo 1981, 39; fig. 109
IT	Trentino - Alto Adige	Bolzano/Bozen	Merano/Meran (Untermais/Maia Bassa)	Chiesa parrocchiale di San Vigilio	Sandstone					not discussed				Johannson-Meery 1993, 115, nr. 98
IT	Trentino - Alto Adige	Bolzano/Bozen	Sabiona/Säben (Chiusa/Klausen)	Monastery of Sabiona	Sandstone					not discussed				Bierbrauer / Nothdurfter 1988, 287-290; 295; Bierbrauer / Nothdurfter 1988a; Bierbrauer 2005, 348
IT	Trentino - Alto Adige	Bolzano/Bozen	Silandro/Schlanders (Corces/Kortsch)	Chiesa parrocchiale della Natività di San Giovanni Battista	Marble (white)	x				Lasa/Laas	15 max.			Rasmo 1981, 78-79
IT	Trentino - Alto Adige	Trento	Arco	Piazza 3 Novembre	not discussed					not discussed				Porta 2013, 34 (map, nr. 24, with wrong quotation as "Piazza 4 Novembre")
IT	Trentino - Alto Adige	Trento	Arco, fraz. Vignole	San Valentino	not discussed					not discussed				Dalba 2013; Rasmo 1982, 46; Porta 2013, 56
IT	Trentino - Alto Adige	Trento	Avio	Santa Maria Assunta	not discussed					not discussed				Rasmo 1982, 46; Boselli / Pisu 2013; Porta 2013, 63
IT	Trentino - Alto Adige	Trento	Bleggio Superiore	Santi Dioniso, Rustico ed Eleuterio	Sandstone					not discussed				Ciurletti 2003, 367 (stone identification); Colecchia 2013e; Porta 2013, 51 and 58

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Trentino - Alto Adige	Trento	Brentonico	Santi Pietro e Paolo	Limestone (white)					not discussed				Rasmo 1982, 46; Pisu / Turrini 2013 (stone identification); Porta 2013, 63
IT	Trentino - Alto Adige	Trento	Campodenno	San Pancrazio	not discussed					not discussed				Giacomelli 2004, 691-692; Lenzi 2010-2011, 35
IT	Trentino - Alto Adige	Trento	Comano Terme, fraz. Cares	Santi Pietro e Paolo	not discussed					not discussed				Colecchia 2013b
IT	Trentino - Alto Adige	Trento	Comano Terme, fraz. Lundo	San Marcello (?)	Oolitic limestone	x				Comano Terme, fraz. Lundo	i.s.			Porta 2013, 57
IT	Trentino - Alto Adige	Trento	Comano Terme, fraz. Vigo Lomaso	San Lorenzo (baptistery)	Oolitico limestone	x				Lundo	5			Colecchia 2001-2002, 14; Colecchia 2013c
					Sandstone (1 fr.)	x				Arco	30			
IT	Trentino - Alto Adige	Trento	Comano Terme, fraz. Vigo Lomaso	San Silvestro	Oolitico limestone	x				Lundo	5			Colecchia 2001-2002, 14; Colecchia 2013d
IT	Trentino - Alto Adige	Trento	Drena	San Martino	Sandstone (grey)					not discussed				Ciurletti 2003, 375-376 (stone identification); Cavada / Dalba 2013; Porta 2013, 56
IT	Trentino - Alto Adige	Trento	Fornace	Santo Stefano	Sandstone					not discussed				Ciurletti 2003, 377
IT	Trentino - Alto Adige	Trento	Mori	Chiesa parrocchiale di Santo Stefano	not discussed					not discussed				Rasmo 1982, 46; Porta 2013, 63-64
IT	Trentino - Alto Adige	Trento	Mori, fraz. Valle San Felice, loc. Gardumo	San Felice	not discussed					not discussed				Pisu 2013
IT	Trentino - Alto Adige	Trento	Pieve di Bono	Santa Giustina	Sandstone					not discussed				Ciurletti 2003, 381-382
IT	Trentino - Alto Adige	Trento	Riva del Garda	Santi Cassiano e Ippolito	not discussed					not discussed				Bassi 2011, 115-116
IT	Trentino - Alto Adige	Trento	Riva del Garda / Tenno / Lomaso, Monte San Martino (loc. Campi)	San Martino (church, archaeological area)	Sandstone					not discussed				Ciurletti 2003, 389-390; Bellosi, Granata, Pisu 2011, 162
IT	Trentino - Alto Adige	Trento	Riva del Garda, fraz. Varone	Santa Maria del Pernone	Sandstone					not discussed				Ciurletti 2003, 384-385

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Trentino - Alto Adige	Trento	Sanzeno	Santi Sisinio, Martirio e Alessandro	Sandstone					not discussed				Dal Ri 1997, 94
					Ammonitic sandstone (red)					not discussed				
IT	Trentino - Alto Adige	Trento	Spiazzo Rendena, loc. Mortaso	San Vigilio	not discussed					not discussed				Brogiolo 2013
IT	Trentino - Alto Adige	Trento	Stenico	San Martino in castro	Oolitic limestone	x				Lundo	10			Ciurletti 2003, 386; Porta 2013, 48 (stone identification)
IT	Trentino - Alto Adige	Trento	Stenico, fraz. Premione	Sante Margherita e Lucia	not discussed					not discussed				Cecchelli 1928, 204-205; Porta 2013, 53
IT	Trentino - Alto Adige	Trento	Stenico, fraz. Seo	Village centre / church of San Michele Arcangelo?	not discussed					not discussed				Cecchelli 1928, 204-205; Rasmo 1982, 46
IT	Trentino - Alto Adige	Trento	Tenno	San Lorenzo	Sandstone	x				Ceole	5			Vedovetto 2011, 130
IT	Trentino - Alto Adige	Trento	Tione	Santa Maria Assunta e San Giovanni Battista	Oolitic limestone					not discussed				Colecchia 2013
IT	Trentino - Alto Adige	Trento	Tione	San Vigilio	not discussed					not discussed				Colecchia 2013a
IT	Trentino - Alto Adige	Trento	Trento	Doss Trento (church, arch. area)	not discussed					not discussed				Ciurletti 2003, 393-394
IT	Trentino - Alto Adige	Trento	Trento	San Vigilio	Oolitic limestone	x				Trento or Arco	0-35		x	Porta 2001
IT	Trentino - Alto Adige	Trento	Trento	Sant'Apollinare	not discussed					not discussed				Porta 2013, 363
IT	Trentino - Alto Adige	Trento	Trento	Santa Maria Maggiore	Oolitic limestone	x				Trento or Arco	0-35	x	x	Beghelli 2013
					Marble (white, 1 fr.)		x			Ancient monument / stone item	i.s.	x	x	
IT	Valle d'Aosta	Aosta	Aosta	Santa Maria (cathedral)	not discussed					not discussed				Lomartire 2007, 314-318
IT	Valle d'Aosta	Aosta	Aosta	Sant'Orso	not discussed					not discussed				Lomartire 2007, 314-318
IT	Veneto	Belluno	Belluno	San Martino (cathedral)	not discussed					not discussed				Lusuardi Siena 1989a, 285-288

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Veneto	Belluno	Belluno, fraz. Pedeserva	San Daniele (now San Liberale)	not discussed					not discussed				Alpago Novello 1974; Lusuardi Siena 1989a, 286-288
IT	Veneto	Belluno	Belluno, loc. Travazoi	San Sebastiano	not discussed					not discussed				Lusuardi Siena 1989a, 287-288
IT	Veneto	Belluno	Belluno, loc, S. Fermo / Baldeniga	Santi Fermo e Rustico	not discussed					not discussed				Lusuardi Siena 1989a, 288
IT	Veneto	Belluno	Sedico, fraz. Libano, loc. Valdenere	Chiesa della Madonna di Valdenere	"Local stone"	x				Local stone (exact provenance not discussed)	i.s. / s.a.			Lusuardi Siena 1989a, 286
IT	Veneto	Padova	Padova	San Martino	Soft limestone			x		Berici Hills	50		x	Vedovetto 2014, 606
IT	Veneto	Padova	Padova	Santa Maria e Santa Giustina (cathedral)	not discussed					not discussed				Lusuardi Siena 1989a, 223-225
IT	Veneto	Padova	Megliadino San Fidenzio	San Tommaso	not discussed					not discussed				Lusuardi Siena 1989a, 248-250
IT	Veneto	Padova	Monselice	Church	not discussed					not discussed				Cattaneo 1888, 106
IT	Veneto	Rovigo	Adria	Santa Maria della Tomba	Marble		x			Ancient monument / stone item	i.s. / s.a.			Lusuardi Siena 1989a, 251-255
IT	Veneto	Rovigo	Adria	Museo Bocchi (from Adria?)	not discussed					not discussed				Cattaneo 1888, 106
IT	Veneto	Treviso	Vittorio Veneto, quartiere Ceneda	San Marco	Sandstone					not discussed				Lusuardi Siena 1989a, 281-284 (provenance from San Marco); Zanette 1999 (stone identification)
IT	Veneto	Treviso	Vittorio Veneto, quartiere Ceneda	Santa Maria Assunta (cathedral)	Bioclastic limestone					not discussed				Lusuardi Siena 1989a, 281-284; Zanette 1999 (stone identification)
					Crystalline limestone					not discussed				
					Sandstone					not discussed				
IT	Veneto	Venezia	Caorle	Santo Stefano Protomartire	not discussed					not discussed				Zovatto 1971, 107-108; Dorigo 1983, 658 and 663
IT	Veneto	Venezia	Ceggia	Chiesa parrocchiale	not discussed					not discussed				Lusuardi Siena 1989a, 258
IT	Veneto	Venezia	Cittanova Eraclea	Complex of the cathedral (archaeological site)	not discussed					not discussed				Tozzi / Harari 1984, 75-96; Scarpa Bonazza Buora Veronese 1985, 19-20; Lusuardi Siena 1989a, 256-258

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Veneto	Venezia	Concordia	Early Christian complex (archeological site) and baptistery	not discussed					not discussed				Zovatto 1971, 64; Dorigo 1983, 657; Lusuardi Siena 1989a, 269-270
IT	Veneto	Venezia	Jesolo, loc. Le Mura	San Mauro	not discussed					not discussed				Dorigo 1983, 253 e 652; Dorigo 1995
IT	Veneto	Venezia	Jesolo, loc. Le Mure	Santa Maria	not discussed					not discussed				Cuscito 1983, 66-67; Dorigo 1995
IT	Veneto	Venezia	Venezia	Abbey of Sant'Ilario	Soft stone (and terracotta)					not discussed				Polacco 1980, 25-27; Dorigo 1983, 666
IT	Veneto	Venezia	Venezia	Sant'Agostino	Marble (white)					not discussed				Polacco 1980, 28
IT	Veneto	Venezia	Venezia	San Marco and surroundings	Marble					not discussed				Zuliani 1970, 78-93; Dorigo 1983, 650-651
IT	Veneto	Venezia	Venezia	San Zaccaria	not discussed					not discussed				Dorigo 1983, 658 and 667
IT	Veneto	Venezia	Venezia	San Giovanni in Bragora	not discussed					not discussed				Dorigo 1983, 669
IT	Veneto	Venezia	Venezia, Murano island	Basilica di Santa Maria e Donato	Marble (many objects without type of stone)					not discussed				Vecchi 1995
IT	Veneto	Venezia	Venezia, Torcello island	Santa Fosca	not discussed					not discussed				Dorigo 1983, 658 and 670
IT	Veneto	Verona	Affi	San Pietro	Limestone	x				Incaffi	2-5			Ibsen 2006a, 307-353
IT	Veneto	Verona	Bardolino	San Severo	Sandstone					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Bardolino	San Zeno	Limestone					not discussed				Ibsen 2006a, 307-353
					Sandstone					not discussed				
IT	Veneto	Verona	Bardolino	San Vito di Cortelline	Marble?					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Bardolino, fraz. Cisano	Santa Maria (parish church)	Soft limestone			x		Berici Hills	80-90 overland (waterways used)			Napione 2001, 109-110; Napione 2002, 333; Ibsen 2006a, 307-353
IT	Veneto	Verona	Bardolino, fraz. Cisano	Via Gardesana Orientale	Soft limestone			x		Berici Hills	80-90 overland (waterways used)			Napione 2001, 109-110; Napione 2002, 333; Ibsen 2006a, 307-353
IT	Veneto	Verona	Caprino Veronese	Parish house	not discussed					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Cavaion Veronese	San Michele	Sandstone					not discussed				Ibsen 2006a, 307-353
					Ammonitic sandstone (red)	x (?)				Verona area (?)	i.s. / s.a.			
					Limestone	x				Incaffi	2			
IT	Veneto	Verona	Garda	Santa Maria, parish house	Soft stone	x				Verona area	i.s. / s.a.			Ibsen 2006a, 307-353
					Limestone					not discussed				
					Oolitic limestone					not discussed				
IT	Veneto	Verona	Garda	Town hall	Limestone					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Incaffi	Sant'Andrea	Limestone	x				Incaffi	i.s.			Ibsen 2006a, 307-353
IT	Veneto	Verona	Lazise	San Pietro	Limestone	x				Incaffi	2-5			Ibsen 2006a, 307-353
IT	Veneto	Verona	Lazise	San Faustino di Mondragone	not discussed					not discussed				Ibsen 2006a, 307-353

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Veneto	Verona	Malcesine	San Michele	Sandstone					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Palazzolo (Sona)	San Giacomo	Limestone					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Palazzolo (Sona)	Santa Giustina	Limestone					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Sandrà	Parish church	Marble?					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Sandrà	Via Chiesa	Marble					not discussed				Ibsen 2006a, 307-353
IT	Veneto	Verona	Sant'Ambrogio di Valpolicella, fraz. San Giorgio	San Giorgio	"Masegna" stone (euganean trachyte)	x				Cristo (Verona)	10			Brugnoli / Cortellazzo 2011-2012, 131; Brugnoli 1999, 110
IT	Veneto	Verona	San Pietro in Cariano, fraz. Castelrotto	Santa Maria della Vallena	Marble					not discussed				D'Arcais 1984
IT	Veneto	Verona	Gazzo Veronese	Santa Maria	Marble (white, from Luni?)		x (?)			Ancient monument / stone item (?)	i.s. / s.a. (?)			Lusuardi Siena 1989a, 172-187
IT	Veneto	Verona	Gazzo Veronese	San Pietro in Valle	not discussed					not discussed				Lusuardi Siena 1989a, 187-188
IT	Veneto	Verona	Verona	San Lorenzo	Limestone (1 fr.)					not discussed				Lusuardi Siena 1989a, 131 and 298, footnote 89
IT	Veneto	Verona	Cologna Veneta (frazione Baldaria)	Santa Giustina	Marble (white, veined: Luni?)		x			Ancient monument / stone item	i.s. / s.a.			Napione 2001, 109-110 (and footnote 268); 110-116; 135-137
IT	Veneto	Vicenza	Bassano del Grappa	Santa Eulalia (surroundings)	Limestone (brownish, compact)			x (?)		Berici Hills (?)	60 (?)		x	Napione 2001, 109-110 (and footnote 268); 110-116; 127
IT	Veneto	Vicenza	Brogliano	San Martino	Soft limestone	x				Berici Hills	30		x	Napione 2001, 109-110 (and footnote 268); 110-116; 128-130
IT	Veneto	Vicenza	Caldogno	San Michele	Soft limestone	x				Berici Hills	25		x	Napione 2001, 109-110 (and footnote 268); 110-116; 130-132
IT	Veneto	Vicenza	Castelnovo di Isola Vicentina	San Lorenzo	Soft limestone	x				Berici Hills	20-25		x	Napione 2001, 109-110 (and footnote 268); 110-116; 132-134
IT	Veneto	Vicenza	Costabissara	San Zeno	Soft limestone	x				Berici Hills	20		x	Napione 2001, 109-110 (and footnote 268); 110-116; 137-143
IT	Veneto	Vicenza	Grancona	Sant'Antonio Abate (old San Vitale)	Soft limestone	x				Berici Hills	10		x	Napione 2001, 109-110 (and footnote 268); 110-116; 144-147
IT	Veneto	Vicenza	Lonigo	Villa Giovanelli (old monastery Santi Fermo e Rustico)	Soft limestone	x				Berici Hills	15		x	Napione 2001, 109-110 (and footnote 268); 110-116; 147-150
IT	Veneto	Vicenza	Lovertino di Albettone	San Vito	Soft limestone (red-brownish)	x (?)				Berici Hills (?)	15		x	Napione 2001, 109-110 (and footnote 268); 110-116; 150-151
IT	Veneto	Vicenza	Lumignano di Longare	Eremo di San Cassiano (Berici hills)	Soft limestone	x				Berici Hills	0-10		x	Napione 2001, 109-110 (and footnote 268); 110-116; 151-156

Country	Region	District / province / department	Municipality	Find-spot (church / context / etc.)	Stone type	Proximate supply of stone		Medium range 50-100 km	Imported materials	Origin	Distance (km, circa)	Stone analysis		Literature
						Local	Re-used					Petr.	Geol.	
IT	Veneto	Vicenza	Marostica / San Vito	San Vito	Soft limestone	x				Berici Hills	40		x	Napione 2001, 109-110 (and footnote 268); 110-116; 156-159
IT	Veneto	Verona	Montecchia di Crosara	San Salvatore (Santa Maria?)	Soft limestone	x				Berici Hills	30-35		x	Napione 2001, 109-110 (and footnote 268); 110-116; 159-165
IT	Veneto	Verona	Villanova (San Bonifacio)	Abbey of San Pietro	Soft limestone	x				Berici Hills	30-35		x	Napione 2001, 109-110 (and footnote 268); 110-116; 165-171
					Marble (1 fr.)		x			Ancient monument / stone item	i.s. / s.a.		x	
IT	Veneto	Vicenza	Vicenza	Santa Maria Annunciata (cathedral)	Soft limestone	x				Berici Hills	10-15		x	Napione 2001, 109-110 (and footnote 268); 114; 110-116; 179-181; 216-253
					Marble (white, from Luni?)		x			Ancient monument / stone item	i.s. / s.a.		x	
					Marble (white, crystalline)		x			Ancient monument / stone item	i.s. / s.a.		x	
					Marble (grey)		x			Ancient monument / stone item	i.s. / s.a.		x	
IT	Veneto	Vicenza	Vicenza	Santi Felice e Fortunato	Soft limestone	x				Berici Hills	10-15		x	Napione 2001, 109-110 (and footnote 268); 114; 110-116; 179-181; 184-213
					Marble (3 small frr.)		x			Ancient monument / stone item	i.s. / s.a.		x	
IT	Veneto	Vicenza	Vicenza	San Giorgio in Gogna	Soft limestone	x				Berici Hills	10-15		x	Napione 2001, 109-110 (and footnote 268); 110-116; 181-184; 214-216
IT	Veneto	Vicenza	Ponte del Marchese (Vicenza)	San Martino	Soft limestone	x				Berici Hills	10-15		x	Napione 2001, 109-110 (and footnote 268); 110-116; 181-184; 259-262
IT	Veneto	Vicenza	Vicenza	San Pietro	Soft limestone	x				Berici Hills	10-15		x	Napione 2001, 109-110 (and footnote 268); 110-116; 181-184; 259-262

Appendix 2.

Latin texts

The written sources mentioned in this work have been quoted in their English translation, which seemed the most convenient option in order to ease the reading. However, likewise important is the possibility to quickly check the original versions of the texts (all in Latin but one). In this Appendix are therefore collected all the sources included in the previous pages of this work, and some more. For instance, have been added all the mentions from the *Liber Pontificalis* describing the 'relation' between stone furnishings and other items in the church, such as lamps, curtains and icons on pergulae, ciboria, ambos, etc. The texts are ordered chronologically. Given the high number of records from the *Liber Pontificalis*, these have been presented first, grouped together. The editions used are listed in the Literature.

Liber Pontificalis, 69. Boniface IV (608-615)

II. [Bonifatius] petiit a Focate principe templum qui appellatur Pantheon, in quo fecit ecclesiam beatae Mariae semper virginis et omnium martyrum; in qua ecclesia princeps dona multa optulit.

Liber Pontificalis, 86. Sergius I (687-701)

XI. […] Hic fecit in suprascripta basilica faros argenteos VI, pens. lib.CLXX, qui sunt super trabes ad ingressum confessionis. Hic fecit in circuitu altaris basilicae suprascriptae tetravela VII, IIII ex albis et IIII a coccino. […]

XII. [...] Hic tegnum et cubicula universa in circuitu basilicae beati Pauli apostoli, quae longa per tempora vetustate confecta fuerant, studiosius innovavit ac reparavit. Similiter et trabes fecit de Calabria adduci et quae in eadem basilica vetustissimas invenit renovavit. […]

XIII. Hic fecit ambonem et cyburium in basilica sanctorum Cosmae et Damiani, ubi et multa dona obtulit; trullum vero eiusdem basilicae fusis chartis plumbeis cooperuit atque munivit. Hic cyburium basilice sancte Susannae, quod ante ligneum fuerat, ex marmore fecit; diversaque cymilia aurea et argentea vel immobilia loca illic condonavit. […]

Liber Pontificalis, 87. Johannes VI (701-705)

III. Hic fecit in basilica beati Andreae apostoli qui ponitur infra ecclesia beati Petri principis apostolorum ambonem noviter. Hic super altare ecclesiae sancti Marci coopertorium fecit; et in basilica beati Pauli apostoli inter columnas altaris dextra levaque vela alba. […]

Liber Pontificalis, 88. Johannes VII (705-707)

II. [...] Basilicam itaque sanctae Dei genetricis qui Antiqua vocatur pictura decoravit, illicque ambonem noviter fecit et super eandem ecclesiam episcopium quantum ad se construere maluit, illicque pontificati sui tempus vitam finivit. Hic fecit calicem aureum praecipuum, pens. lib. XX, quem et gemmis praetiosis decoravit.

Liber Pontificalis, 91. Gregorius II (715-731)

II. […] Hic maximam partem basilicae beati Pauli apostoli quae ceciderat, allatis de Calabria trabibus cooperuit, et altare a novo refecit et cyburium argenteum quod fuerat ruina quassatum. […]
VIII. Hic Hierusalem ecclesiam sanctam quae multo fuerat distecta tempore et circumquaque porticos vetustate quassatos, travibus deductis cooperuit ac reparavit; ammonem etiam marmoreum in eadem ecclesia fecit, eamque diversis ditavit linteis atque ministeriis[1]. […]
X. Eo namque tempore moribus certe Honesta et nomine pontificis mater ab hac vita subtracta est. Post cuius obitum domum propriam in honore sanctae Christi martyris Agathae, additis a fundamento cenaculis vel quae monasterii erant necessaria a novo construxit; praedia illic urbana vel rustica pro monachorum obtulit necessitate. Fecit autem in eandem ecclesiam beatae Agathae ciburium ex argento qui pens. lib. DCCXX, arcos argenteos VI, pens. sing. lib. XV, canistra X, pens. sing. lib. XII, et alia dona multa largitus est.

Liber Pontificalis, 92. Gregorius III (731-741)

V. Hic concessas sibi columnas VI onichinas volutiles ab Eutychio exarcho, duxit eas in ecclesiam beati Petri apostoli, quas statuit erga presbiterium, ante confessionem, tres a dextris et tres a sinistris, iuxta alias antiquas sex filopares. Super quas posuit trabes et vestivit eas argento mundissimo, in quo sunt expresse ab uno latere effigies Salvatoris et apostolorum et ab alio latere

[1] Ministerium, -ii: altar service, objects of the liturgical set: see Niermeyer / van de Kieft / Burgers 1976 [2002] s.v. Ministerium, 898, nr. 18.

Dei genetricis et sanctarum virginum; posuitque super eas lilia[2] et faros argenteos, pensantes in unum libras DCC.

VI. - VII. Hic fecit oratorium intro eandem basilicam, iuxta arcum principalem, parte virorum […] In quo faciens pergulam, contulit dona diversarum specierum, id est:

gabatas aureas numero II et alias saxiscas numero V;

cruces pendentes num. IIII;

item cruces similes num. X;

amulas superauratas, paria II, pendentes;

fibulatoria num. V;

coronam auream cum cruce pendentem, in gemmis, super altare;

patenam et calicem aureos, par unum, in gemmis;

aquamanus argenteum par unum;

et in imaginem sancte Dei genetricis diademam auream in gemmis et collare aureum in gemmis, cum gemmis pendentibus, inaures habentes iacinthias sex;

et faciem altaris et confessionem cum regiolis vestivit argento et in tribus lateribus altaris posuit cruces argenteas III, pens. in unum lib. XXXVI;

canistra argentea II;

calicem argenteum I cotidianum;

coronulas argenteas num. V;

et calicem argenteum I, qui pendit in absida ipsius oratorii;

et super eandem absidam cruces argenteas III;

et cetera quae in ornamento pergule seu et vestes altaris ordinata sunt.

VIII. - IX. Hic fecit in ecclesia sanctae Dei genetricis ad Praesepem per circuitum super columnas regulare candelabrum[3] ad instar ecclesie beati Petri apostoli. Fecit et ibidem in oratorio sancto quod Praesepe dicitur imaginem auream Dei genetricis amplectentem Salvatorem dominum Deum nostrum in gemmis diversis, pens. lib.V.

Hic renovavit tectum sancti Chrysogoni martyris et cameram sive parietum picturas; cyburium etiam de argento seu arcos V, pens. in unum lib. CCX; ubi obtulit:

coronas argenteas IIII;

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[2] Lilium, -us: lily-shaped ornament on buildings, here in the meaning of 'capital': see Niermeyer / van de Kieft / Burgers 1976 [2002], s.v. Lilium. This translation, 'capital', is also adopted by Michel Aubrun in his French translation of the Liber Pontificalis: see Aubrun 2007, 112.

[3] According to Davis 2007, 23, footnote 29, «The object is a cross-beam or entablature over or round the altar, carrying lamps»; also according to De Blaauw 1994, 556-557, the regularis is a belonging to a railings-system, smaller and lighter than regular beam, called generally trabes.

farocantara II;

patenam argenteam I;

calicem argenteum I;

seu etiam et vestes altaris necnon et vela sirica alba, ornata blattio, circumquaque pendentia. […]

XI. Fecit autem et tectum a noviter simul et cameram sancti Andree apostoli ad sanctum Petrum apostolum, quam depinxit; et fecit in eadem basilica imaginem auream in gemmis beati Andree apostoli, pens. lib. VIII; et intro confessionem vestivit argento, quod deauravit auro purissimo. [...]

XII. Item in ecclesia beati Genesii martyris tectum noviter restaura vit; ubi et altare erexit in nomine Salvatoris domini Dei nostri, in quo contulit patenam argenteam et calicem, seu coronam argenteam cum delfinis VI, necnon et coronulam auream cum cruce, pendentem super altare. […]

XV. Huius temporibus plurima pars murorum huius civitatis Romae restaurata est; alimonia quoque artificum et pretium ad emendum calcem de proprio tribuit. [...]

Liber Pontificalis, 94. Stephanus II (752-757)

LII - LIII. Interea renovavit in atrium ante fores beati Petri apostoli, qui quadriporticos dicitur, columnas marmoreas VIII, mirae pulchritudinis, sculptas, quae desuper quadris composuit[4] et aereum desuper conlocavit tegumen[5]. [...]

Liber Pontificalis, 95. Paulus I (757-767)

III. [...] Fecit autem et rugas[6] in ecclesia beati Petri apostoli in presbiterio ingredientes utraque parte dextera levaque, investivit argento purissimo, qui pens. lib. L. […]

V. Hic sanctissimus presul in sua propria domu monasterium a fundamentis in honore sancti Stephani, scilicet martyris atque pontificis, necnon et beati Silvestri, idem pontificis et confessoris Christi construxit. Ubi et oraculum in superioribus eiusdem monasterii moeniis aedificans, eorum corpora magna cum veneratione condidit. Infra claustra vero ipsius monasterii ecclesiam mirae pulchritudinis a fundamentis noviter construxit, quam musibo et marmoribus decorans et omnem

[4] Quadris: entablature: see Duchesne, 461, footnote 61.

[5] See De Blaauw 1994, 504. – Davis 2007, 75, footnote 119: «This is the cantharus or pigna built by Symmachus, which did have 8 columns of porphyry, some sculpted, supporting an entablature, and a bronze cupola. Krautheimer thinks that Stephen restored the canopy [= ciborium] and possibly added four of the columns. The huge antique bronze pinecone enclosed inside it survives in the Vatican» (Krautheimer / Corbett / Frankl 1937-1977, vol. 5, 175).

[6] Ruga, -ae: balaustrade, railing, enclosure for the sanctuary (often in metal, as railings to close the pergula's entrances to the presbiterium): see Niermeyer / van de Kieft / Burgers 1976 [2002], s.v. Ruga, 1205, nr. 5. On the rugae see also De Blaauw 1994, 541 and 557-559.

illic ornatum in auro argentoque et diversis speciebus largiens; sed et cyburium ibidem ex argento fecit, qui pens. lib. DCCXX. Fecit autem ibidem altare apud confessionem, quae investivit argento purissimo, qui pens. lib. CCC. Illicque innumerabilium sanctorum corpora quae de praefatis demolitis abstulit cymiteriis maximo venerationis condidit affectu. In eodem quippe monasterio plura contulit praedia et possessionum loca, urbana vel rustica, superflue atque abundanter eum ditans in auro et argento aliisque rerum speciebus et omnibus utilitatibus. […]

Liber Pontificalis, 96. Stephanus III (768-772)

XIII. […] Factaque ab universo populo Romano paenitentiae confessionisque deprecatione apud divinam clementiam, per quam se omnes peccasse in praedicti Constantini invasoris apostolicae sedis impia ordinatione confitentes, pro eo quod non ei restiterunt, ita excelsa voce in ambone basilice beati Petri a Leontio scriniario eadem relecta est confessio. […]

XXIV. Expletis vero omnibus quae in eodem concilio [*year 769*] promulganda erant, tunc hisdem beatissimus pontifex aggregans universos sacerdotes atque clerum et cunctum populum, profecti sunt ad beatum Petrum principem apostolorum, cum hymnis et canticis spiritalibus, nudis pedibus incedentes. Illicque in ambonem ascendens Leontius scriniarius, cuncta quae in eodem peracta sunt concilio extensa voce legit populo; sed et tres episcopi, id est Gregorius Silva Candida, Eustratius Albano et Teodosius Tibur, in eodem praedictae ecclesiae ambone ascendentes anathematis obligationem protulerunt, ne quisquam presumi quoquo tempore transgredi quippiam de omnibus quae in eodem concilio statuta sunt.

XXVII. [...] Fecit enim et tres regulares argenteos super rugas per quas ingrediuntur ad altare, ubi imagines in frontespicio constitutae sunt, unum quidem in basilica beati Petri apostoli, et alium in basilica beati Pauli, et alium ab beatum Andream apostolum.

Liber Pontificalis, 97. Hadrianus I (772-795)

XLVI. [...] Nam et in ecclesia beati Andreae apostoli, sitam iuxta eandem beati Petri ecclesiam, cyburium noviter ex argento mundissimo ipse ter beatissimus pontifex fecit, qui pens. lib. CXXXV.

XLIX. [...] Ecclesia vero beati Marci, cuius tectum iam vetustate positum vicina ruinae existebat, depositis vetustissimis travibus et aliis fortissimis inpositis, a noviter ipsum tectum atque portica in circuitu fecit, eandemque ecclesiam restauravit. Arcora vero tria quae vetustissima erant, addens isdem beatissimus pontifex argenti lib. XII, noviter fecit[7]. Fecit etiam in eadem aecclesia super

[7] System of columellae and arcus (here in wood and silver-plated) which formed the chancel screen: see De Blaauw 1994, 177.

altare maiore et vestem de stauracim. Sed et per diversos arcos eiusdem aecclesiae ex palleis quadrapolis fecit vela numero XXVII, simulque et cortinam ex eisdem palleis quadrapolis quae pendet sub trabe fecit.

LI. Fecit in basilica beati Adriani a cereostata argentea, pens. lib. XII, simulque et laudimas duas ex argento, pens. lib. VIII, quas posuit super rugas de presbiterio ubi arcum de argento existit. [...]

LVIII. Fecit etiam eius ter beatitudo imagines VI ex lamminis argenteis investitas ex quibus tres posuit super rugas qui sunt in introitu presbiterii, ubi et regularem ex argento investito fecit, et posuit super eundem regularem praefatas tres imagines: in medio quidem imago existentem habentem depictum vultum Salvatoris et ex utriusque lateribus imagines habentes depictas effigies, unam beati Michahelis et aliam beati Gabrihelis angelorum. In secundas vero rugas, id est in medio presbiterii, faciens alium regularem ex argento investito, constituit super eum reliquas tres imagines: in medio quidem habentem praefiguratum vultum sanctae Dei genetricis, et ex duobus lateribus unam habentem vultum depictum sancti Andree apostoli et aliam sancti Iohannis evangelistae. Utrasque vero sex imagines, ut dictum est, de lamminis argenteis nimis pulcherrime factas deauravit; in quibus imaginibus posuit argenti libras C.

LX. Simulque isdem beatissimus pontifex fecit in basilica beati Pauli apostoli ex lamminis argenteis imagines III qui ponuntur super rugas in introitu presbiterii, una quidem habente depictum vultum Salvatoris domini nostri Iesu Christi, et ex utriusque lateris imagines depictas habentes effigies angelorum, qui pens. lib. XXIIII. [...]

LXII. Dum vero forma quae Claudia vocatur per annorum spatia demolita esse videbatur, unde et balneus Lateranensis de ipsa aqua lavari solebat et in baptisterio ecclesiae Salvatoris domini nostri Iesu Christi et in plures ecclesias in die sanctum Pasche decurri solebat; et dum modica aqua de praenominata forma intus civitatem decurrebat, prospiciens praecipuus et coangelicus praesul, aggregans multitudinem populi partibus Campanie per semetipsum ad fabricandum atque restaurandum eandem formam vicibus properavit. Et tantam curam ac sollicitudinem in eiusdem forme fabrica exibuit, qui etiam a noviter eam renovavit atque restauravit. Et confestim qui ex eadem formam aquae in praefato balneo etiam et intus civitatem sicut ex antiquitus habundanter decurri fecit.

LXXI. [...] Sed et in praedicta basilica beati Marci fecit alios arcos argenteos numero VI, pens. simul lib. LV; pariterque et calices ministeriales in catholica procedentes ex auro purissimo reparavit VII, pens. inibi lib. VIIII semis.

LXXVIII. Hic fecit in basilica beatae Petronillae ad beatum Petrum apostolum arcos argenteos VI, pens. lib. L.

LXXXIII. Hic vero egregius sacerdos, ob nimium amorem, confessionem beati Petri apostoli totam intus ex auro purissimo in lamminis diversisque historiis compte ornavit, ponderum CCC librarum ponens; et in postem superius eiusdem sacrae confessionis auri mundissimi lib. XIII. Pari modo et in ipsius apostoli confessione limitare inferius lib. XXV. Aspectum vero altaris super eadem almam confessionem atque dextra levaque parte iuxta grados quae coherent iamdictae confessionis, addens in eo argenti lib. CXXXVI, curiose renovavit, eiusque historiis ex auro purissimo lib. XVIII nitidissime deauravit. Simulque et cantaros in eadem Dei apostoli ecclesia numero X renovavit, addens in eos argenti lib. C. Ante ianuas vero argenteas fecit canistros argenteos numero VIIII, pens. simul lib. XLV. Simili modo et in turre canistros XII, pens. inibi lib. XXXVI.

LXXXIV. .[...] Fecit et in ecclesia beati Petri per diversa oratoria canistra argentea numero XII, pens. simul lib. XL; et rugas in presbiterio a parte virorum et mulierum ex argento purissimo pens. simul lib. CXXX; nec non et alias rugas in caput presbiterii ante confessionem, ex argento, pens. simul lib. CIIII. Et in ecclesia sanctae Dei genetricis trans Tiberim fecit canistra argentea V, pens. simul lib. XV. Enimvero in basilica sanctae Dei genetricis quae appellatur ad Praesepem, in altare ipsius Praesepii fecit lamminas ex auro purissimo historiis depictis, pens. simul lib. CV ; ex argento intus suprascriptae confessionis tabulas II, pens. simul lib. XV.

LXXXVII. [...] In ecclesia vero Salvatoris quae vocatur Constantiniana fecit ante vestibulum altaris[8] gabatas aureas III, pens. lib. X. [...]

LXXXIX. Hic idem eximius papa altare beati Pauli apostoli una cum eiusdem confessionis fores, ex auro mundo in sacris designans historiis mirifice ornavit, pens. lib. CXXX. [...]

XCIII. Presertim et in altare maiore ecclesiae beati Petri apostoli fecit ex auro purissimo diversas storias, pens. lib. DXCII; et intus in confessione imaginem in modum evangeliorum ex auro obrizo pens. lib. XX, simul et cancellum ante eadem confessionem ex auro purissimo pens. lib. LVI, qui fiunt simul tam in altare quam intus in sacra ultro citroque confessione, seu imagine in modum evangeliorum, necnon et in postibus inferioribus et superioribus atque cancello, simul etiam et in corpus auri obrizi lib. mille CCCXXVIII.

XCVI. Idem vero sacratissimus praesul portas aereas maiores mire magnitudinis decoratas, studiose a civitate Perusine eas deducens, in basilica beati Petri apostoli ad turrem compte erexit. [...] Fecit autem et in diaconia sancti Adriani martyris arcora de argento II, pens. inibi lib. XX; et in basilica sancte Martine arcora de argento III, pens. inibi lib. XXX. Immo et in ecclesia sanctae semperque virginis Mariae quae vocatur ad martyres renovavit cyburium de argento, qui ex vetustate

[8] Explained by Duchesne 522, footnote 117, as an iconostasis or pergula.

consumptus inerat, et addidit in eo argenti lib. LX, et in pristino eum erexit noviter locum. Sed et arcum in eadem venerabili ecclesia fecit argenteum, pens. lib. XII.

Liber Pontificalis, 98. Leo III (795-816)

III. Fecit enim in basilica beati Petri principis apostolorum, nutritori suo, turibulum aureum, ante vestibulum altaris[9], pens. Iib. XVII. Immo et in confessione eidem apostoli ruga ex auro purissimo, cum gemmis diversis, pens. lib. XLVIIII. [...]

IV. [...] Fecit autem et in basilica beate Dei genetricis, quae appellatur ad Presepem, ciborium ex argento purissimo, qui pens. lib. DXC, simul et rugas argenteas in ingressu presbiterii, pens. lib. LXXX; atque cortina maiore sirica alba, habentem periclisin et crucem de fundato. [...].

VI. Fecit autem isdem praesul in basilica doctoris mundi beati Pauli apostoli confessione simul et ruga ex auro obrizo habentem gemmas pretiosas, instar beati Petri apostoli, pens. lib. CLVI. [...] Fecit autem et in basilica beati Andreae ad beatum Petrum apostolum rugas argenteas, pens. lib. LXXX. [...]

VIII. [...] Fecit etiam et in arcora argentea[10] ecclesia beati Petri apostoli vela alba paschales et in natale eidem Dei apostoli vela de stauraci valde puicherrima.

IX. Ipse vero praecipuus pontifex titulum beate Susanne, ubi et presbiter ordinatus fuerat, dum breviter constructus fuisset, etiam per olitana tempora ipsi parietes marcuissent, ob nimium amorem eum in amplum largivit aedificium et noviter in altum fodiens firmissimum posuit fundamentum; [...] Fecit et confessionem eiusdem altaris ex argento purissimo, pens. lib. CIII, uncias II; columnas argenteas VIII cum gammadias II et arcora II, cum cruces argenteas V et gabathas XV, pens. simul libras CL; cruce diacopton I, pens. lib. XIIII, cum canistrum excedecafoti I, pens. lib. XII semis; corona maiore de argento I, cum delfinos XXXII, pens. lib. XXII; necnon et canistrum argenteum I, pens. lib. XVIII; seu et alium canistrum argenteum, pens. lib. XVIII; catia colatoria argentea deaurata I, pens. lib. IIII, uncias III; gabathas argenteas saxisca, habentem grifos deauratos, pens. lib. II; coronas argenteas II cum delfinos XVIII, pens. lib. XVIII.

X. [...] Fecit autem et in patriarchio Lateranense triclinium maiorem super omnes triclineos nomini suo mire magnitudinis decoratum, ponens in eo fundamenta firmissima et in circuitu lamminis marmoreis ornavit, atque marmoribus in exemplis stravit et diversis columnis tam purfireticis

[9] Explained by Duchesne 522, footnote 117, as an iconostasis or pergula.

[10] Arcora: plural for arcus (arch); here in the meaning of silver-plated wooden arches belonging to the presbiterium's enclosure system (pergula): see du Cange 1883-1887, vol. 1, col. 372c.

quamque albis et sculptis cum basibus et liliis simul postibus[11] decoravit. Et camera cum absida de musibo seu alias II absidas diversas storias pingens super
marmorum constructione pariter in circilitu decoravit. [...]

XXII. Alia vero die, in eadem ecclesia beati Petri apostoli, omnes generaliter archiepiscopi seu episcop... et abbates et omnes Franci qui in servitio eidem magni regis fuerunt, et curicti Romani in eadem ecclesia beati Petri apostoli, in eorum praesentia amplectens prelatus venerabilis pontifex sancta Christi quattuor evvangelia coram omnibus ascendit in ambonem et sub iusiurando 3l clara voce dixit: « Quia de istis criminibus falsis, quibus super me inposuerunt Romani qui inique me persecuti sunt, scientiam non habeo, neo talia egisse me cognosco. » [...]

XXIV. - XXV. Ilico sanctissimus antistes et pontifex unxit oleo sancto Karolo, excellentissimo filio eius, rege, in ipso die Natalis domini nostri lesu Christi. Et missa peracta, post celebrationem missorum, obtulit ipse serenissimus domnus imperator mensa argentea cum pedibus suis, pens. lib. ... Sed et in confessione eiusdem Dei apostoli obtulit una cum praecellentissimos filios suos reges et filiabus diversa vasa ex auro purissimo, in ministerio ipsius mensae, pens. Iib. Sed et corona aurea cum gemmis maiores, quae pendet super altare, pens. lib. LV; et patena aurea maiore cum gemmis diversis, legente KAROLO, pens. lib. XXX; et calicem maiorem cum gemmis et ansis duabus, pens. lib. LVIII. Item calice maiore fundato cum sifone, pens. lib. XXXVII. Immo et alìum calicem maiore fundatun, pens. lib. XXXVI, obtulit super sacratissimum altarem beati Petri apostoli. Immo et in basilica beati Pauli apostoli mensa argentea subminore, cum pedibus suis, pens. Iib. ... , cum diversis vasis argenteis mire magnitudinis, quae ad usum ipsius mensae pertineunt. Item, in basilica Salvatoris domini nostri, quae appellatur Constantiniana, obtulit crucem cum gemmis yacinctinis, quam almificus pontifex in letania procedere constituit, secundurn petitionem ipsius piissimi imperatoris; immo et altare cum columnis argenteis et ciburio; verum etiam et evangelium cum battaci ex auro mundissimo, in gemmis ornatum, pens. lib. ... Interea et in basilica beatae Dei genetricis ad Praesepe obtulit sicla argentea maiore, pens. lib. ...

XXVII. - XXVIII. [...] Itemque fecit in basilica beati Petri apostoli veste chrysoclaba cum pretiosis gemmis ornata, habentem storia dominicae Resurrectionis. Sed et in arcora argentea vela sirica alba et in natale eiusdem Dei apostoli fecit in eadem arcora vela de stauraci puicherrima post reversione sua. Et ob nimium amorem fecit eiusdem nutritori suo presbiterio noviter totum in marmorum pulchritudinis sculptum compte erectum[12]. Sed et super altarem maiorem fecit tetravila olosirica

[11] They are the door jambs, topped by a capital, or low-relief pilasters used as door jambs, also topped by a low-relief capital.

[12] Du Cange reads 'Ornatus'.

alithina IIII[13], cum astillis et rosis chrisoclabis; et in eidem sacro altare fecit alia veste cum storiis crucifixi Domini tyrea. Et in ecclesia doctoris mundi beati Pauli apostoli tetravila olosirica alithina IIII [...].

XXXIV. [Ecclesia beati Petri apostoli] Verum etiam et in arcora argentea fecit vela pascatiles cum periclisin de stauraci, ex quibus V cum crisoclabo, XCIII, et in arcoras maiores vela alba XLVIII. Necnon et gabatas fundatas fecit ex auro purissimo XVIII, cum gemmis, pendentes in
pergula ante altare, pens. lib. LXV semis. Seu et tabulam ante contessionem fecit ex auro purissimo, pens. lib. XXVIII. [...]

XXXV. [...] Et in altare beatae Petronillae fecit vestem albam olosiricam cum tabulis de chrisoclavo et cruce; et ibidem presbiterium ex marmoribus sculptis decoravit; fecit et columnas argenteas VI cum regulares II ex argento purissimo, pens. simul lib. LXXX.

XXXVI. [...] In basilica beati Pancratii martyris fecit cyburium ex argento purissimo, pens. lib. CCCLXVII. Et in titulo beati Calisti ad honorem Dei genetricis semperque virginis Mariae fecit cyburium ex argento, pens. lib. DIIII semis.

XLVIII. - XLIX. [Basilica beati Petri] [...] atque inibi eius beatitudo fecit crucifixum ex argento purissimo, qui stat iuxta altare maiore, mire magnitudinis decoratum, pens. lib. LII. Enimvero cui super fecit gabatas VI cum cruces ex argento purissimo, qui pendent ante arcum maiorem destra levaque, pens. simul lib. XII semis. Enimvero et inibi fecit praeclarus pontifex vela de stauracim quae pendent in arcora argentea in circuitu altaris et in presbiterio, numero XCVI, ex quibus duo habentes in medio cruces de chrisoclabo cum orbiculis, et alia VIII cum periclisin de chrisoclabo. Necnon et arcora cum columnis suis fecit ex argento purissimo in supradicta ecclesia et in medio presbiterio, pens. simul lib. CCLI semis. Isdem vero almificus pontifex fecit ubi supra crucem anaglifa interrasilem ex auro mundissimo, pendentem in pergula ante altare, cum candelas XII, pens. lib. XIIII et semis. Predictus vero venerabilis pontifex fecit in basilica doctoris mundi beati Pauli apostoli calices maiores fundatos ex argento purissimo, ex ipsius apostoli donis, qui pendent in arcora maiora, numero XI, et alios qui pendent inter columnas maiores dextra levaque, numero XL, pens. simul Iib. CCLXVII. Hic idem almificus praesul, divina inspiratione repletus, fecit in basilica beati Pauli apostoli cyburium cum columnis suis super altare, mire magnitudinis et pulchritudinis decoratum, ex argento purissimo, pens. lib. CCCCXV; necnon et crucem anaglifam interrasilem ex auro purissimo, pendentem in pergula ante altare, pens. lib. XIII; atque velum rubeum qui pendet ante altare, habentem in medio crucem de chrisoclabo et periclisin de chrisoclabo.

[13] Tetravela for the ciborium: see De Blaauw 1994, 173.

L. - LI. Pari modo et in basilica sanctae Dei geretricis ad Praesepem fecit gabatas V ex auro purissimo, pens. simul lib. VIII semis; atque crucem ex auro purissimo, pens. lib. X; necnon et coronam maiorem ex argento purissimo, pens. lib. XXXVI. Enimvero et inibi fecit vela alba olosirica pendentes inter columnas maiores dextra levaque, numero XLII, ex quibus XI rosatas. Fecit et in circuitu altaris ubi supra alla vela alba olosyrica rosata, qui pendent in arcora de cyburio, numero IIII, ex quibus una cum chrisoclabo et margaretis; atque velum alium maiorem album, qui pendet ante regias miores in introitu.

Ipse vero praeclarus pontifex fecit in basilica Salvatoris, quae appellatur Constantiniana, tetravela in circuitu altaris alba olosirica[14], ex quibus unum habet in medio tabula cum cruce de obrisoclabo et in circuitu lista de chrisoclabo. Immo et in eandem basilicam Salvatoris domini nostri lesu Christi renovabit altare maiore mire magnitudinis et pulchritudinis decoratum, ex argento purissimo, pens. lib. LXVIIII[15]. Fecit et in basilica sanctae Dei genetricis ad Praesepem vestem chrisoclabam margaretis ornatam, habentem storiam dominicae Nativitatis, simul etiam et arcora II ex argento, in presbiterio, cum columnis IIII, et alia arcora V, pens. simul lib. CXXXIII et semis. [...]

LII. Fecit autem et in diaconia ipsius Dei genetricis quae appeÌlatur Antiqua, super altare maiore, cyburium ex argento purissimo, pens. lib. CCXII.

LIV. [Basilica beati Petri] Praesertim vero hisdem beatissimus pontifex fecit ubi supra cancellos fusiles in ingressu presbiterii seu in capite dextra levaque, necnon et in ingressu vestibuli, ex argento mundissimo, pens. simul lib. mille DLXXIII. Simulque et columnas voltiles tam in ingressu corporis dextra levaque quamque etiam in capite presbiterii dextra levaque seu a parte virorum ac mulierum paria VIII, pens. simul lib. CXC. Necnon et arcos argenteos VIII, pens. simul lib. CXLIII. [...]

LVII. [...] Pari modo et in basilica ipsius apostoli [beati Petri] fecit Cherubim ex argento purissimo deauratos IIII, qui stant super capita columnarum argentearum sub cyburio, pens. Iib. XCIII. Fecit quoque isdem praecipuus praesul ubi supra imaginem Salvatoris auream, quae stat in trabe super ingressurn vestibuli, pens. lib. LXXVIIII. [...]

LVIII. Fecit autem in basilica doctoris mundi beati Pauli apostoli angelos ex argento purissimo deauratos II, qui stant iuxta imaginem Salvatoris in ingressum vestibuli, pens. lib. C et semis. Verum etiam et policaudilum porfiriticum, pendentem in pergulam ante confessionem, in catenulis aureis, quae pens. lib. I. [...]

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[14] Tetravela for the ciborium: see De Blaauw 1994, 173.

[15] The formula renovabit altare is unique in the LP. Most probably it is the old, original wooden altar, which had been preserved owing to its condition of most venerated object, and which is now renewed with the addiction of silver plates: see De Blaauw 1994, 173.

LX. [...] Fecit autem predictus venerabilis et praeclarus pontifex super altare beatae Petronillae ubi supra cyburium cum columnis porphreticis ex argento purissimo mire magnitudinis decoratum, pens. lih. CCCXLVIII, atque imaginem argenteam stante sub arco de ipso cyburio, pens. lib. X et semis.

LXIV. Fecit autem isdem egregius praesul in basilica beati Petri apostoli calices maiores fundatos antipento ex argento mundissimo, qui sedent super trabes argenteas, numero XVIII, pens. simul lib. CLXXXII et semis. Necnon ubi supra fecit cereostatos maiores fusiles ex argento purissimo, qui stant ante confessionem, pens. inibi lib. CXCVIII. Investivit vero ubi supra trabem ex argento mundissimo quae est super imagines aureas in ingressu vestibuli, pens. llb. CXXVI et semis. [...]

LXV. Hic fecit ubi supra ad beatum Andream apostolum super altare maiorem cyburium ex argento purissimo, qui pensat undique lib. simul CCCV. Hic autem praecipuus pontifex, divinitus inspiratus, baptisterium ubi supra conspiciens qua iam prae nimia vetustate ruinae proximum inerat, et quia angustior locus populi existebat qui ad baptismum veniebant, isdem

praesul a fundamentis ipsum baptisterium in rotundum ampia largitate construens in meliorem erexit statum, atque sacrum fontem in medio largiori spatio fundavit, eumque in circuitu columnis porphireticis decoravit et in medio fontis columnam posuit, et super columnam agnum ex argento purissimo fundentem aquam, qui pens. lib. XVIII et uncias X. Necnon et altarem maiorem sub absidam construxit, cuius faciem atque confessionem seu rugas ad decorem ipsius sacri altaris investivit ex argento mundissimo, pens. simui lib. XLVIII; verum etiam et veste de stauraci super eum posuit; atque regularem ubi supra investitum ex argento purissimo fecit; et super ipsum regularem posuit arcum et gammadias ex argento, qui pens. simul lib. LXXX, necnon et imagines III ubi supra posuit, pens. inibi lib. XXXVII et uncias X[16]. Ipsum vero baptisterium diversis in circuitu decoravit picturis.

LVI. Oratorium vero sanctae Crucis ubi supra, quod iam prae nimia erat vetustate ruiturum, hic praecipuus pastor eum a fundamentis simul cum absida novo aedificio erexit et ad perfectum usque perduxit, atque ipsam absidam ex musibo diversis decoratam picturis atque marmoribus miro splendore ornavit; ubi et obtulit hoc: cyburium super altare cum columnis suis atque faciem ipsius altaris investivit ex argento purissimo, pens. simul lib. XXI et uncias lI; regnum spanoclistum ex auro purissimo, cum cruce in medio[17], pendentern super ipsum altare, pens. lib. I et uncias XI necnon et alias columnas argenteas IIII et super ipsas columnas regularem investitum ex argento

[16] Regularis, arcus, gammadia: that is the pergula with arches and gable arches - also called pointed arches.

[17] Spanoclist crown with a cross in the centre; all 'spanoclist' items in Leo's life are of gold. Davis 2007, 201-202, thinks that the term could refer to a technique of refining gold, or a skill used in Spain, where very preciuos early medieval crown are indeed well-known.

purissimo, pens. inibi lib. LXIIII et uncias III; arcos argenteos III, pens. lib. LXIII et uncias VIII; imagines argenteas deauratas III, pens. inibi lib. XXX; canistros argenteos interrasiles XII, pens. simul lib. LXXVIII; gabatas argenteas interrasiles fundatas XXI et cruce I, pens. in uno lib. L; vestem super altare fundatam I et aliam de blati cum chrisoclabo, necnon et alia veste alba rosata cum chrisoclabo; velum modicum chrisoclabatum cum crucifixum et margeretis ornatum; vela de stauraci VII; vela de fundato IIII; vela modica quae pendent in regularem ante imagines, tireas, VI; vela alba sirica, ornata in circuitu de fundato, XII; velum maiorem album rosatum, ornatum desuper de quadrapulo I, et alium velum rubeum cum bubalo, qui pendent ante regias maiores; vela modica de stauraci III, qui pendent in regularem ante imagines; seu et alia vela promiscua sirica, numero XI. Fecit ubi supra ad fontes vela tyrea III, quae pendent in regularem ante imagines, et alia vela sirica numero XXI.

LXVII. Hic fecit beato Petro apostolo nutritori suo calicem aureum praeipuum spanoclistum, diversis ornatum lapidibus pretiosis, pens. lib. XXX. Pari modo fecit et patenam auream spanoelistam, similiter diversis ornata pretiosis lapidibus, pens. lib. XXV; Fecit vero super ciburium de altare maiore beato Petro apostolo cantara maiores IIII ex argento purissimo, habentes in medio cereos ei argento deauratos, pens. in unum lib. CXL. [...] Fecit vero ubi supra lectorium ex argento purissimo mire magnitudinis et pulcritudinis decoratum, pens. lib. CXIIII; necnon et cereostatos ex argento mundissimo, stantes iuxta ipsum lectorium, pens. simul lib. XLVIIII; verum etiam et super ipsos cereostatos fecit lucernas fusiles bimixas II, ex argento purissimo, pens. lib. XXVII. Et hoc constituit ut dominicorum diem vel in sanctis sollempnitatibus hinc inde iuxta ipsum lectorium consisterent et ad legendum sacras lectiones luminis splendore refulgerent. [...] Necnon columnas VIIII et arcora IIII fecit ex argento, pens. inibi lib. CLXXIIII. Fecit vero ubi supra calices fundatos ex argento, qui pendent inter columnas maiores dextra levaque basilicae, numero LXIIII, pens. pariter lib. CCCCLXI.

LXVIII. Idem vero praesagus antistes ubi supra ad beatum Andream apostolum investivit altare maiore ex argento purissimo deaurato miro decore ornato, qui pens. undique lib. CXXXV; cantaros XII ex argento purissimo, pens. simul lib. LII; canistros XII ex argento, pens. simul lib. LXXVIII. Investivit vero altarem beate Petronille ubi supra ex argento mundissimo deaurato diversis ornatum picturis, qui pens. undique lib. CLXXVIII et uncias VIII. Necnon investivit altarem beati Gregorii confessoris atque pontificis ex argento deaurato pens. undique lib. CXXVII. [...]

LXXXIV. Fecit vero isdem praesagus antistes beato Petro apostolo calicem aureum diversis ornatum pretiosis lapidibus, qui procedit per stationes, pens. lib. XIII semis. Hic fecit in basilica ipsius apostoli velum chrisoclabum, qui pendet super ingressu vestibuli; item alium velum maiorem

chrisoclabum, qui pendet in trabe argentea ante imaginem Salvatoris, super ingressu vestibuli [...] Hic vero ubi supra investivit altarem beati Leonis confessoris atque pontificis, ex argento mundissimo deaurato, pens. lib. CVIIII; item investivit altarem beati Gregorii confessoris atque pontificis ex argento mundissimo deaurato, pens. undique lib. CXXVII.

LXXXV. Hic vero a Deo protectus et praeclarus pontifex investivit altarem beati Pauli apostoli ex argento purissimo ac deauravit, qui pens. Iib. CLV; necnon et confessione ipsius atque faciem altaris investivit ex auro purissimo, pens. inibi lib. CXXI et unc. VIIII; fecit et super ingressu corporis scutum ex argento purissimo, in quo ortodoxe fidei symbulum scribi praecepit, qui pens. lib. XXXII. [...]

LXXXVI. Praefatus vero venerabilis et praeclarus pontifex fecit in basilica beati Petri apostoli nutritori suo super altare maiore cyburium cum columnis suis ex argento purissimo deaurato cum diversis storiis mire magnitudinis et pulchritudinis mirifice decoratum, qui pens. undique lib. dua milia DCCIIII et unc. III. Ciburium vero quod inde abstulit posuit super altare maiore in basilica beate Dei genetricis quae appellatur ad Praesepem; et crucem ex argento puro fecit et inibi posuit, pens. lib. XII et unc. III; necnon et tetravila rubea alithina IIII ubi supra fecit, ex quibus unum cum chrisoclabo [...]

LXXXVII. Fecit vero isdem praeclarus pontifex ante confessionem ipsius apostolorum principis angelos ex argento purissimo deauratos dextra levaque, pens. inibi lib. CXLVI; nec non et alios angelos II ex argento purissimo deauratos, qui stant in trabe maiore super ingressum vestibuli dextra levaque, iuxta imaginem Salvatoris auream, pens. simul lib. LXIIII; et alios angelos IIII minores ex argento purissimo deauratos ubi supra dextra levaque, qui pens. simul lib. LXVIII; verum etiam fecit ubi supra columnellas ex argento deauratas VI in ingressu vestibuli, diversis depictas storiis, qui pens. simul lib. CXLVII. [...]

LXXXVIII. Fecit vero isdem praefatus pontifex in basilica doctoris mundi beati Pauli apostoli imaginem Salvatoris ex argento mundissimo deauratas super ingressum vestibuli, pens. lib. XLVIIII semis. Fecit ubi supra columnam I de argento purissimo, pens. lib. XVII. [...] Hic divina inspiratione protectus fecit in basilica Salvatoris quae appellatur Constantiniana cyburium cum columnis suis IIII ex argento purissimo diversis depictum storiis cum cancellis et columnellis suis mire magnitudinis et pulchritudinis decoratum, qui pens. undique simul lib. mille. CCXXVII.

XCIII. [In basilica beati Petri apostoli] [...] vela modica IIII ubi supra in singulis columnis de ciburio fecit, habentes tigris de chrisoclabo, et in circuitu ornatas de blati. Verum etiam et alia vela modica IIII, eadem habentes similitudinem, in basilica doctoris mundi beati Pauli apostoli in columnis de ciburio posuit.

XCV. Hic a Deo protectus et venerabilis pontifex fecit in basilica Salvatoris domini nostri lesu Christi quae appellatur Constantiniana de proprio argento ipsius basilicae coronas cum delfinis suis numero V, canistros nnmero XXXV, gabatas numero VIII, qui pens. simul lib. CCLXXVI [...].

XCVII. [In basilica beati Pauli] [...] Ingressum vero corporis cuius supra isdem praesul ex marmoribus candidis miro decore ornavit, atque regias aereas ibidem posuit. Super columnas vero marmoreas quae stant in circuitu altaris ipsius Doctoris mundi, ubi trabes quondam ligneae positae fuerant et iam nimia vetustate emarcuerant, hic sacer antistis super ipsas columnas lilios poni fecit, et super ipsas lilias ex metallis marmoreis platomas posuit diversis picturis mire magnitudinis et pulchritudinis opus decoravit. Necnon ubi supra fecit vela alexandrina maiora, numero V, qui pendent super regias maiores in ingressu basilicae, mirifice decorata.

C. Fecit in basilica beati Petri [...] fara argentea IIII,quae stant super trabes argenteas, pens. Iib. XCIII; arcos argenteos II, pens. simul lib. XLI, unc. VIIII. [...]

CVI. Basilicam vero beati Apolenarii martyris atque pontificis quae fundata est iuxta civitatem Ravennam, cuius trabes prae nimia vetustate de annorum curriculis et olitanis temporibus nimis emarcuerant, iamque pene ruiturae in tempore illo essent, isdem venerabilis pater, divinitus inspiratus, misit illic et per sollertissimam ac providam curam suam omnia sarta tecta ipsius ecclesiae simul cum quadriporticis suis noviter ac firmiter restauravit et in meliorem deduxit statum.

CX. [...] Immo vero ubi supra ante sanctum Andream investivit altare beati Martini confessoris Christi ex argento purissimo deaurato, ex transmisso quondam Fridigisi abbatis, qui pens. undique lib. XVII semis[18].

Liber Pontificalis, 100. Paschalis I (817-824)

VI. [Basilica beati Petri, Oratorium beati Processi et Martiniani] [...]. Ubi etiam regularem ordinavit, quem ex laminis argenteis superinduxit, pens. lib. XX; super quem constituit arcora II de argento et gammadias IIII qui simul pens. lib. LX. Propitiatorium ergo altaris ex lamminis argenteis exornantes circumduxit[19] atque sacram confessionem eius interius exteriusque cum rugulis [= *rugae*] suis nobilissime circumstruxit, qui simul pens. lib. ... . Et super altare eorundem beatissimorum mantirum vestes II instituit, ex quibus unam de fundato cum cruce de chrisoclabo, et altera de quadrapulo mirifice exornavit; vela quoque maiores de fundato numero VII, cum periclisin de blatti circumsuti similiter decoravit.

[18] Davis 2007, 226, highlights that «Fridugisus, abbot of St. Martin at Tours and of Sithieu, with three other abbots witnessed Charlemagne's will (Einhard, Vita Karoli. 33); the gift has nothing to do with Charlemagne's legacies to Rome but is the abbot's show of piety to his own monastery's patron».

[19] Propitiatorium: explained by De Blaauw 1994, 392, as small doors of the confessio, under the altar itself.

VIII. Hic praeclarus pontifex fecit in ecclesia beati Petri principis apostolorum, nutritoris sui, vela chrisoclaba per arcos presbiterii, habentem storiam de mirabilibus apostolorum quae per eos Dominus operari dignatus est, numero XLVI. [...]

X. [Ecclesia beatissimae Christi martyris Praxedis] [...] Fecit autem in eadem ecclesia ciburium ex argento, pens. lib. DCCCCX; immo et propitiatorium sacri altaris ex argenteis lamminis mirifice exornavit. Confessionem denique eius cum rugulis suis interius exteriusque vallantem pulcherrime compsit atque deauravit, qui simul pens. lib. CCC.

XI. [Ecclesia virginis Mariae quae appellatur Dominica] [...] Ubi etiam et plurima obtulit dona, scilicet ciburium ex argento, pens. lib. CCCXXXII; propiciatorium sacri altaris ex lamminis argenteis compte decoravit. Confessionem quoque eius cum rugulis intus et foris mirum in modum perficiens adornavit, pens. lib. CXV, unc. III. Item ubi supra fecit gabatam ex auro purissimo, pens. lib. II, unc. VIII. Verum etiam et arcum ex argento et columnelle II cum gammadiis duabus, pens. lib. ...

XIX. [Sancta Cecila] Qui sanctissimus praesul, amore venerandorum sanctorum fecit in ornamentis ipsius eccIesiae absidam musibo opere decoratam, et ciburium mire magnitudinis ex argento, pens. lib. DC, unc. VIII; propitiatorium denique sacri altaris seu confessionem interius exteriusque cum rugulis suis et lamminis argenteis mirum in modum perficiens compsit, qui simul pens. lib. CLIIII, unc. XV. Ad sacrum vero eiusdem virginis corpus

obtulit imaginem ex argenteis lamminis, pens. lib. XCV. Fecit etiam ante vestibulum altaris regularem investitum ex lamminis argenteis et columnis duabus, ubi et posuit arcum I et gammadias II, pens. simul lib. C semis.

XX. [Sancta Cecila] [...] Fecit vela alitina venerabilis pontifex pendentes in circuitu altaris IIII[20], habentes cruces et gammadias de fundato et quadrapulo.

XXI. [Sancta Cecila] [...] Fecit enim in arcus presbiterii vela parva tyrea cum periclisin de blati bizantea, numero XI. [...]

XXX. - XXXI. Praeterea idem sanctissimus et ortodoxus pontifex, divina inspiratione pulsatus, ecclesiam sanctae et intemeratae virginis Mariae dominae nostrae quae appellatur ad Praesepem cernens quondam tali more constructam ut post sedem pontificis mulieres ad sacra missarum sollemnia stantes prope adsistere iuxta pontificem viderentur, is ita ut si aliquid conloqui pontifex cum sibi adsistentibus voluisset, ex propinqua valde mulierum frequentatione, nequaquam ei sine illarum interventione liceret; et largum ibidem locum messe qualiter indo sedem mutari valeret cerneret, dato operis studio, caepit indesinenter agere sedem inferius positam sursum ponere, ut eo

[20] They are the veils for the ciborium: Davis 1995, 20, footnote 64.

familiarius Domino preces fundere posset, quo consortia populorum modeste declinare potius constitisset; denique sedem optime quam dudum fuerat pulcherrimis marmoribus decoratam condidit, et undique ascensus quibus ad eam gradiatur construxit; pavimentumque altaris erigens pretiosissimis marmoribus stravit. Erexit sane sex inibi ante confessionem sacri altaris purpureo colore columnas, quas super et candidi marmoris trabem posuit, purpureis dextra levaque marmoribus nectens novis illas scilicet celaturis exornans satis commode decoravit[21]. Presbiterium quoque ipsius ecclesiae diversis marmoribus quam pridem fuerat in melius reparavit. Propitiatorium vero sacri altaris seu confessionem interius exteriusque cum rugulis suis ex auro purissimo mirifice decoravit, pens. lib. CLXXIIII et unc. VI. Similiter quoque et altare ipsius basilicae ex argenteis lamminis cum istoriis diversis pulcherrime compsit atque deauravit, pens. lib. CCCLXXXV.

XXXII. Benignissimus etenim praeclarusque praesul obtulit ubi supra gabathas ex auro purissimo cum diversis gemmis numero VI, pens. Iib. XX et unc. VI; et hoc constituit ut semper diebus ac noctibus ante sacrosancto altare lucere debeant. Hic divina inspiratione fultus obtulit in iamdicta basilica arcos ex argento numero VIII cum columnis XVI, pens. lib. CCXVIII et unc. VIII. Fecit etiam ante vestibulum altaris rugas maiores ex argento, pens. lib. LXXVIII. [...]

XXXV. [...] Domini Dei nostri lesu Christi famulus ob amorem eidem Dominae nostrae per arcos presbiterii iamdictae ecclesiae fecit vela de chrisoclabo, habentia storiam domini nostri lesu Christi atque Nativitatem seu Assumptionem eiusdem intemeratae virginis, numero XXVI. [...]

XXXVIII. [...] Item in iamdicta ecclesia [beati Petri] ob amorem idem Dei apostoli fauctori suo obtulit vela crisoclaba per arcos presbiterii, habentia storia dominicae Passionis atque Resurrectionis domini nostri lesu Christi, numero XLVI. [...]

XXXIX. Benignissimus etenim praesul fecit in basilica beatae Dei genetricis semperque virginis Mariae dominae nostrae quae appellatur ad Praesepem [...] columnas IIII et arcum I, pens. simul lib. LX. [...] Fecit enim ad ornatum praefatae ecclesiae vela de chrisoclabo per arcos presbiterii, habentia storia dominicae Passionis atque Resurrectionis domini nostri lesu Christi, numero ...

XL. Venerabilis etenim praesul fecit in ecclesia beatae Dei genetricis quae appellatur Dominica rugas ex argento[22], pens. lib. LXVI. [...]

[21] He conncted the columns on left and right: this means they were linked, most probably by marble decorated slabs, in two groups of three, leaving the entrance to the prebiterium free: see Davis 1997, 26, footnote 85.

[22] For the confessio, according to Davis 1995, 29, footnote 104 (with literature).

Liber Pontificalis, 103. Gregorius IV (827-844)

VI. [...] Et quoniam tunc divino ignis amore succensus corpus beati Gregorii huius universalis ecclesiae praesulis, per quem sancti Spiritus gratia toto orbe terrarum inextinguibili sapientiae munus induxit, ex loco sepultus quo prius fuerat tulit, et non longe ab eo in alium noviter constructum infra ecclesiam beati Petri apostoli summo honore perduxit, eiusque sacrum altare argenteis tabulis undique perornavit, et oratorium suo sancto nomine titulavit, absidamque eius desuper aurato musibo depinxit. In quo scilicet oratorio sanctorum corpora beatorum martyrum Sebastiani, Gorgonii ac Tiburtii ex cymiteriis quibus ante iacebant perduxit, et unumquodque eorum separatis altaribus collocavit. [...]

IX. [Ecclesia beati Marci] [...] Fecit et cyburium ad laudem atque decorem confessoris iam sepius dicti ex argento purissimo, pens. lib. mille. Altare quoque eiusdem argenteis similiter tabulis exornavit. [...]

XXVII. [Ecclesia beati Pauli] [...] in cyburium ipsius ecclesiae fecit vela IIII.

XXX. [Ecclesia beati Pauli] [...] Ipse vero a Deo protectus et praeclarus pontifex fecit in basilica doctoris mundi beati Pauli apostoli vela chrisoclaba per arcos presbiterii, habentia storia ipsius beati Pauli apostoli et in circuitu lista cum auro, numero XXII. [...]

XXXI. - XXXII. Hic a Deo electus et praeclarus antistes obtulit in ecclesia beate Dei genetricis semperque virginis Mariae domine nostrae quae appellatur Calisti et Cornelii [i.e. *St Mary in Trastevere*] coronas argenteas Il, per unamquamque delfinos XII, pens. lib. XII. Simulque et in diaconia beati Christi martyris Georgii fecit coronam de argento I, cum delphinos XII, pens. lib. VI. Ipse vero a Deo protectus et praeclarus pontifex fecit in basilica beate Dei genetricis semperque virginis Marie dominae nostrae quae appellatur Calisti et Cornelii canistra de argento IIII, legente sanctae Dei genetricis et domni Gregorii pape, pens. lib. XXIIII; et in altare quoque eiusdem tabulas de argento, pens. lib. CXIII. Fecit ibidem venerabilis papa in eodem sancto loco, infra ambitum ipsius ecclesiae, operosam decoramque restructionem. Nam prius altare in humili loco situm fuerat, pene in media testudine, circa quod plebs utriusque sexus conveniens, pontifex cum clero plebi confuse inmixto sacra misteria celebrabat; sed et sancta corpora beatorum Calisti et Cornelii et Calepodi in meridiana plaga aecclesiae tumulata postergum populi iacentia non condigne honorifIcabantur. Quod religiosus idem papa non leve tulit. sed solerti solitoque studio cum intima industria operam adhibens, mirificum opus incoans, optime consummavit. Nam effosso clandestino antro, summa cum reverentia praefata sancta corpora elevans, in occidentali plaga eiusdem aecclesiae, hoc est in ambitu abside, honorifice collocando occuluit; circa quae quam maxime molis

aggregans aggerem, comptum miris lapidibus tribunal erigens decoravit[23]. Supra que confessionem respicientem ad ortum solis miri odoris celaturarum ornata compagine coaptavit infra consurgentes siquidem bases altaris, quod miri metri et ornatus modulo ex argento perspicue comens, in honore sanctae Dei genetricis Mariae semper virginis, elato scilicet priori, erexit inter consurgentes pulchri operis gradus. Ante quod presbiterium ampli ambitus operosi operis funditus construit, cui ex septemtrionali plaga lapidibus circa septum matroneum adposuit[24].

XLIII. Item sepedictus idem almus atque praeclarus pontifex, superno amore exardescens, fecit in basilica sanctae intactaeque virginis Dei genetricis dominae nostrae Mariae quae cognominatur ad Martyres cyburium ex argento purissimo, pens. lib. CCCC. [...]

Liber Pontificalis, 104. Sergius II (844-847)

XIX. [...] In primo quidem pontificatus sui exordio, superno amore exardescens, in basilica Salvatoris quae Constantiniana nuncupatur mire pulchritudinis opus explevit. Nam ambitus sacri altaris, qui strictim in ea fuerat olim constructus, largiorem proprio digito designans a fundamentis perfecit, pulcrisque columnis cum marmoribus de super in gyro sculptis splendide decoravit, ubi nunc sacra plebs in administratione sacri largiter consistit officii. Quo expleto, ipse almificus pontifex pro decore atque ornatu huius praeclari operis in eadem basilica obtulit vela alba olosirica XX, ornata per cirduitum de fundato[25]; similiter et alia de fundato optima valde XX, ornata per circuitum de blatin. Ubi etiam confessionem mirificam, Christo cooperante, construxit, et argenteis tabulis auro que perfusis fulgide compsit; quam propriis manibus consecrans reliquias posuit. [...]

XXVII. - XXIX. [...] Ecclesia etenim beatissimi Martini confessoris Christi atque pontificis [*now SS. Silvestro e Martino ai Monti*], quae quondam priscis aedificata temporibus, nimio iam lassata senio, ita ut a fundamentis casura ruinam sui minaretur, idem venerabilis pontifex illius ruinam ante praevidens, eidemque ecclesiae curam adhibens, illic pervigil saepius existens, in alio non longe demutans loco, in meliorem eam quam dudum fuerat erexit statum. [...] fecit in absidam fenestras, quas ex vitro et diversis coloribus decoravit, sed et presbyterium ex marmoribus sculptis ornavit.

[23] Tribunal: high-level sanctuary. Most probably, then, the beautiful stones which are used to decorate it are the sculpted slabs belonging to its chancel screen; also, in the following lines, a matroneum separated by an enclosure system is mentioned. Parts of a chancel screen and ciboria were indeed found in the church and they might be related to Gregorius' works: see Davis 1995, 64, footnotes 64 and 76.

[24] Saeptum: area fenced in space, or precints in a church context: the matroneum is, then, enclosed by a chancel.

[25] They were for the new pergula according to De Blaauw 1994, 176.

Fecit autem in eadem ecclesia ciburium ex argento purissimo, cum columnis quatuor porfyrecitis, qui pens. lib. DCCCX[26].

XXXIII. Verum etiam obtulit in ecclesia beati Silvestri et Martini confessorum atque pontificum: regnum aureum valde preciosissimum, cum gemmis prasinis, iacinctinis et albis, quod nunc usque super altare cernitur pendens, habens in medio crucem de auro purissimo cum gemmis similiter pretiosis; item gabatas ex argento purissimo auroque perfusas IIII, pendentes ante vestibulum sacri altaris[27], atque gabatas interrasiles deauratas cum bullis II; similiter cruces aureas cum gemmis valde optimas II, et aliam similiter crucem de argento unam. Obtulit autem in eadem basilica thimiamateria aureo superinducta colore III; patenas de argento mundissimo ac deauratas II; colatorium de argento quod in sacro utitur deauratum officio I; regnum de argento purissimo cum tintinnabulis, habentem in medio crucem cum palumba I.

XXXIV. Hic beatissimus papa, superno amore exardescens, obtulit ubi supra aquaemaniles de argento, paria III; item sexstaria de argento purissimo III; calices de argento purissimo ac deauratos II; similiter et patenam de argento maiorem, auro perfusam, habentem in medio effigiem domini nostri Iesu Christi I; cereostata desuper argentata, paria III; canistra de argento III; patenam cum calice de argento I; scipphum argenteum I, pens. lib. ... Obtulit vero ad honorem ipsius venerandae basilicae canthara de auricalco XII; rugas similiter de auricalco, paria VI[28]. [...] Nam et confessionem sacri altaris argenteis tabulis auroque perfusis, pens. Iib. ... , magnifice perornavit, ut per sacras eorum intercessiones etherei regni gaudia possideret. Hic misericordissimus et benignissimus antistes obtulit ubi supra imagines de argento auroque perfusas III quorum una habens effigiem domini nostri lesu Christi, aliae vero duae sanctorum Silvestri et Martini, sedentes supra vestibulum sacri altaris[29].

XXXVIII. Item beatisssimus papa fecit in basilica sancti Martini confessoris confessionem de

[26] Until the XVI century two ambos were still visible, in situ, in the church, with the inscription «Salvo domno nostro beatissimo Sergio papa iuniore»; many early medieval sculpted fragments have been found there: Duchesne 1995, 104, footnote 26; Zito 1976. In chapter XXXII a long list of relics placed under the altar is given: this relic-chamber is still preserved, including its interlace-decorated marble slabs: Davis 1995, 89, footnote 62. – Krautheimer / Corbett / Frankl 1937-1977, vol. 3, 111.

[27] The vestibule was the space enclosed by the pergula; therefore the silver bowls were hanging from it. In a drawing of the XVI century the pergula appears three-sided and made of six columns: see Davis 1995, 89, footnote 64.

[28] The term rugae is often used to describe the small metal railings of a pergula or chancel screen, but here is unclear wheter they are really of this kind, or they are instead railings for different parts of the church, especially given their number.

[29] That is over the entablature of beams surmounting the pergula: see Davis 1995, 90, footnote 68.

argento purissimo exauratam, cum imagine sanctae Mariae cum decem virginibus; et in ipsa confessione evangelium de argento purissimo exaurato et rugula in praedicta confessione, par I; et ante ipsam confessionem, regularem ex argento purissimo cum columnis II, ex argento purissimo.

Liber Pontificalis, 105. Leo IV (847-855)

XII. [...] Ipse iam sepefatus et sollertissimus pontifex, secundum antiquam consuetudinem, canonica auctoritate decrevit atque constituit ut dum sacra missarum sollemnia in ecclesia celebrantur, nullus ex laicis in presbiterio stare vel sedere aut ingredere praesumatur, nisi tantum sacra plebs quae in amministratione sacri officii constituta videtur.

XIII. Ipse quidem beatissimus pontifex, post cedem ac depraedationem sevae gentis Agarenorum [...] obtulit in basilica beati Petri apostoli [...] vela de fundato quae in arcos ad ornatum et decorationem presbiterii pendent, XXXIII; [...]

XXII. [Basilica beati Petri] [...] Fecit autem ubi supra, post Saracenorum sevissima devastatione in eadem basilica rugas de argento purissimo, pens. lib. LVII.

XXIII. [Basilica beati Petri] [...] Fecit etiam isdem sanctissimus et beatissimus praesul in ecclesia beati Petri apostolorum principis vela quae pendent in arcos presbiterii ex auro texta, habentia storiam beati Petri apostoli, numero XVIII. [...]

XXXIV. Obtulit beato Petro apostolo calices de argento, qui sedent super circuitum altaris, numero XVI, pens. lib. ... ; verum etiam et calicem pendentilem cum catenulis et delfinis, pens. lib. ... . [...]

XXXI. Ipse quidem a Deo protectus ac venerabilis praesul, intra basilica beati Petri apostoli oraculum[30] mirae pulcritudinis summique decoris construxit, quod pulcris marmoribus circumdans splendide compsit; absidamque eius ex musibo aureo superinducto colore glorifice decoravìt. In quo etiam venerabile corpus beati Leonis confessoris atque pontificis recondens, sacrum desuper construxit altare et ciburio cum cruces exauratas ad laudem et gloriam Christi nominis hoc fretus amore perfecit, ut sibi dignum in aethera conquireret locum.

XXXII. [...] cum cotidie beatissimi apostolorum principis Petri sacratissimum altare cerneret violatum et ad tantam inhonestatem a Sarracenis perfidis Deoque contrariis sive vilitatem perductum [...] aureis simuique argenteis tabulis, non tantum confessionem sacram, verum etiam frontem sepedicti altaris satis decenter et onorifice perornavit, ut praesens per omnia opus i ibidem dedicatum luce clarius manifestat.

XXIII. Quam ob rem venerandi altaris frontem praecipuam, tabulis auro optimo noviter dedicatis, una cum gemmis quam plurimis valde optimis ac pretiosis, totam circumdedit et in meliorem, ut

[30] i.e. an oratorium, most probably not constructed ex novo but renewed: see Davis 1995, 123, footnote 53.

prius, statum atque decorem perduxit. In quibus scilicet aureis, ut dictum est, tabulis, non solum Redemptoris nostri forma depicta praefulget, verum et eius Resurrectio veneranda atque indicium sacrae ac salutifere crucis, Petri quoque Paulique pariter vultus atque Andree in praenominatis tabulis similiter splendent atque coruscant; inter quos sanctissimi quarti Leonis praesulis, necnon et spiritalis fui sui domni imperatoris Lotharii, propter futuram memoriam sive mercedem, persone Deo care per cuncta saecula venerande depicta sunt[31].

XXIV. Quod denique tabularum opus CCXVI auri obrizi libras pensant. Confessionem vero crebro dicti altaris tabulis argento paratis purissimo modo simili tota animi devotione ad anticum decus et statum perduxit; in quibus Salvatorem in trono sedentem conspicimus, pretiosas in capite gemmas habentes, et a dextris illius Cherubim, a leva quoque ipsius vultus apostolorum ceterorumque depictos. Immo et rugas sacrae confessionis ex argento constructas, vultus habentes beatissimi Petri et Pauli, pens. omnia lib. CCVIII.

XLI. - XLII. [Basilica IIII Coronatorum] [...] Sacrissima corpora [...] sub sacro altare recondens locavit, et alii multi quorum nomina sunt Deo cognita. Super quod etiam, ad gloriam Creatoris, miro opere miraeque pulcritudinis ciburium ex argento purissimo aureo superinductum colore cum gemmis prasinis et iaquintis, pens. lib. CCCXIII et semis. Ubi supra obtulit in eadem ecclesiam vela rubea quae pendent in circuitu altaris, numero IIII.

XLV. [Ecclesia sanctorum IIII Coronatorum] [...] confessionem cum sacro altari argenteis tabulis pens. Iib. XCIII decoravit, sanctorumque effigiis perornavit, super quod etiam obtulit regnum de argento purissimo, pretiosis gemmis, habentem in medio crucem, quod usque nunc super eodem altare pendere conspicitur [...]

LV. Obtulit in basilica beati Petri principis apostolorum, post depraedationem seve gentis Agarenorum, arcora de argento mundissimo, numero XIII, ex quibus duo vero, quem posuit a parte dextra seu sinistra in presbiterio, mirae magnitudinis, pens. lib. ... . [...] Fecit et in ecclesia beati Andree apostoli cyburium super altare ex marmore, necnon et calicem de argento cum coronis, pendentes in eodem cyburium, numero XII, pens. lib. ... . [...] LVII. [Ecclesia sanctorum IIII Coronatorum] [...] et in pergula eiusdem ecclesiae, quae est ante altare maiore, suspendit gilium de argento, habentem mela de cristallo et rannunculum[32]. [...]

LXI. Quis denique decentius consumatis atque peractis, post flebilem et iniquam Saracenorum depraedationem, catholicus et per omnia laudabilis praesul, ad decorem et laudem ecclesiae

[31] This altar's front was still to be seen in the 12th century, composed by tablets of gold and enamel: see Davis 1995, 124, footnote 55, with literature.

[32] Fragments of early medieval sculptures – among which a marble slab with circles and grid – have been found in the church, and they are commonly attributed to Leo IV: Melucco Vaccaro / D'Achille 1999.

apostolorum principis apostoli Petri, fecit mirae magnitudinis ac pulcritudinis super illius venerandum altare ciburium, obtulit et columnas ac lilia exaurata ex argento purissimo, pens. lib. mille DCVI. Namque et in ipsum ciburium obtulit coronas IIII cum calicibus XVI, ex auro mundissimo, pens. lib. ... et de argento ut supra. Ad honorem et gloriam ipsius namque ciburii fecit calices et coronas numero XLVI, pens. lib. XXII et unc. VII. Necnon et super columnas ipsius ciburii, propter amplam pulchritudinem, ex argento purissimo fecit cofinos numero IIII, pens. lib. XLII. Fecit etiam ibidem, ante altaris circuitum, vela alba olosirica sigillata, numero XII, listas habentia de fundato. Obtulit adeo inibi et alia vela linea numero XIIII, listas habentia per circuitum de sirico albo sigillato. Ubi supra fecit arcora II ex argento purissimo, pens. lib. L.

LXIV. [...] Et in Suxorio fecit ciburium olee qui pendent in circuitu altaris, habentes tabulas IIII, exauratas; necnon et gammadias IIII. Ubi supra fecit arcora IIII qui stat in presbiterio, ex argento mundissimo, pens. lib. C.

LXVI. [...] Hisdem beatissimus et praeclarus pontifex fecit in basilica beati Petri apostoli arcora cum columnis et giliis de argento purissimo III, pens. simul lib. CII[33].

LXVII. [...] Ipse vero a Deo protectus pontifex, post devastationem Saracenorum, fecit in ecclesia beati Petri principis apostolorum rugas de argento mundissimo, qui est ante confessionem ipsius, pens. lib. DLXXX; nam et tabulas de argento exauratas, qui est in gradas ante confessione beati Petri apostoli, numero IIII, et agnos II, qui pens. simul in unum lib. XLIIII Obtulit ubi supra coronas porfuretica mire magnitudinis, ornata ex auro purissimo cum delfinos XII, legente de nomine ipsius almifici praesulis, pens. ipsum auro lib. III et semis; necnon et arcos de argento purissimo numero X, qui pens. simul in uno lib. CLXXXI; et vela lineae, qui pendent in arcora ubi supra, ornata in circuitu de fundato, numero XLVIII.

LXX. [*construction of Leopolis-Cencelle*] Cepit autem ex tunc de praedicto negotio valde esse sollicitus. Convocansque cunctos sanctae Dei fideles ecclesiae, petens ab eis ore suo consilium qualiter tantam murorum cito valuisset fabricam consummari, tunc omnibus ita visum est, ut de singulis civitatibus massisque universis publicis ac monasteriis, per vices suas generaliter advenire fecisset, sicut et factum est.

XCIII. [...] Fecit aliam lucernam ex argento fusilem ac vimixam, pens. lib. XXVII et dimidiam. Similiter et in monasterio sanctorum Iohannis et Pauli fecit aliam lucernam argenteam similiter

[33] This gift is repeated three times in two chapters: one time in LXV and two times in LXVI, being the one transcribed here the frst one in chapter LXVI. As Davis 1995, 139, footnote 102, notices, this repetition shows the undigested state of the vestiarium register when they were used by the compiler.

supradictis, pens. lib. XXII et dimidia, quae dominicis vel festis diebus iuxta Iectorium [34] consistentes ad legendum sacras lectiones magno luminis splendore Iucescant.

XCIV. Isdem vero sanctissimus papa fecit rugulas de argento fusiles cum cancellus in ingressu presbiterii et ante confessionem beati Petri apostoli amatoris sui, quae pulchro rutilantes decore hominum praebent mentibus admirationem; quarum II pens. lib. DCXLII, alia vero II lib. DLXXX. [...]

XCVI. [...] descripsimus, nunc vero ea quae in ecclesia beatissimi Pauli apostoli, doctoris gentium, post impiam Agarenorum devastationem est operatus, ob aeternam memoriam summatim innotescere studeamus. Fecit autem super eius sacratissimum corpus cyborium mirae pulchritudinis ingenti argenti pondere cum columnis argenteis comptum, pens. lib. DCCCCXLVI. [...]

XCVIII. [...] Idem vero praeclarus et almificus praesul, superna protectus dextra, deditusque in Dei semper servitio, sincero perseverans animo, post multas bonas actiones, beati Silvestri et Martini ecclesiam, quam domnus Sergius praeedecessor eius noviter ab imis aedificaverat muris, quidem pulchrisque decoravit ac depinxit coloribus, cuius etiam pulchritudo magna usque hodie humanis oculis admirationem praestat. Nam et eiusdem venerabile sacrumque altare ex argento investivit ac decoravit purissimo, pens. lib. CXVI.

CII. Mane autem facto, pro somnio quo viderat magna coepit habere certamina, et praenominatum Petrum[35] ad suam ilico iussit venire praesentiam; cui quidquid in somnis viderat retulit, multosque ei in argento mancosos praebuit, ut conducto populo nutri eis ad vicem Centumcellensis urbis festinantius perficere debuisset. Deo quidem auspice, ita nunc omnia aedificata nitescunt sicut in somnio papa laudabilis manu propria designavit; cui ex nomine proprio Leopolim nomen imposuit. Ad quam postquam aedifcari caeperant, ad videndum et considerandam fabricam cum suorum fidelium multitudine ovanter accessa, visis denique portis et ecclesiis, in ipsis specialiter loca sicut monstraverat et suum, Christo protegente, desiderium adimpletum, omnipotenti Domino gratias retulit infinitas, qui ei talem ostendere locum dignatus est, in quo et populus salvus existeret, et aquae abundantiam ministrare etiam Iapides et arenam inibi tribuere, quatenus sine labore operariorum noviter constructa fabrica augmentum percipere potuisset.

Liber Pontificalis, 106. Benedictus III (855-858)

XXV. [...] Nam et in titulo Calixti fecit amam I ex argento purissimo, pens. lib. XI. Ubi supra fecit gabathas IIII, pens. lib. VIIII semis; similiter et canistra VIIII, pens. in simul lib. XI. Ad laudem et

[34] i.e. the ambo.

[35] Mentioned as magistro militum in the previous chapter.

gloriam ipsius ecclesiae fecit evangelium argento auroque perfusum I, pens. lib. XV. Item ubi supra fecit coronam I, canistrum I, arcum cum duobus gammadiis ex argento purissimo, pens. in simul lib. XL.

XXXII. Verum etiam ethereo conpunctus nutu magnam sanctae ecclesiae ut idoneus Christi minister curam corde purissimo indesinenter gerens, tectum scilicet voluminis in quo constant vere praedicationis Pauli videlicet apostoli et aliorum apostolorum epistolas atque prophetarum ordinabiliter constitute lectiones, quae a subdiaconibus leguntur per cunctas ecclesiarum stationes more solito sursum in ambone, raptum vel perditum a sancta ecclesia fuisse percipiens, captum cum magna vehementer sollicitudine, oc tale dignum similiter volumen praeparare studuit, in quo grecas et latinas lectiones quas die sabbato sancto Paschae simulque et sabbato Pentecosten subdiaconi legere soliti sunt scriptas adiungi praecepit, mireque operationis tabulis argenteis decenter adornans sanctae ecclesiae Romanae libenter optulit.

Eddius Stephanus, Vita Wilfridi I. Episcopi Eboracensis (657/658; 671-678)

XIV. DE EO, QUOD INTERIM ORDINATUS EST CEADDA IN SEDEM SUAM.

[...] [*year 657 / 658*] Ideo autem venerabiliter vivens, omnibus carus, episcopalia officia per plura spatia agens, cum cantatoribus Aedde et Aeonan et cementariis omnisque pene artis institutoribus regionem suam rediens, cum regula Benedicti instituta ecclesiarum Dei bene melioravit. Tunc ergo in illis regionibus sancto episcopo, sicut Paulo apostolo, magnum hostium fidei, Deo adiuvante, apertum est. [...]

XVII. DE AEDIFICATIONE BASILICAE IN HRYPIS A ET DEDICATIONE EIUS.

[...] Nam in Hrypis [*Ripon*] basilicam polito lapide a fundamentis in terra usque ad summum edificatam, variis columnis et porticibus suffultam, in altum erexit et consumavit [*years 671-678*]. [...]

Willelmus Malmesbiriensis, De gestis pontificum Anglorum (672-678). [*Construction of the church in Hexham, years 672-678*]

III, 117, p. 255. Hengstaldeheim vocatur locus XV ab Eboraco milibus disparatus. Fisco regio famulabatur, quando eum beatae memoriae Wilfridus a beatissima Etheldrida regina pro aliis possessionibus commutavit. Ibi edifitia minaci altitudine murorum erecta, et diversis anfractibus per cocleas circumducta, mirabile quantum expolivit. Arbitratu quidem multa proprio, sed et cementariorum, quos ex Roma spes munificentiae attraxerat, magisterio. Ferebaturque tunc in populo celebre, scriptisque etiam est inditum, nusquam citra Alpes tale esse edifitium. Nunc qui

Roma veniunt idem allegant, ut qui Haugustaldensem fabricam vident ambitionem Romanam se imaginari jurent. Adeo tot temporum et bellorum injuriae venustatem edifitiis non tulere. [...]

Willelmus Malmesbiriensis, De gestis pontificum Anglorum (701).

V, 222, pp. 371-373. Paginae hujusce praerogativa Adelmus triumphans, simulque benedictione antistitis et sacrarum reliquiarum pignoribus fretus, redeundi domum iter impiger adoritur. Devehens secum multimoda peregrinarum mertium pretia, quae patriae nova et mirabili inferret copia. Inter quae fuit altare ex splendenti marmore, candido colore, sesquipedali crossitudine, quadrupedali longitudine, latitudine trium palmorum, labio ex eodem lapide prominenti, in circuitu pulchre decusatum (sic!). Camelus, ut dicitur (quod enim nostre regionis animal tantam sustineret molem?), ejus usque ad Alpes bajulus fuit, et inoffense tulit. Ibi camelus seu quodlibet quadrupes, nec enim refert quae bestia tulerit, vel injusti fascis injuria vel propter praerupta viae declivia concidit. Ruina jumentum contrivit, et marmor in duas partes effregit. Utriusque dampnum, sotiis ingemiscentibus, Sanctus archano cordis murmure et protensa benedictione dextrae sarcivit. Animali salutis vigor refusus, quod, alacri statim se motu excutiens, in pedes constitit. Fractura lapidis, quae non recta linea sed quodam anfractu dissiliens crepuerat, stati, se in solidum compegit. Sed ut mirabilis signi memoria non obsolesceret, adhuc cicatrix scissurae paret, sanata quidem miraculo, sed curioso tamen perspicua oculo.

Vita Ceolfridi (674)

7, p. 86. Secundo auterd fundati monasterii anno Benedictus mare transiens architectos a Torthelmog abbate, dudum sibi in amicitiis iuncto, quorum magisterio et opere basilicam de lapide faceret, petiit, acceptosque de Gallia Britanniam perduxit.

Beda Venerabilis, Vita abbatum Wiremuthensis et Girvensium [PL XCIV, 716-717]

[...] [*years 674-675*] Nec plus quam unius anni spatio post fundatum monasterium interjecto, Benedictus, Oceano transmisso, Gallias petens caementarios qui lapideam sibi ecclesiam iuxta Romanorum quem semper amabat morem facerent, postulavit, accepit, attulit. Et tantum in operando studii prae amore beati Petri, in cujus honorem faciebat, exhibuit, ut intra unius anni circulum, ex quo fundamenta sunt jacta, culminibus superpositis, missarum inibi sollennia celebrari videres. [*year 676*] Proximante autem ad perfectum opere, misit legatarios Galliam, qui vitri factores, artifices videlicet, Britanniis eatenus incognitos, ad cancellanda ecclesiae, porticuumque et coenaculorum ejus, fenestras adducerent. Factumque est, venerunt; nec solum opus postulatum

compleverunt, sed et Anglorum ex eo gentem hujusmodi artificium nosse ac discere fecerunt; artificium nimirum vel lampadis ecclesiae claustris, vel vasorum multifariis usibus, non ignobiliter aptum. Sed et cuncta, quae ad altaris et ecclesiae ministerium competebant, vasa sancta, vel vestimenta, quia domi invenire non potuit, de transmarinis regionibus advectare religiosus emtor curabat.

[*year 678*] Et ut ea quoque, quae nec in Gallia quidem reperiri valebant, Romanis e finibus ecclesiae suae provisor impiger ornamenta vel munimenta conferret, quarta illo, post compositum juxta regulam monasterium, profectione completa, multipliciore quam prius spiritualium mercium foenore cumulatus rediit. Primo, quod innumerabilem librorum omnis generis copiam apportavit; secundo, quod reliquiarum beatorum Apostolorum martyrumque Christi abundantem gratiam multis Anglorum ecclesiis profuturam advexit; tertio, quod ordinem cantandi, psallendi, atque in ecclesia ministrandi, juxta Romanae institutionis suo monasterio contradidit [...] Quintum, picturas imaginum sanctarum, quas ad ornandum ecclesiam beati Petri Apostoli, quam construxerat, detulit [... et] imagines virginis Mariae [... et] XII Apostolorum [... et] evangelicae historiae [... et] visionum Apocalypsis [apportavit].

Beda Venerabilis, Historia ecclesiastica Gentis Anglorum (710)

V, 21. Eo tempore Naitanus rex Pictorum, qui septentrionales Britanniae plagas inhabitant [...] misit legatarios ad virum venerabilem Ceolfridum, abbatem monasterii beatorum apostolorum Petri et Pauli, quod est ad ostium Wiri amnis, et juxta amnem Tinam, in loco, qui vocatur "In Gyrvum", cui ipse post Benedictum, de quo supra diximus, gloriosissime praefuit; postulans, ut exhortatorias sibi literas mitteret, quibus potentius confutare posset eos, qui Pascha non suo tempore observare praesumerent; simul et de tonsurae modo vel ratione, qua clericos insigniri deceret; excepto, quod etiam ipse in his non parva ex parte esset imbutus. Sed et architectos sibi mitti petiit, qui juxta morem Romanorum ecclesiam de lapide in gente ipsius facerent, promittens hanc in honorem beati apostolorum principis dedicandam; se quoque ipsum cure suis omnibus morem sanctae Romanae et apostolicae ecclesiae semper imitaturum, in quantum duntaxat tam longe a Romanorum loquela et natione segregati hunc ediscere potuissent. Cujus religiosis votis ac precibus favens reverendissimus abbas Ceolfridus misit architectos, quos petebatur, misit illi et literas scriptas [...].

Vita Ricmiri abbatis apud Cenomannos (700 .ca)

I,7. Reperto autem et emundato praefato loco, mutavit ibi una cum consilio, et auxilio praedicti Episcopi habitationem suam. Cui Domnus Episcopus operarios et magistros omnis generis dedit qui fabricarent ibi ecclesiam in honore Apostolorum, et monasterium costruerent monachorum. [...]

Memoratorium de mercedibus commacinorum (probably, **712-744**[36])

[...] **VI. De caminata**. Si quis magistri caminatam fecerit, tollant per unam tremisse uno. Et si habietarii cancellos fecerint, per sol. uno vadant pedes 12; [...] anona ei non reputetur.

VII. De marmorariis. Si quis axes marmoreas fecerit, det per sol. uno pedes 15. Et si columnas fecerit de pedes quinos quaternos, per tremisse columnas tres; anonas ei non reputetur. [...]

In ecclesia beati Anastasii (712-744)

IN ECCLESIA BEATI ANASTASI QUAM CONSTRUXIT LEUTBRANDUS REX IN ITALIA. Ecce domus domini perpulchro condita textu / Emicat et vario fulget distincta metallo, / Marmora cui pretiosa dedit museumque columnas / Roma , caput fidei , illustrant quam lumina mundi / Euge auctor sacri, princeps Leutbrande, laboris! […]

Leges Liutprandi regis (720)

18. De negotiatoribus vel magistris. Si quis negotium peragendum vel pro qualicumque artificio intra provincia vel extra provincia ambolaverit, et in tres annos regressus non fuerit, et forsitan infirmitas ei emerserit, faciat scire per iudicem aut per missum suum. Nam si hoc distolerit mandare, si filius reliquerit, habeant res ipsius in suo iure. [...] Et si nec parentes proximi non fuerent, qui ei legibus a succedere possent, post predictos tres annos curtis regiae succedant. Quod si habuerit oxorem, et intra suprascripto constituto, hoc est tres annos, menime regressus fuerit, veniat ipsam ad palatium regis, qui in tempore fuerit, et qualiter ei ipse maritandi licentia dederit, aut de causa ipsius ordinaverit vel tractaverit, ita facere deveat. Nam sine permissum regis non presumat maritum ducere. [...]

Sancti Bonifatii et Lulli epistolae (764)

116. Si aliquis homo in tua sit parrochia, qui vitrea vasa bene possit facere, cum tempus adrideat, mihi mittere digneris. Aut si fortasse ultra fines est in potestate cuiusdam alterius sine tua parrochia, rogo, ut fraternitas tua illi suadeat, ut ad nos usque perveniat. Quia eiusdem artis ignari et inopes

[36] Jarnut 2009, 3.

sumus. Et si hoc fortasse contingit, ut aliquis de vitri factoribus cum tua diligentia Deo volente ad nos usque venire permittatur, cum benigna mansuetudine, vita comite, illum suscipio.

Paulus Diaconus, Gesta episcoporum Mettensium (783 / 784; Chrodegangus: 742-766)

[...] [page 268] Hic (Chrodegangus) fabricare iussit, una cum adiutorio Pipini regis, rebam sancti Stephani prothomartyris et altare ipsius atque cancellos, presbiterium arcusque per girum. Similiter et in ecclesia beati petri maiori presbyterium fieri iussit. Costruxit etiam ambonem auro argentoque decoratum, et arcus per girum throni ante ipsum altare[37]. [...]

Codex Carolinus (779 / 780)

65. DOMINO EXCELLENTISSIMO FILIO, CAROLO REGI FRANCORUM ET LANGOBARDORUM ATQUE PATRICIO ROMANORUM HADRIANUS PAPA .

[...] Porro, dilectissimae atque excellentissime fili, sicut direxistis nobis nostrae petitioni adimpleri pro trabes ad restaurationem sanctae ecclesiae, poscimus vestra a Deo promota excellentia, ut Kalendas Augustas hic ad limina beati Petri, fautoris vestri, si fieri potest, parate esse inveniantur, ut exinde sempiterna memoria vestra et hic et in futuro permaneat.

De camarado autem, quod est ypochartosin [*i.e. ceiling panels*] ad renovandum in basilica beati Petri apostoli, nutritori vestro, prius nobis unum dirigite magistrum, qui considerare debeat ipsum lignamen, quod ibidem necesse fuerit, ut, sicut antiquitus fuit, ita valeat renovari. Et tunc per vestram regalem praecellentiam iussionem dirigatur ipse magister in partibus Spoletii, et demandationem ibidem de ipso faciat lignamen, quod in predicto ypochartosin, hoc est camarado, necesse fuerit, quia in nostris finibus tale lignamen minime reperitur. Et pro hoc sanctissimus frater noster Wilcharius archiepiscopus nunc minime fatigetur venire, dum ipsum lignamen per semet ipsum siccetur; quia, dum viride est, non audemus exinde opera qualecumque facere. [...]

Codex Carolinus (787)

81. DOMINO EXCELENTISSIMO FILIO NOSTROQUE SPIRITALI COMPATRI, CAROLO REGI FRANCORUM ET LANGOBARDORUM ATQUE PATRICIO ROMANORUM HADRIANUS PAPA.

Praefulgidos atque nectareos regalis potentiae vestrae per Aruinum ducem suscepimus apices. In quibus referebatur, quod palatii Ravennate civitatis mosivo atque marmores ceterisque exemplis

[37] Both in in the cathedral of St. Stephen and St. Peter at Metz, have been found many Early Medieval sculpted objects, commonly attributed to Chrodegang's age: see Vieillard-Troiekouroff 1989 and Will 2001.

tam in strato quamque in parietibus sitis vobis tribuissemus. Nos quippe libenti animo et puro corde cum nimio amore vestre excellentiae tribuimus effectum et tam marmores quamque mosivo ceterisque exemplis de eodem palatio vobis concedimus abstollendum, quia per vestra laboriosa regalia certamina multa bona fautoris vestri, beati Petri clavigeri regni caelorum, ecclesia cotidiae fruitur, quatenus merces vestra copiosa adscribatur in celis. [...]

Hariulfus, Chronicon Centulense (years 790 and 831)

II, 6. Angilbertus [...] impetrata ab imperatore Karolo complendi voti licentia [...] quo sancti Richarii ecclesiam [*Centula / Saint-Riquier*] reficere ambiebat, accepit ab eodem rege cum omni favorabilitate benignam responsionem, solamen et adjutorium suum illi nunquam defuturum spondente. Aperiuntur illi, jubente rege, thesauri ingentes, et quidquid vel quantum vellet inde tollere rogatur, quo dilectissimi viri intentio diligentissime compleretur. [...] Itaque post non multum temporis, abbas loci defungitur, et tam fratrum precatu quam regis jussu, Anghilbertus, continentia et humilitate revera monachus, ad hoc officium provehitur [*year 790*]. Quod postquam factum est, artifices doctissimos ligni et lapidis, vitri et marmoris Anghilberto dirigit regia potestas. Exinde quia, tam pro amore sancti Richarii quam pro dilecto suo Anghilberto, Centulense monasterium omni honorificentia attollere cupiebat, direxit vehicula fortia et multa in urbem Romam, ut marmor et columnae ad ornatum jam dictae ecclesiae deferrentur. [...]

II, 7. [...] Piissimus autem rex Karolus ex suis, ut dictum est, thesauris tantam et tam immensam eidem delegavit pecuniam, ut ad omne opus necessarium, mercede abundante, ante deficeret quis operaretur et quod operaretur, quam unde operarius remuneraretur. Cum ergo marmoreae columnae in butico [*ciborium*] erigerentur, una inter erigentium manus lapsa in duo frusta confracta est. [...] Angelus quippe Domini, veniens et suo digito scissuram perpalpans, integerrimam dicto citius restituit. [...] Haec [ecclesia] ab oriente habet ingentem turrem post cancellum, et, interposito vestibulo, alia turris versus occidentem habetur priori aequalis [...] Turris ergo orientalis cum cancello et butico sancto Richario dicata est, et turris occidentalis in honore sancti Salvatoris specialiter est dicata.

II, 10. [*Hariulf's transcription of Angilbertus text*] [...] Id sunt: in ecclesia sancti Salvatoris sanctique Richarii altaria fabricata XI, et ciboria duo, lectoria auro, argento et marmoribus parata duo. In ecclesia sancte Dei genitricis Mariae et sanctorum apostolorum, altaria fabricata XIII, ciborium I, et lectorium optime paratum I. In aecclesia sancti Benedicti altaria parata III. In ecclesiis vero sanctorum angelorum Gabrielis, Mychaelis et Raphaelis altaria III. Quae fiunt simul altaria XXX, ciboria III, et lectoria III. Nam de aliis vasis et suppellectilibus, habentur cruces auro

argentoque parate XVII, coronae aureae II, lampades argentee VI, cuprinae auro argentoque decorate XII, poma aurea III, calices aurei magni cum patenis II; item calix unus aureas magnus cum imaginibus simul cum patena sua, alii calices argentei XII cum suis patenis, offertoria argentea X. Ad caput sancti Richarii tabula auro et argento parata II, ostia majora auro et argento parata II, alia minora II, alia ostiola similiter parata II, balteus aureus I atramentarium optimum argenteum auro paratum I, cultellus auro et margaritis paratus I, codex eburneus auro, argento et gemmis optime paratus I, ponga auro parata I, incensoria argentea auro parata IV, hanappi argentei superaurati XIII, conca argentea major cum imaginibus argenteis I, bocularis argenteus I, urcei argentei cum aquamanilibus suis II, canna argentea I, eburnea I, situle argentee II, suiones argentei duo, clavis aurea I, schilla argentea I, corone argenteae cum luminibus XIII, columne coram altare sancti Richarii auro et argento parate VI, trabes minores cum arcubus suis argento parate III, cloccaria auro parata III, clocce optime XV, cum earum circulis XV, schillae III, imagines enee VI, eburnea I, candelabra auro parata II, ostia auro parata VII. Insuper donavimus ibi pallia optima LXXVIII, cappas CC, dalmaticas sericas XXIIII, albas Romanas cum amictis suis auro paratas VI, albas lineas CCLX, [casulas de pallio XXX, de purpura X, de storace VI, de pisce I, de platta XV, de cendato V] stolas auro paratas V, fanones de pallio auro paratos X, cussinos de pallio V, saga de pallio V.

DE LIBRIS. Evangelium auro scriptum cum tabulis argenteis auro et lapidibus preciosis mirifice paratum I, aliud evangelium plenarium I. De aliis libris volumina CC.

Insuper etiam plurima ornamenta in fabricaturis, et in diversis utilitatibus in plumbo, vitro, marmore, seu cetera instrumenta quae longum fuit numerare prolixiusque scribere: que tamen tunc temporis appreciata sunt a fidelibus Dei et sancti Richarii, qui nobiscum in Dei servitio laborantes extiterant, hec omnia valere potuisse libras quindecim milia vel eo amplius. [...]

III, 3. [*year 831*] [...] Anno igitur Incarnationis Domini DCCCXXXI, indictione IX, facta est descriptio de abbatia sancti Richarii, rogante serenissimo Augusto [*Louis the Pious*], anno imperii sui XVIII. [...] Habentur ibi principales ecclesiae III; una, major, in honore sancti Salvatoris et sancti Richarii, altera in honore sanctae Mariae, tertia in honore sancti Benedicti. In quibus principalia habentur altaria III, hoc est sancti Salvatoris, sancti Richarii, et sanctae Mariae, ex marmore, auro et argento, et gemmis ac lapidibus diversis fabrefacta. Super illa tria altaria habentur tria ciboria ex argento et auro parata, in quibus tres dependent coronae, singulae per singula ex auro gemmisque paratae, cum aureis cruciculis aliisque diversis ornamentis. In eisdem ecclesiis sunt lectoria tria ex marmore, argento et auro fabricata. Capsae reliquiarum aureae et argenteae, vel eburneae paratae sunt XXX, cruces majores V, et minores VIII, poma altarium XXI; e quibus tria

sunt aurea, reliqua argentea. Item poma guntfanonum VII, ex argento auroque parata, candelabra ferrea ex argento et auro parata, majora XV, minora VII, coronae argentae VII, et cupreae deauratae VII, lampades argenteae VI, cupreae deauratae VI, hanappi pendentes argentei XIII, conchae argenteae pendentes II, areae majores III, et minores III, turibula argentea deaurata VIII, ex cupro I, flabellum argenteum I, paries ad caput sancti Richarii, et duo ostiola parva ex argento et auro gemmisque fabricata; ad pedes ipsius ostiola VI, ex argento auroque parata. Sunt et alia IV, similiter parata. Ante altare ejusdem sancti stant columnae magnae ex cupro argento et auro paratae y sustentantes trabem unam similiter cupream argenta auroque paratam. Sunt et aliae trabes minores tres ex cupro, argento, auroque paratae in circuitu altaris vel chori sustentantes arcus XVII, ex cupro, argento, auroque fabricatos; inter quos stant imagines bestiarum, avium, hominumque VII, ex aere circuli ad signa pendentes argentei V, reliqui ex aurichalco. Evangelium auro scriptum unum cum capsa argentea, gemmis et lapidibus fabricata. Aliae capsae Evangeliorum duae ex auro et argento paratae, faldene addito ex argento fabricatum ad opus ipsarum I, calices ex auro IV, ex argento majores II, minores XIII, patenae aureae II, argenteae majores IV, minores XIII, ex aurichalco I, offertoria aurea IV, argentea LX, eburneum I, magnum argento et auro paratum. Scyphus argenteus major I, minores argentei IV, ex aurichalco I, tutelli argentei IV, urcei argentei cum aquamanilibus II, hanappus ad bibendum argenteus I, situla argentea I, ex cupro et aere II, et argento parata I, canna argentea I, ex stanno I, tabulae eburneae ex auro argentoque paratae I, majores II, minores II, ex cypresso una argento parata, claves argenteae II, ex aurichalco deaurata I, baculus auro, argento et crystallo paratus I, praeparatio baculi unius ex crystallo I, casulae castaneae XL, sericae nigrae V, persae sericae III, ex plata I, ex pallio XX, galnae sericae V, melnae sericae III, ex pisce I, ex cendalo IV, cappa castanea auro parata I, serica I, dalmaticae XXXI, hrocci serici XV, lanei XI, sericus albus I, persi serici II, roccus pectoralis I, fanones ad offerendum auro parati XIV, ex brandeo III, ex pallio XV, saga ad patenas ferendas IV, pallia LXXVIII, vestimenta XLIX, viginti alia, cum pallio paratum I; in sacrario ad tabulam cooperiendam vestimentum lineum pallio paratum I, tapeta VI, cortinae III, bancales serici IV, et alii sex cussini serici II, ex pallio IV, vestimentum lineum Dominicale I, nastolae ex auro paratae II, wanti castanei auro parati II, linei II, fanones manuales auro parati II, capellum auro paratum I, ex pallio I, facitercula II, cappae CCCLXXVII. [...]

Notker Balbulus, Gesta Karoli (796-804 .ca)

I, 28. Cum strenuissimus imperator Karolus aliquam requiem habere potuisset, non ocio torpere sed divinis servitiis voluit insudare, adeo ut in genitali solo basilicam, antiquis Romanorum operibus

praestantiorem, fabricare propria dispositione molitus in brevi compotem se voti sui gauderet. Ad cuius fabricam de omnibus cismarinis regionibus magistros et opifices omnium id genus artium advocavit. Super quos unum abbatem cunctorum peritissimum ad executionem operis [...] constituit. [...]

I, 30. [...] Si vero essent ecclesie ad ius regium proprie pertinentes laquearibus vel muralibus adornande picturis, id a vicinis episcopis aut abbatibus curabatur. Quodsi nove fuissent instituende, omnes episcopi, duces et comites, abbates etiam vel quicumque regalibus ecclesiis praesidentes cum universis, qui publica consecuti sunt beneficia, a fundamentis usque ad culmen instantissimo labore perduxerunt; sicut adhuc probat non solum basilica divina, sed et humana apud Aquasgrani et mansiones omnium cuiusdam dignitatis hominum, que ita circa palatium peritissimi Karoli eius dispositione constructe sunt [...]

I,31. Providentissimus igitur Karolus quibuscumque primoribus in proximo constitutis praecepit, ut opifices a se directos omni industria sustentare et cuncta ad opus illud necessaria subministrare curarent. Qui vero ex longinquis partibus advenissent, commendavit eos praeposito domus sue nomine Liutfrido, ut eos de publicis rebus aleret et vestiret, sed et cuncta, que ad constructionem illam pertinerent, sedulus impendere semper instaret. [...]

Einhard, Vita Karoli Magni (796-804 ca.)

26. Religionem Christianam, qua ab infantia fuerat inbutus, sanctissime et cum summa pietate coluit, ac propter hoc plurimae pulchritudinis basilicam Aquisgrani exstruxit auroque et argento et luminaribus atque ex aere solido cancellis et ianuis adornavit. Ad cuius structuram cum a columnas et marmora aliunde habere non posset, Roma atque Ravenna devehenda curavit. [...]

Vita Sancti Willelmi (804 ca.)

9. [...] Accitis quoque magistris quos secum deducebat virisque sapientibus quos in suo comitatu habebat quamprimum condecens metitur oratorium, metitur etiam tocius claustri spacium, domum refectionis atque dormitorium, domum etiam infirmorum et cellam noviciorum, proaulam hospitum, xenodochium pauperum, junctum clibano p(r)istrinum de latere molendinum. His ita dispositis et congrue atque regulariter designatis, ipse dux ad opus rediit, operarios ponit, artifices pneponit. Qui quibus insistant operibus, quaeve exerceant studia diligenter et oportune disponit […].

Archives archbishopric of Lucca I.34 (805)

In nomine Patris, et Filii, et Spiritus Sancti. Carolus Serenissimus Augustus a Domino coronatus […], idibus mensis Novembris, Indictione quartadecima. Ego Natalis, homo transpadanus Magister casarius, Christo auxiliante, edificavi ecclesiam in honore Dei, et Beate Marie semper Virginis, et Beati Petri Apostolorum Principis infra hanc Civitatem in fondamento meo, quod mihi in commotatione obvenit a Venerabili Viro Jacobo gratia Dei Episcopo […].

Chronicon Vulturnense del monaco Giovanni (shortly before 808)

220-221. [...] venerandus pater Iosue simul cum universis fratribus <se> Supplices exhibentes, cum obnixe deposcunt, ut illis concederet templum antiquissimum in territorio Capuano, quod maximis colupmnis et diversis lapidibus ab antiquis fuerat institutum in locum, ubi Edes Imperatoris, vel Cripte dicebantur. [...] Quibus Augustus [i.e. Louis the Pious] libenter annuens postulata concessit, et queque utilia vel necessaria ob hoc eis esse videbantur, tribuit.

Capitula Episcoporum I, Theodulf of Orléans (early 9th century)

2nd Capitulary, 7. Sed et hoc secundum auctoritatem canonum modis omnibus prohibendum, ut, quando missa celebratur, nulla femina ad altare praesumat accedere aut presbitero ministrare aut infra cancellos stare aut sedere.

Will of Fortunatus II of Grado (patriarchate: 803-826 ca.; facts occured most probably before 814)

[...] Ecclesia autem sancti Joannis maior tota erat [inusta] et scola in ruinis posita […] Ego autem feci venire magistros de Francia, misi ibi traves XXX. [...]

Capitula Episcoporum I, Haito of Basel (806-823, most probably before 813)

XVI. Sexto decimo, ut unusquisque hoc provideat, ut mulieres ad altare non accedant nec ipsae deo dicatae in nullo ministerio altaris intermisceantur. Quod si pallae altaris lavandae sunt, a clericis abstrahantur et ad cancellos feminis tradantur et ibidem repetantur. Similiter et presbyteri, cum oblata ab eisdem mulieribus offeruntur, ibidem accipiantur et ad altare deferantur.

Vita Amandi episcopi II. auctore Milone (elevatio: year 809)

VII. SERMO DE ELEVATIONE CORPORIS BEATI AMANDI, QUAE FACTA EST A HLOTHARIO CUSTODE ANNO AB INCARNATIONE DOMINI OCTINGENTESIMO NONO,

A TRANSITU VERO PRAEDICTI PATRIS CENTESIMO QUINQUAGESIMO, DIE VIGESIMO MENSIS SEPTEMBRIS.

[...] Igitur ablatas de corpore viri Dei Amandi supramemoratas reliquias congruo loco debito honore deposuit; lapidum etiam caesores necnon et cementarios adhibuit aliaque perplura, quae ad hoc opus apta videbantur, exquisivit. Corpus vero venerabile a die XII. Kalendarum Octobrium, quibus elevatum est, usque ad X. Kalendarum Novembrium, quibus restitutum est, per XXXII dies supra terram manere permisit ac die eodem, magno cleri populique conventu congregato, in loco praeparato recollocavit urnamque sepulchri non, ut antea fuerat, in profundioribus posuit, sed in superioribus, ita ut fundamentum illius videri et lumen sub illo accendi posset, collocavit atque in eo illum a psalmi versiculum: Haec requies mea in saeculum saeculi; hic habitabo, quoniam elegi eam, suprascripsit. [...]

Chronicon Moissiacense (812)

pag. 309. [Karolus] fecit […] in comitatu Magdalonense (ecclesiam) […] Ad cuius structuram cum columnas et marmora habere non posset, Nemauso civitate cum magna diligentia adduci praecepit […].

Andreas Agnellus, Liber Pontificalis Ecclesiae Ravennatis (restorations: year 814)

168. [...] Mortuus est istius temporibus Pipinus Langobardorum rex, et voluto tempore obiit Karolus imperator die 30. mensis Ianuarii, et suscepit imperium Lodovicus, filius eius, pro eo. Eo namque tempore Leo Romanae ecclesiae et urbis antistes misit cubicularium suum nomine Crisafum et reliquos caementarios, restauravit tecta beati Apolenaris, omnia ex trabibus et laquearibus abiegnis, et omnia illius martiris tegumenta; uno cum suo dispendio omnes suburbanae civitates veniebant, omnia docaria et subtegulata et omnia ligna abiegna et quae necessaria erant Ravennenses cives volventes in angaria cum funibus et ingemas cetera. Caementariique ordinabant trabes super parietes, et perfecta sunt omnia; solaque hypocartosis [*i.e. ceiling panels*] hic pontifex infigere praecepit.

Giustiniano Partecipazio, on the foundation of the church of St. Zaccaria at Venice (before 820-827; text transcribed by Francesco Sansovino) – Lib. I. (Sestriere di Castello), pages 26-29.

Here follows the Italian text as translated in 1581 by Francesco Sansovino from the original document, in Latin, authored by the doge Giustiniano Partecipazio: [...] Per revelatione del Signor

Nostro Onnipotente, et per comandamento del Serenissimo Imperatore & conservatore della pace di tutto il mondo, Leone, dopo molti benefici a noi conceßi, feci questo monisterio di vergini in Venetia, secondo che esso volle che si edificasse della propria Camera Imperiale. Et incontanente (secondo che mi commesse) comandò che mi fosse dato oro & argento, con altre cose necessarie. Oltre a ciò ne fece dare, da consecrar questa Chiesa Santa, le reliquie di san Zaccaria Profeta, del legno della Croce del Signore, del panno di Santa Maria, o vero de vestimenti del Salvatore, con altre sante reliquie. Mandò anco le cose bisogneuoli per questa opera: & maestri, accioché si finisse presto. [...]

Flodoardus Remensis, Historia Remensis ecclesiae (820 .ca)

II,19. [...] Cupiens ergo praefatus pontifex Ebo domum ecclesiae sanctae Dei genitricis Mariae diuturna pene lapsabundam vetustate reparare, in qua etiam secundus Stephanus papa Pippino regi dudum, et Leo tertius Karolo magno imperatori apostolica reperiuntur munia contulisse, ut in epistola commemoratur imperatoris Lotharii Leoni quarto, pro causa commendationis Hincmari archiepiscopi directa, petiit a praemisso imperatore Ludovico ad renovandam et amplificandam eamdem basilicam murum civitatis sibi concedi. Quod idem princeps quietissima pace fruens, et imperii praeclarissima potestate subnixus, nullas barbarorum metuens incursiones, nequaquam refutavit, sed benignissime ob amorem Dei, et ipsius almae genitricis honorem concessit, atque jussionis suae monimento fieri delegavit, hujusmodi super hoc suae dans praeceptionis decreta.
[...] Sed et quendam fabrum servum suum nomine Rumaldum ad petitionem eiusdem presulis ecclesie Remensi concessit, ut hic de talento a domino sibi collato iuxta vires diebus vite sue proficeret. Quam etiam cessionem apicum adnotatione et annuli sui sigillatione roboravit. [...]

Annales regni Francorum (821)

[...] Fortunatus patriarcha Gradensis, cum a quodam presbitero suo nomine Tiberio apud imperatorem fuisset accusatus, quod Liudewitum ad perseverandum in perfidia, qua coeperat, hortaretur eumque ad castella sua munienda artifices et murarios mittendo iuvaret et ob hoc ad palatium ire iuberetur, primo velut iussionem impleturus in Histriam profectus est, inde simulato reditu ad Gradum civitatem nullo suorum praeter eos, cum quibus hoc tractav rat, suspicante nanctus occasionem clam navigavit, veniensque Iaderam Dalmatiae civitatem Iohanni praefecto provinciae illius fugae suae causas aperuit, qui eum statim navi impositum Constantinopolim misit. [...]

Einhard, Translatio et miracula sanctorum Marcellini et Petri (years 827-830 .ca; text written in 830-831 .ca)

III,8. Sub idem fere tempus, cum quadam nocte surgentes ad ecclesiam iremus, invenimus pro foribus ecclesiae quendam puerum in porticu iacentem, adeo miserabiliter contractum, ut mento genua iungerentur. Qui unum ex his qui nos sequebantur rogavit, ut se in ecclesiam deportaret. Et ille misericordia motus sustulit eum et in ecclesia iuxta cancellos iacere fecit. Qui confestim, inruente sopore, ubi iacuit obdormivit. Nec prius plene evigilavit, quam de illa miserabili contractione per suffragia sanctorum ita perfecte sanatus est, ut evigilans per se de loco, in quem alio portante delatus est, surgeret atque ad altare Deo gratias acturus accederet[38]. [...].

IV,2. [year 828; see Binding 2005, 17] Erat ibidem alter aeque iuvenis nomine Gerlaicus de urbe Remorum [*Reims*] inter eos qui propter aedificia Palatii [*i.e. in Aachen*] construenda iussi de illa civitate venerunt. [...]

IV,14. Adventus sanctorum Christi martyrum Marcellini et Petri ad vicum Traiectum contigit pridie Nonas Iunii. [...] Cumque his laudibus et laetitia spiritali usque ad basilicam beati Servacii perventum est, celebratisque cum magna e omnium gratulatione missarum solemniis, et universis ad sua reversis, feretrum, quo sacri cineres advecti sunt, a dextris altaris iuxta cancellos collocatum est; totusque ille dies cum ingenti eodem in vico consistentis populi exultatione atque iucunditate consummatus est. [...]

Andreas Agnellus, Liber Pontificalis Ecclesiae Ravennatis (829-830)

113. [Maurus] sepultusque est in ardica beati Apolenaris, mirae sepulturae. Ibi fuit lapis pirfireticus ante praedictam arcam, preciosissimus et valde lucidissimus in modum vitri. Et apertis ianuis, quae respiciunt ad ecclesiam beati Severi, intuisset quis illum lapidem, sicut in speculum tam homines quamque animalia sive volatilia vel qualiscunque res inde transissent, enigma quasi [in] sepculum videri potuisset. Sed pene annos 12, tempore Petronacis pontificis Lotharius augustus tollere iussit, et in capsam ligneam super lanam inclausit et Franciam deportavit et super altarium sancti Sebastiani, mensam ut esset, posuit. Praeceptum mihi a pontifice fuit, ut ego illuc issem, ne caementarii incaute agerent, frangeretur; sed corde dolore pleno in partem aliam secessi.

[38] In the following chapters, III.9 and III.15, other two miracles with the same narrative stucture are described: they all happen in ecclesia iuxta cancellos, i.e. near the chancel screen. In III.9, an old man is also healed while sleeping, whereas in III.15 the young nun Marcthrudis is totally paralised; after having brought her in nearly all the sanctuaries, she is cured for intercession of the saints.

Folcwinus, Gesta abbatum S. Bertini (838 – Testament of Goibert)

p. 634. Ad Sanctum Salvatorem petrariam illam quam habui iuxta Scamnis.

Heiricus, Miracula sancti Germani (after 841 - before 858)

II, 88. Talibus animata; maturandum credidit omnisque more inpatiens, ad beati Germani coenobium ex iussu principis profecta pervenit. Ac primum loci positione perspecta diligentius postquam suo cuncta vidit respondere proposito. Dici non potest quanto se fervore addixerit coeptis insistere, dummodo divinitas religiosis flexa dispositionibus, quod velle dederat posse donaret.

II, 89. Erat locus naturali quodam situ commodissimus atque a parte orientali clivo montis paulatim lentescente competenter adcline pendulus ultro se cuiusdam ingentis fabricae conceptionibus ingerebat. Ad artifices talium experimentissimos res confertur. Horum industria ad loci oportunitatem accedente, concepti operis exemplar conficitur, et quasi quodam proludio futurae moles magnitudinis caeris brevibus informatur, ea pulchritudine, ea subtilitate, quae digna angelorum hominumque rege, quae sanctorum collegio, quae ipsius etiam loci maiestate esset. Expensis competentibus praeparatis, exactores magistrique operum deliguntur, quorum inrequieto studio summaque instantia inmensum opus incredibili celeritate peragitur, tanta facilitate rerum, tanta alacritate animorum, ut in promptu esset omnibus, divinum negotio concurrisse favorem.

II, 92. Operi magnifice elaborato si qua ornatui fore poterant, instantissime parabantur, et quoniam in nostra provintia marmorum copia minime suppetebat, in remotis haec querenda regionibus decreverunt. Hac de causa quidam fratrum periculosae expeditionis bis adgressi difficultatem, interque vastos Rhodani gurgites iter plenum discriminis subeuntes, Arelatum, ac deinde Massiliam, quae est Galliarum ultima, perrexerunt [...] Eruderatis itaque aedificiorum veterum circumquaque ruinis, ingentem marmorum pretiosorum copiam obtentu partim, partim pretio congregarunt, oneratisque navibus praeda peroptabili, victorioso successu coeptorum audacium memorabilem bis duxere triumphum [...]

II, 95. Miraculo proximum iudico, quod, perductis ad locum destinatum marmoribus, quicquid columnarum devectum est, tanta universi fabricae partibus habitudine convenerunt, acsi indiscrepanter et, ut dicunt, in unguem eisdem ipsis deformatae lineis proposito responderint exemplari. In quarum collocatione quid inter cetera mirum vel evidens claruerit, aestimo non tacendum. Harum unam non contempnendae magnitudinis basi impositam, aggregata robustorum manu, superne ducto fornici collatis viribus inserebant, cunctisque summa ope nitentibus, cum iam erecta paene consisteret, vicit molis immanitas impellentes, iamque elapsa manibus, suo ipsius in ruinam pondere ferebatur. Metu periculi cesserant universi, frustatim mox conterendi, marmoris

lapsum non absque doloris intimi scrupulo praestolantes. Praesente Deo res contra opinatum cessit, quodque humana manus exequi nequiverat, divinae virtutis occursu multo gratius multoque facilius confectum est, quantoque prius impetu deorsum ruisse, tanto mox visa est absque visibili praesidio mole sua superna reposcere. Ita loco fixa inconvulsam perennis miraculi memoriam ingerit speciosam.

Conversio Bagoariorum et Carantanorum (850 .ca)

11. [...] Postmodum vero roganti Priwinae misit Liuprammus archiepscopus magistros de Salzpurc murarios et pictores, fabros et lignarios; qui infra civitatem Priwinae honorabilem ecclesiam construxerunt, quam ipse Liuprammus aedificari fecit [...].

Capitula Episcoporum II, Herardus of Tours (858)

LXXXII. Ut laici infra cancellos non stent. Et ut oblatio populi foris septa recibiantur.

Libellus proclamationis adversus Wenilonem archiepiscopum Senonum

10. De abbatia sanctae Columbae [*Abbey Sainte-Colombe, Sens*] et rebus vel honoribus regni mei apud Hludowicum fratrem meum praeceptum obtinuit et litteras ad missos, qui eandem abbatiam revocarent, Ecchardum et Teodericum impetravit.

11. Sed in eisdem litteris ad praefatos missos iussionem fratris mei Hludowici Wenilo obtinuit, ut de muro castelli Meleduni [*Melun*], quod ius regiae est potestatis, petras haberent licentiam prendere. Unde constat, quia in plebe istius regni mihi a deo collati eum studebat colere et satagebat tenere.

Notker Balbulus, Gesta Karoli Magni (before 875)

II, 11. [...] Oratoria nova ad Franconovurt et Reganesburg admirabili opere construxit. Cumque propter magnitudinem fabricae alii lapides non sufficerent, muros urbis destrui fecit. In quorum cavitatibus tantum auri circa antiquorum ossa repperit, ut non solum eandem basilicam eodem adornaret, sed et libros integros exinde conscriptos thecis eiusdem materiae grossitudine prope digiti cooperiret.

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FIGURES

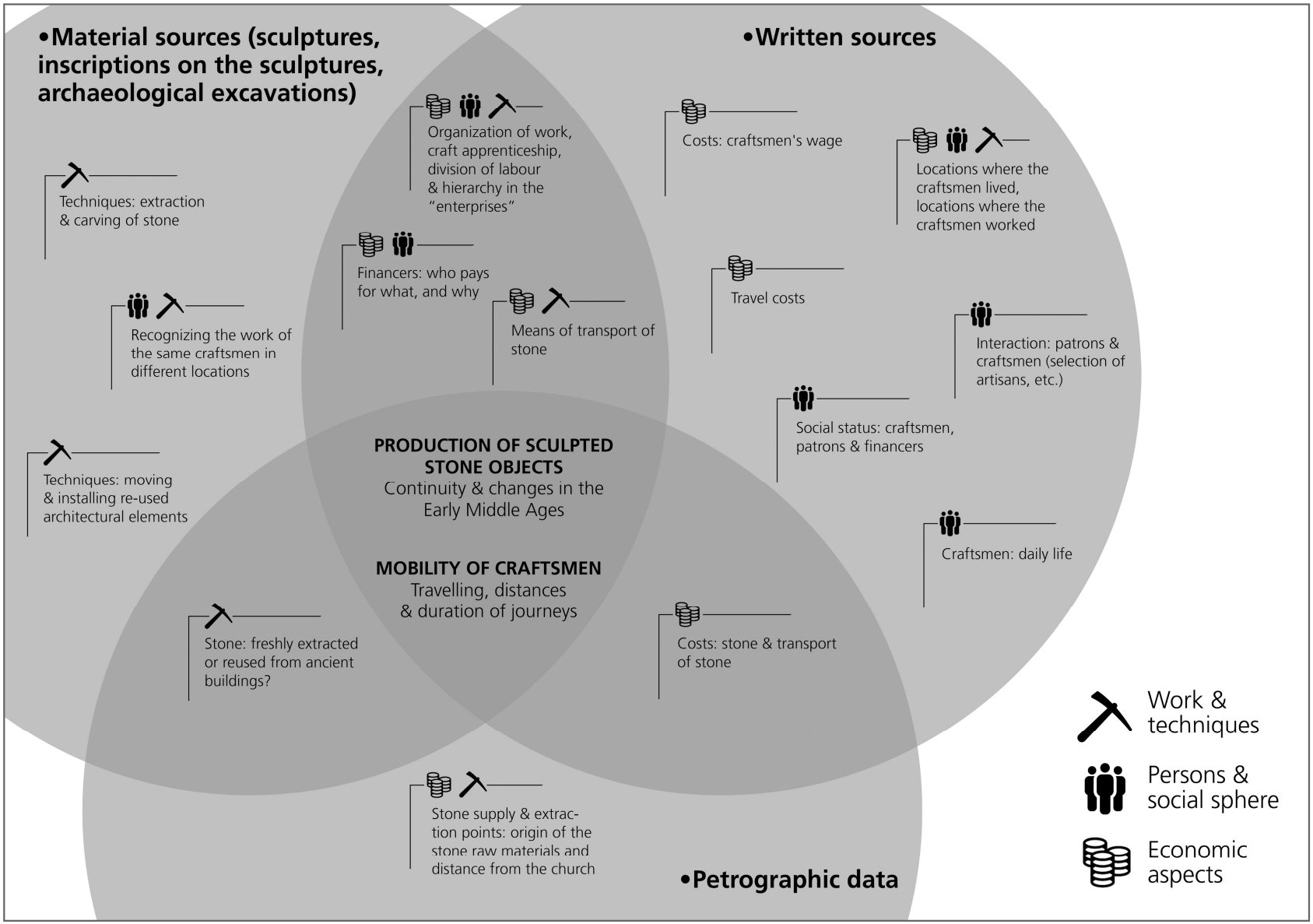


Fig. 1 – Main focuses of this work, types of sources considered, and the aspects that can be studied using them. A number of subjects cannot be investigated using only one category of sources: these are represented in the areas where the circles overlap (diagram: M. Beghelli).

FIGURES
PART I.

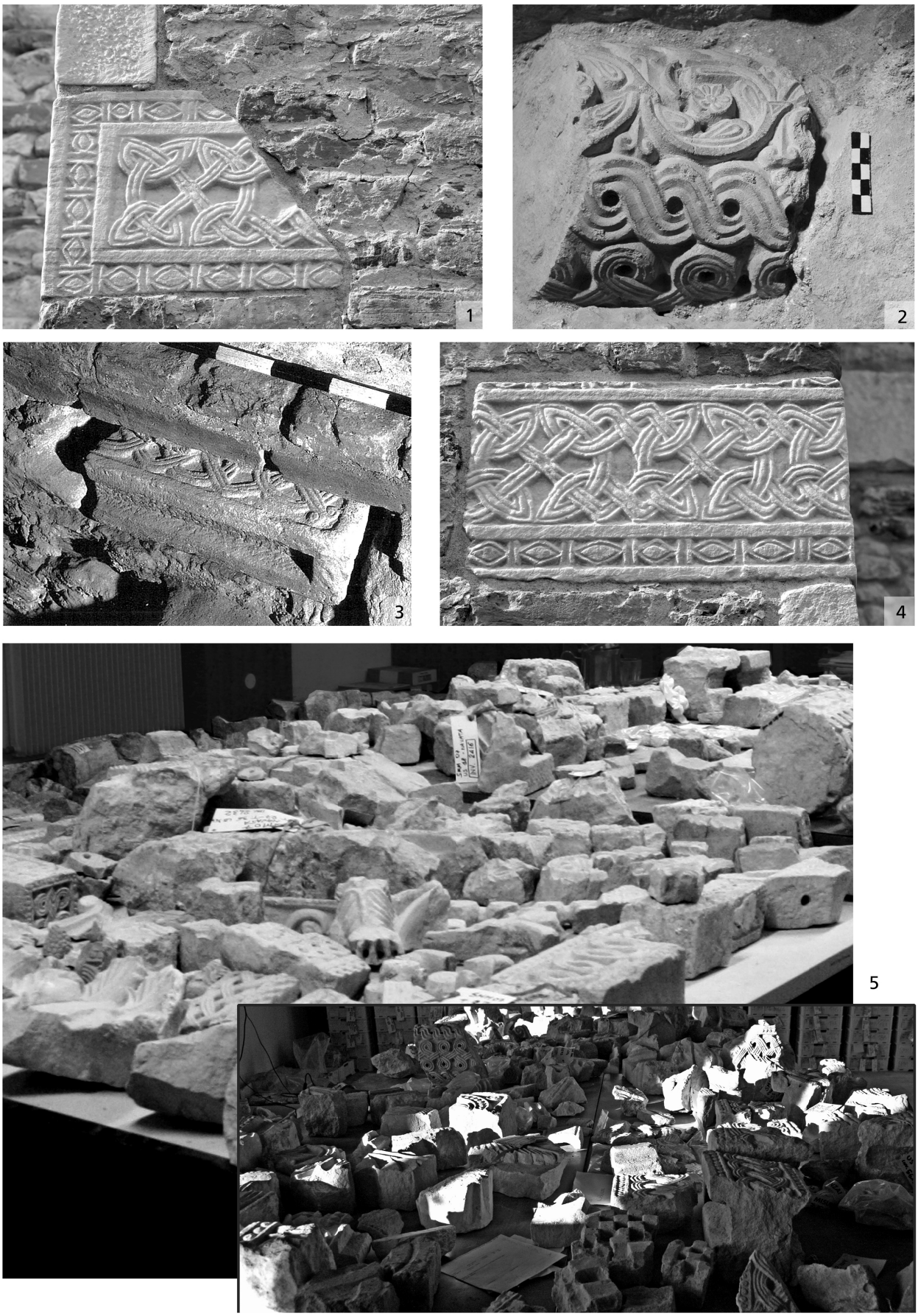


Fig. I.1 – Early Medieval sculpture is almost always found in small fragments, reused as construction material for later buildings. **1**. and **4**. Aquileia, S. Maria Assunta (photos F. Celona). – **2**. Trento, S. Maria Maggiore (after Beghelli 2013). – **3**. Ilmmünster (after Dannheimer 1989). – **5**. Trento, S. Maria Maggiore: the stone fragments during the study (after Beghelli 2013).

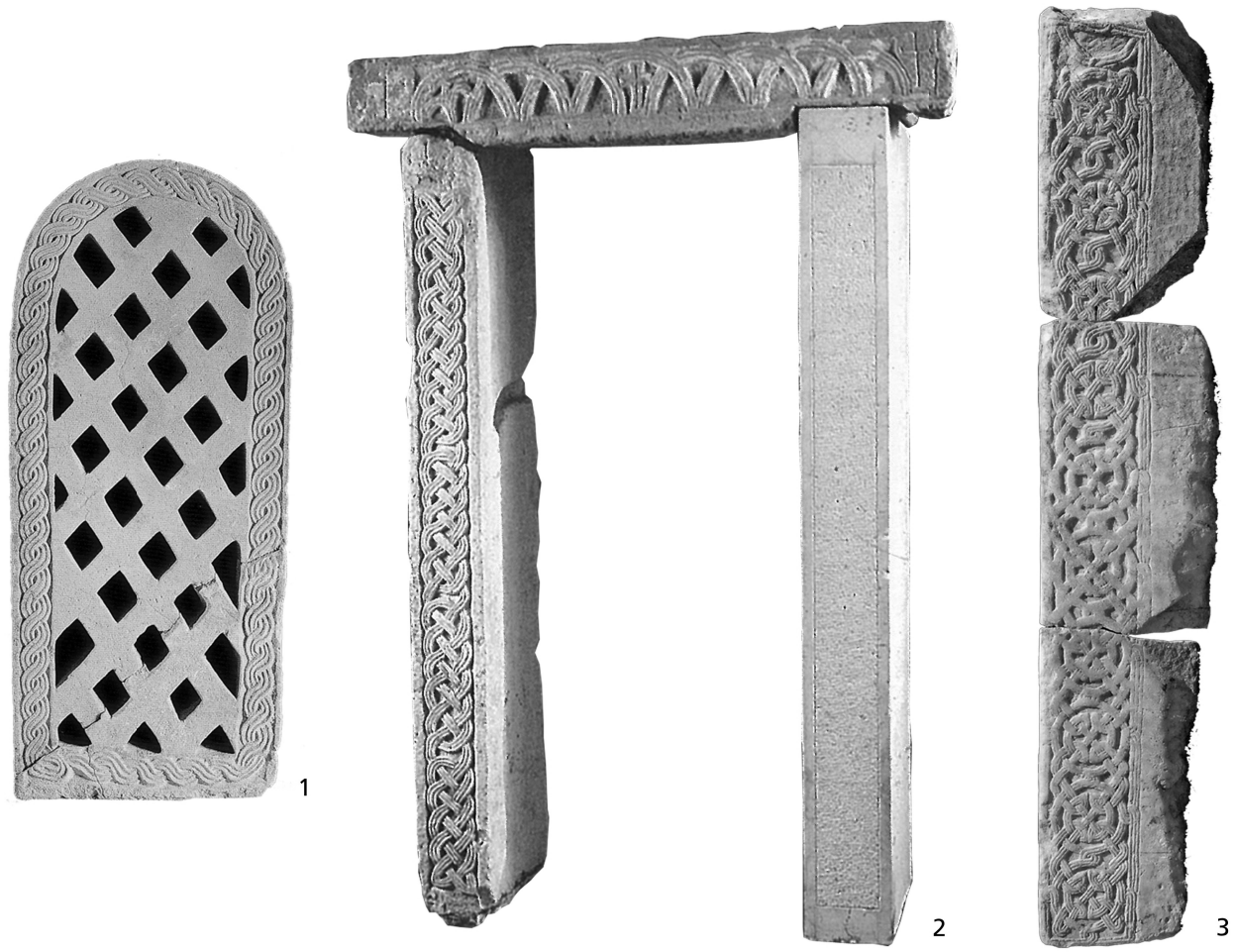


Fig. I.2 – Early Medieval architectural decoration from Croatia (1. and 2.) and some almost unique finds from Hungary (3.). – **1.** Brnaze, not far from Split, window screen, 9th c. (after Bertelli et al. 2001). – **2.** Koljane, 'church 1', first half 9th c. (after Bertelli et al. 2001). – **3.** Zalavár, near the lake Balaton, mid 9th c. (after Szőke 2014).

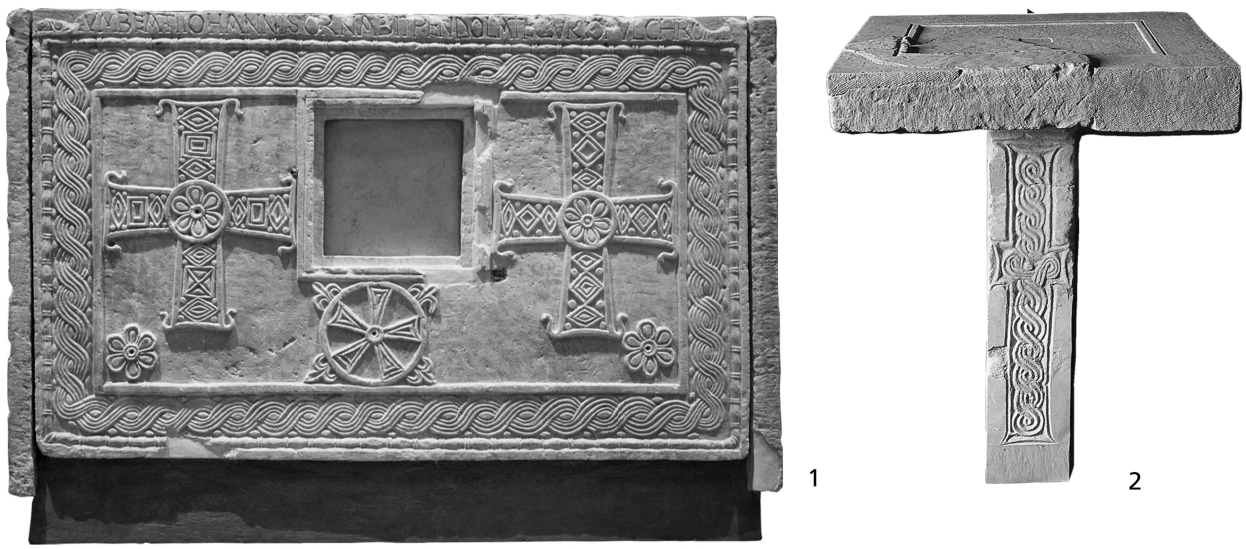


Fig. I.3 – Early Medieval altars from Italy and Croatia. – **1**. *Cippus* type, Cividale del Friuli, 'altar of the duke Ratchis', 739-744 (photo: F. Celona). – **2**. *Mensa* type, Cetina, 880-890 circa (after Bertelli et al. 2001).



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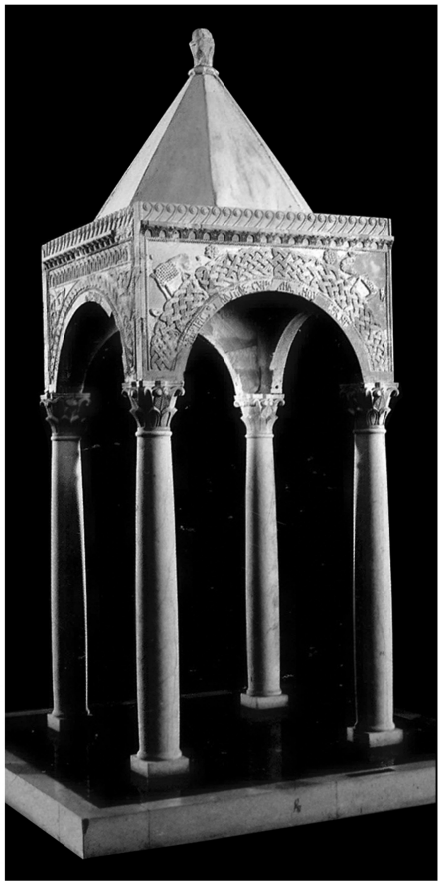


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Fig. I.4 – Chancel screens of the 'low' and 'high' types, resp. called *cancellum* or simply chancel (3. and 4.) and *pergula* (1., 2., 5.). All reconstructed from fragments. – **1**. Pula, Croatia, second half of the 8th c. (after Bertelli et al. 2001). – **2**. Koljane, Croatia, first half of the 9th c. (after Milošević 2000). – **3**. Ilmmünster, Germany, 780-800 ca. (after Dannheimer 1989). – **4**. Como, Italy, early 9th c. (after Casati 2001). – **5**. Molzbichl, Austria, early 9th c. (after Karpf 2003).



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Fig. I.5 – Ciboria or baldaquins. – **1**. Ravenna, the so-called 'ciborium of Eleucadius' (801-810) in a postcard from the early 20th c. – **2**. Bijaci, Croatia, first half of the 9th c. (after Milošević 2000).



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Fig. I.6 – Ambos. – **1**. Romainmôtier, Switzerland, 8th c. (753? After Jörg 1984). – **2**. Voghenza, Italy, 8th c. (after Haseloff 1930). – **3**. Pula, Croatia, last quarter of the 8th c. (after Bertelli et al. 2001).



Fig. I.7 – Baptismal fonts. – **1**. Cividale del Friuli, Italy, 737-756 (photo: F. Celona). – **2**. Nin, Croatia, late 8th - early 9th c. (after Bertelli et al. 2001).



Fig. I.8 – Decorated sarcophagi. – **1**. Amay, Belgium, so-called sarcophagus of Chrodoara, 730 ca.? (after Dierkens 2000-2001 [2006]). – **2**. Ravenna, archbishop Gratiosus, 788 ca. (after Valenti Zucchini / Bucci 1968). – **3**. Zadar, Croatia, second half of the 8th c. (after Bertelli et al. 2001). – **4**. Split, Croatia, archbishop John, attested in 787 (after Basić / Jurković 2011).



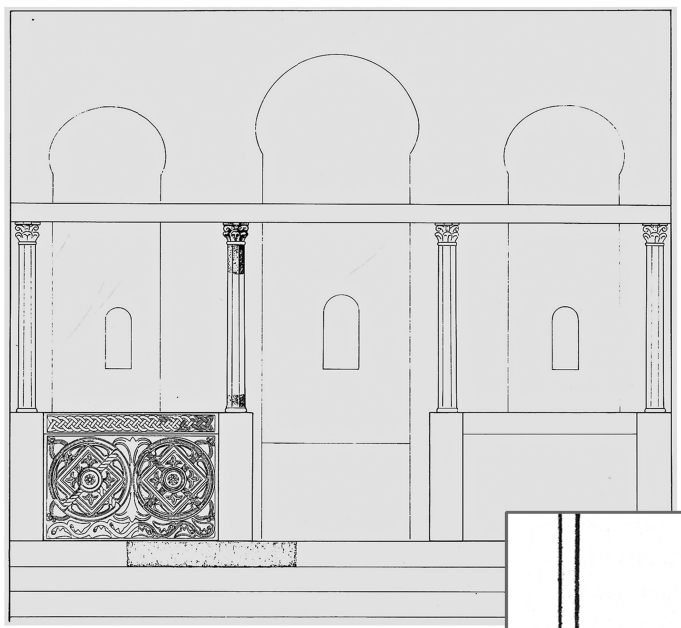


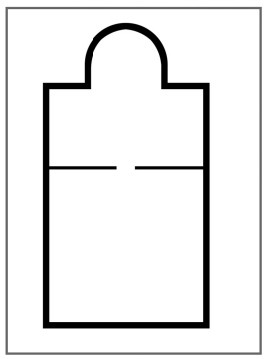
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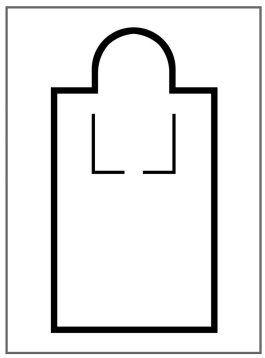
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Fig. I.9 – **1**. Poreč, Croatia, episcopal chair, second half 8th - early 9th c. – **2**. Biskupija, Croatia, holy water font (reconstructed), 'Branmir workshop', 879-892 (both after Bertelli et al. 2001). – **3**. Ravenna, capsella / reliquary, late 8th - early 9th c. (after Bertelli / Brogiolo 2000).





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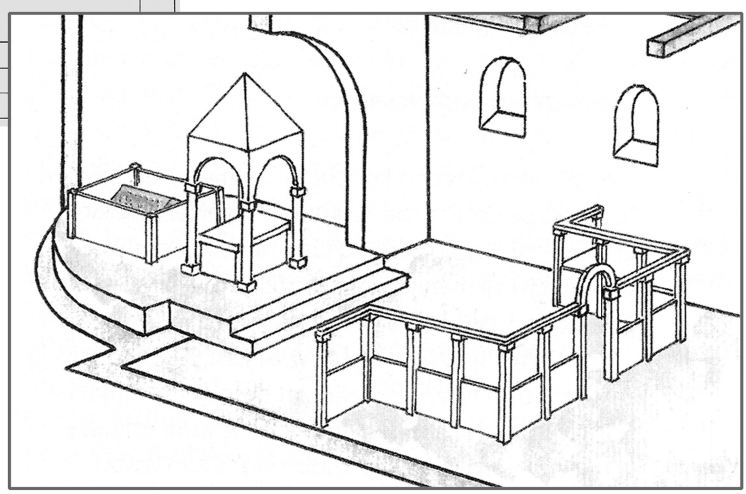


Fig. I.10 – Rectilinear and Π-formed chancel screens, plans and examples from: **1**. Malles/Mals, Italy (reconstruction after Dannheimer 1986). – **2**. Molzbichl, Austria (after Karpf 2003).

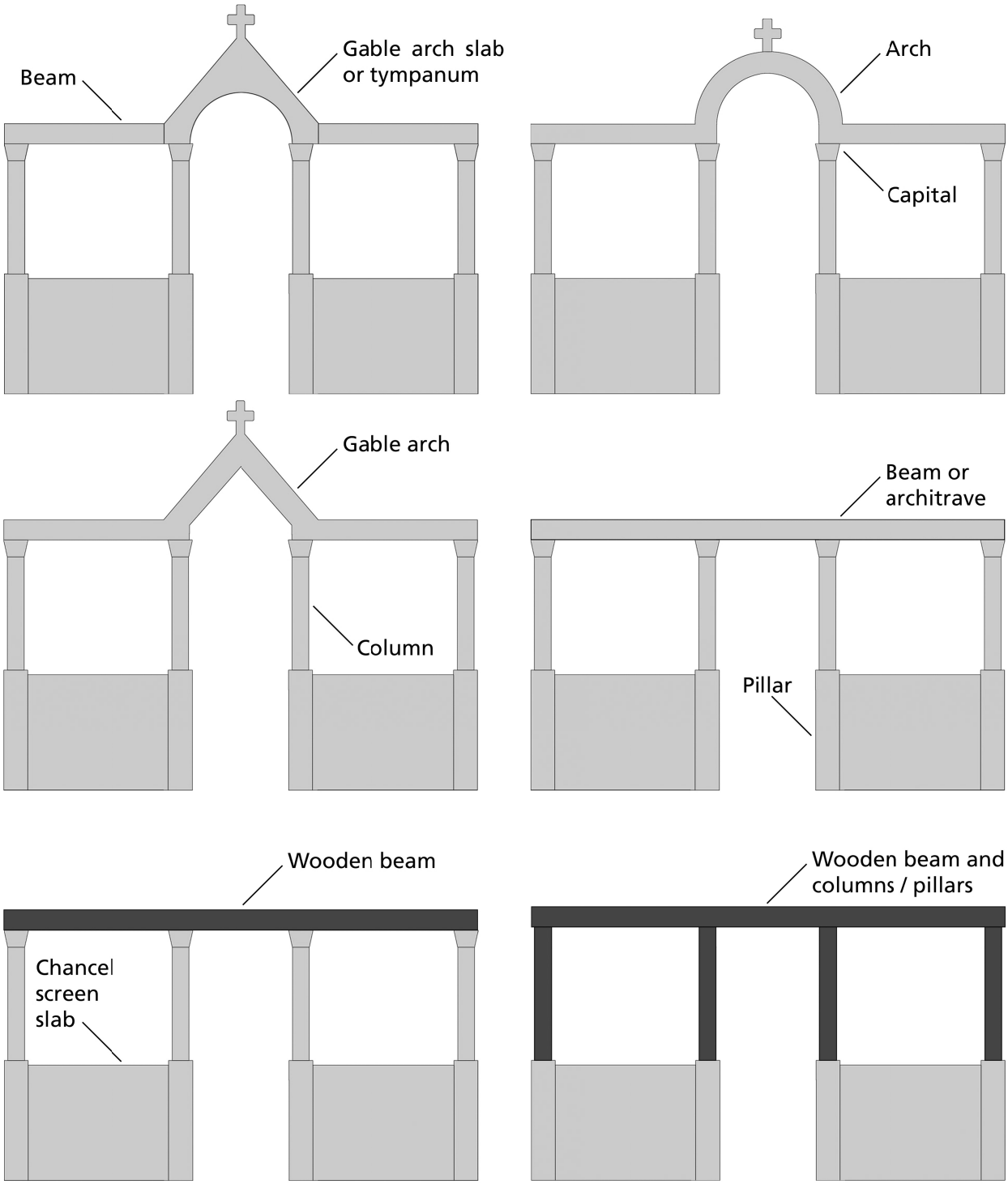


Fig. I.11 – Main components of a piece of stone furnishing and different types / variants of *pergulae*.

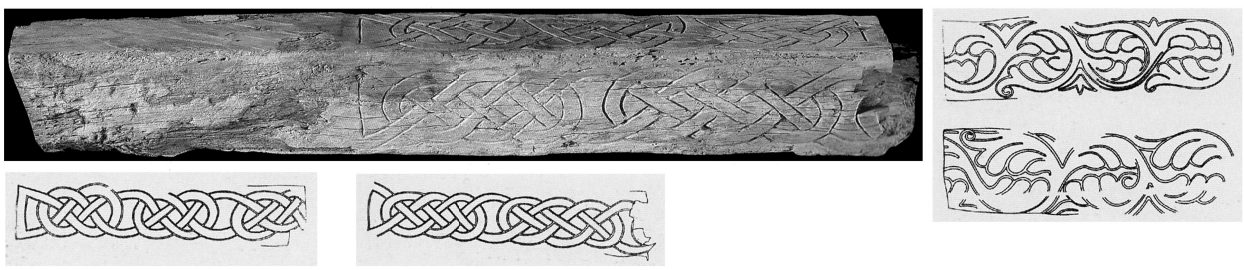


Fig. I.12 – Croatia, Zadar, Holy Trinity / St. Donatus. Decorated wooden beam and drawings from other similar pieces found in the church. ^{14}C and dendrochronology date the beams to the 8th c. They were probably used in the ceiling (after Milošević 2000).



Fig. I.13 – Early Medieval liturgical furnishings in their original context (after Beghelli / Pinar 2013).

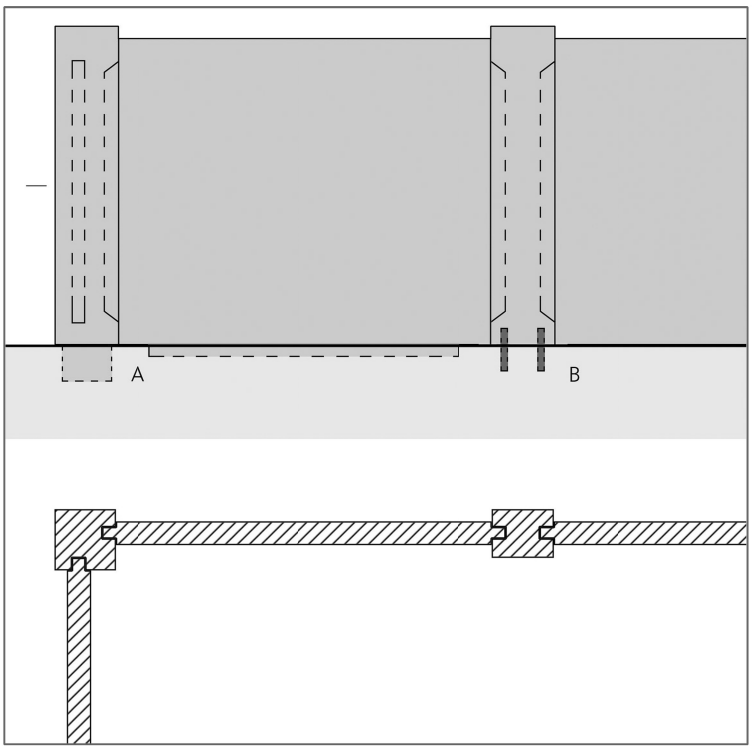


Fig. I.14 – Assembly system of the components of stone furnishings. Slabs were assembled to pillars with a tongue-and-groove method. The same could be used to install the elements on the floor / stone base (**A**). Alternatively, iron rods (or pins) could serve the same purpose (**B**) (drawing: M. Beghelli, based on Dannheimer 1989).

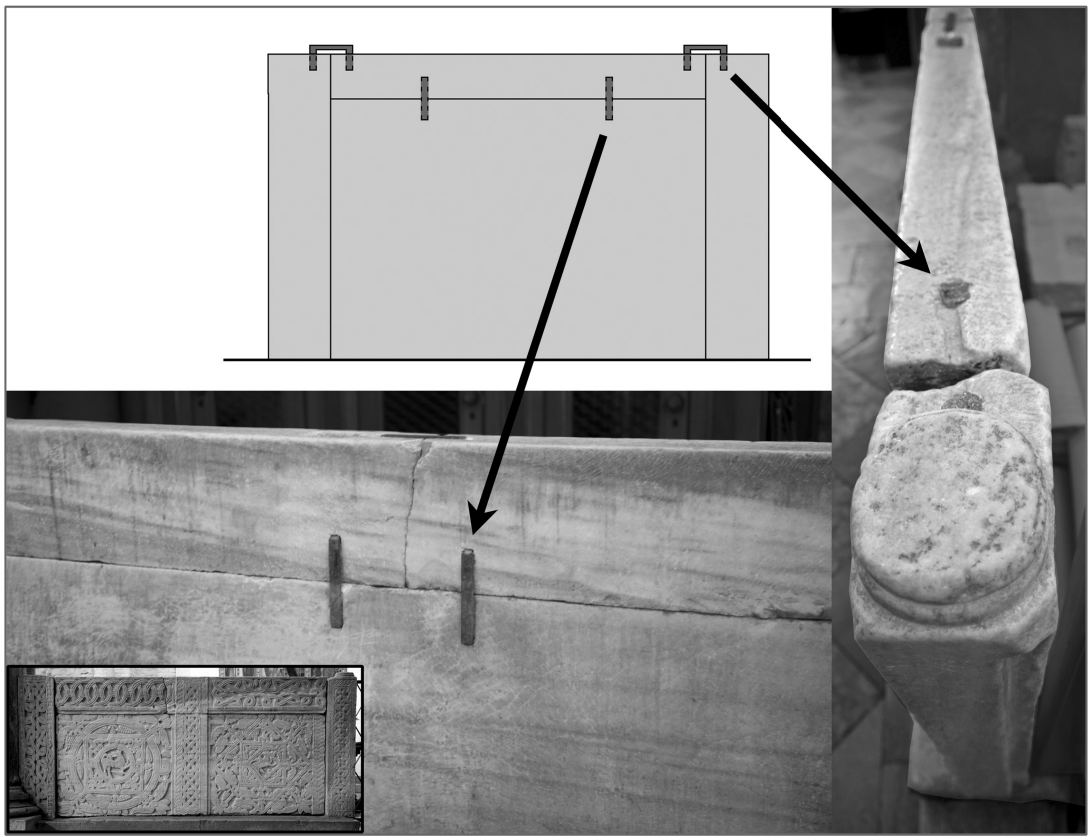
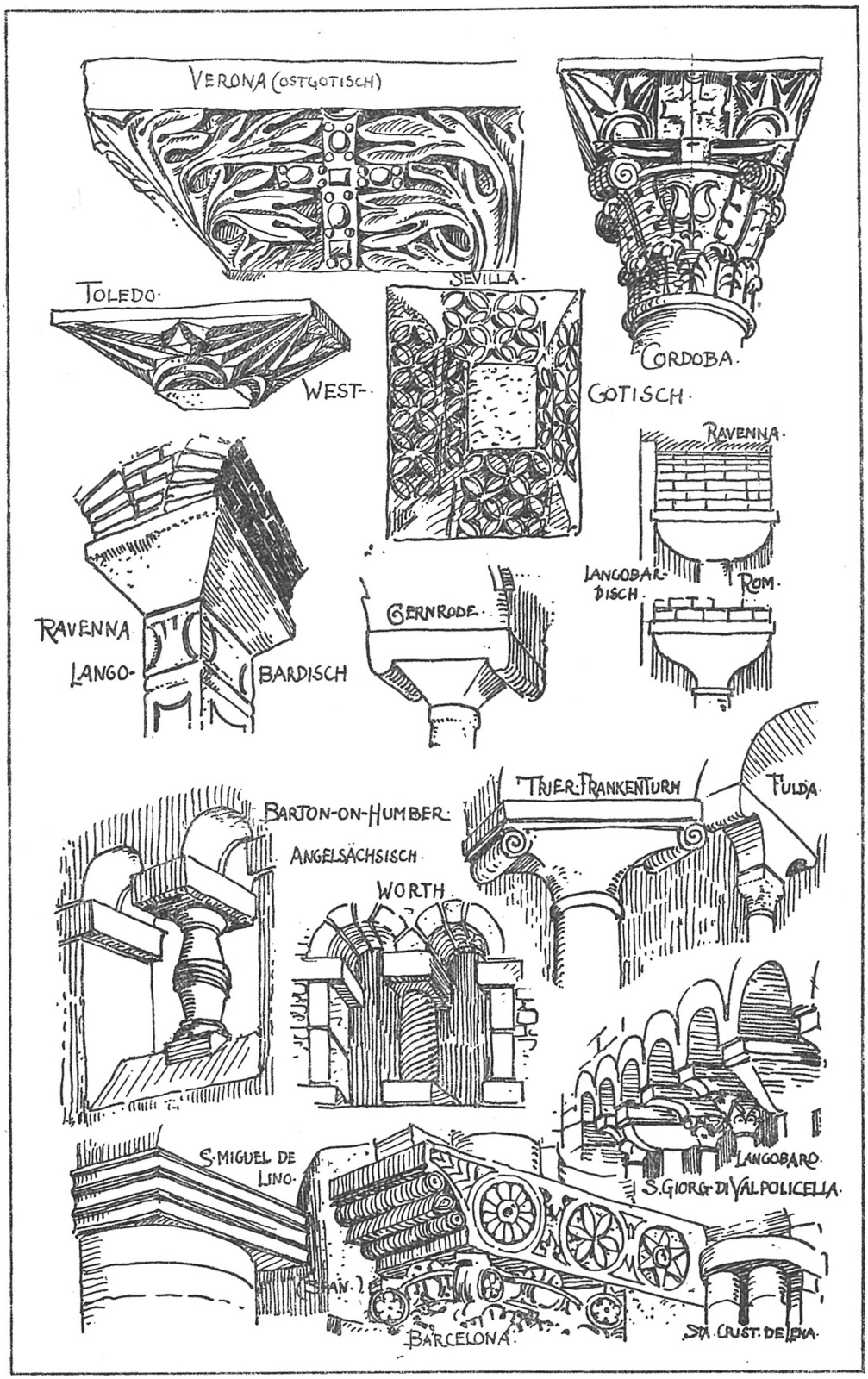


Fig. I.15 – Iron cramps could be used as an alternative to the tongue-and-groove assembly system, especially when slabs and pillars were relatively thin: this usually occurred in the case of marble elements, while those in other stone types are generally thicker. Here an example from Aquileia, S. Maria Assunta (photos and drawing: M. Beghelli).



6 * Abb. 52. Kämpfersteine. 85

Fig. I.16 – 'Ethnic labels' applied to architecture in the early 20th c. (after Haupt 1909).

FIGURES
PART II.

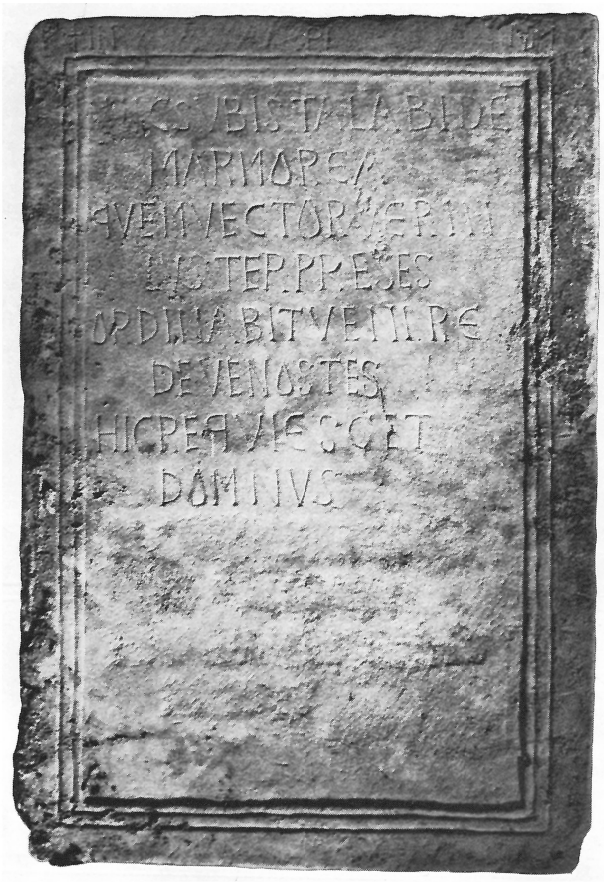


Fig. II.1 – Chur, Switzerland. Gravestone made in marble coming from Vinschgau valley, South Tyrol (after Sulser / Claussen 1978).

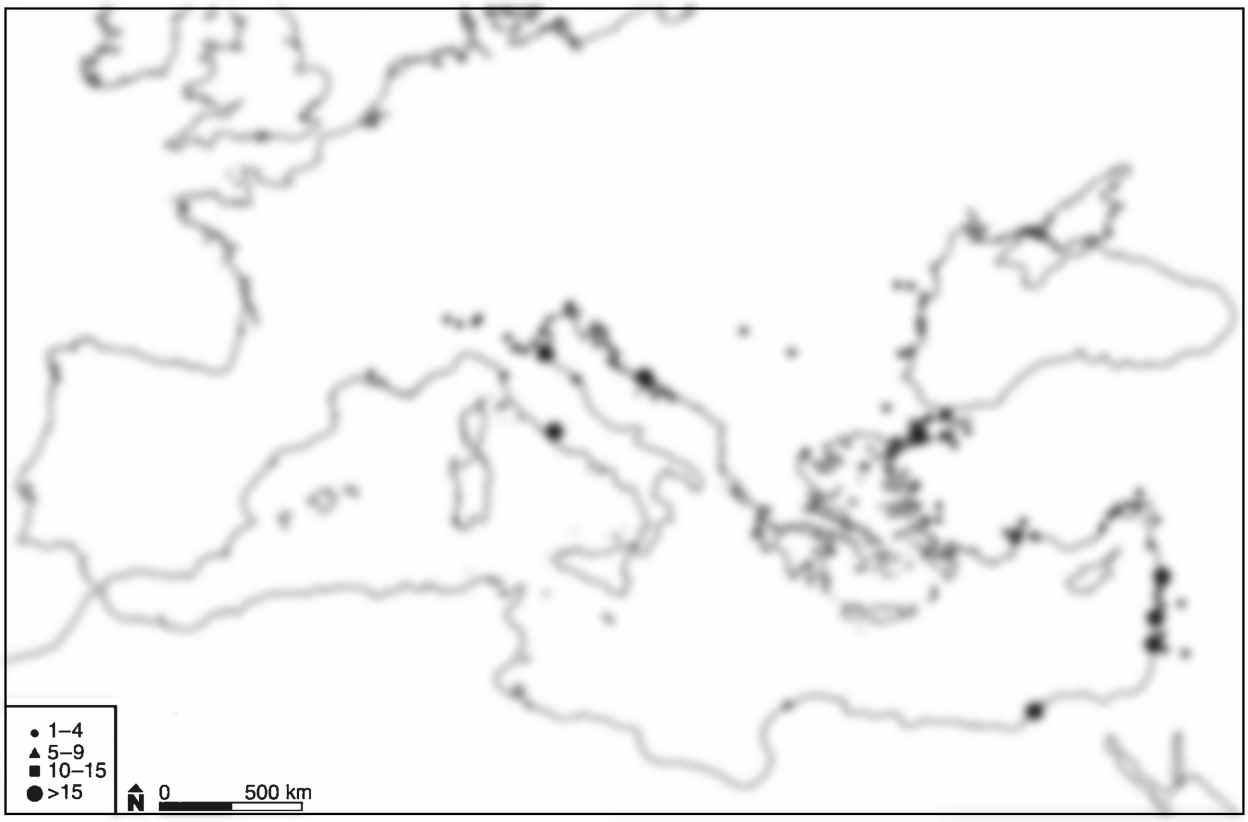


Fig. II.2 – Long distance transport of stone products in the Roman period. Distribution map of sarcophagi made in Prokonnesian marble (after Russell 2013).

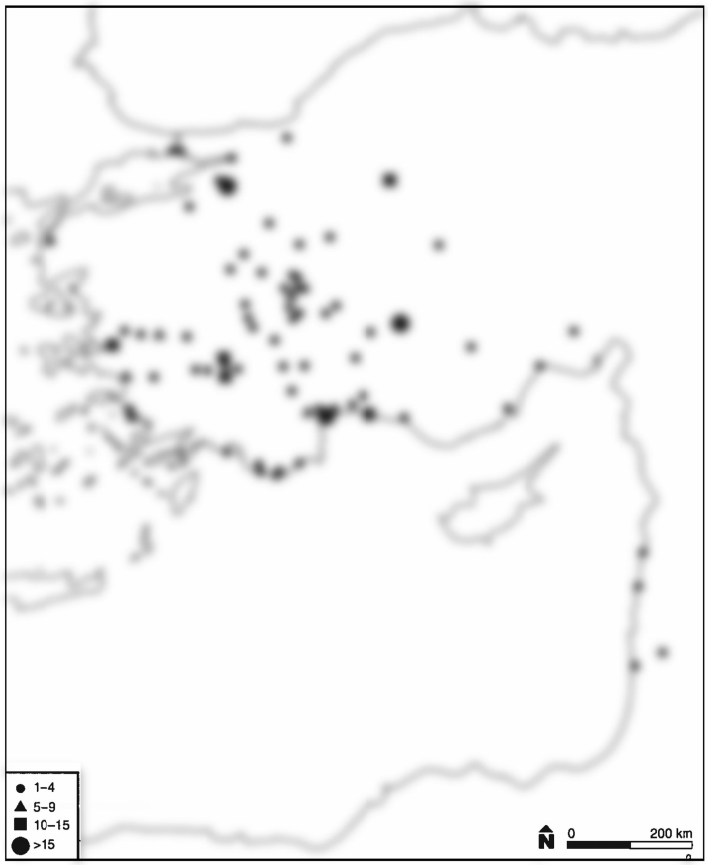


Fig. II.3 – Long distance transport of stone products in the Roman period. Distribution map of Asiatic sarcophagi, in Dokimeian marble (after Russell 2013).

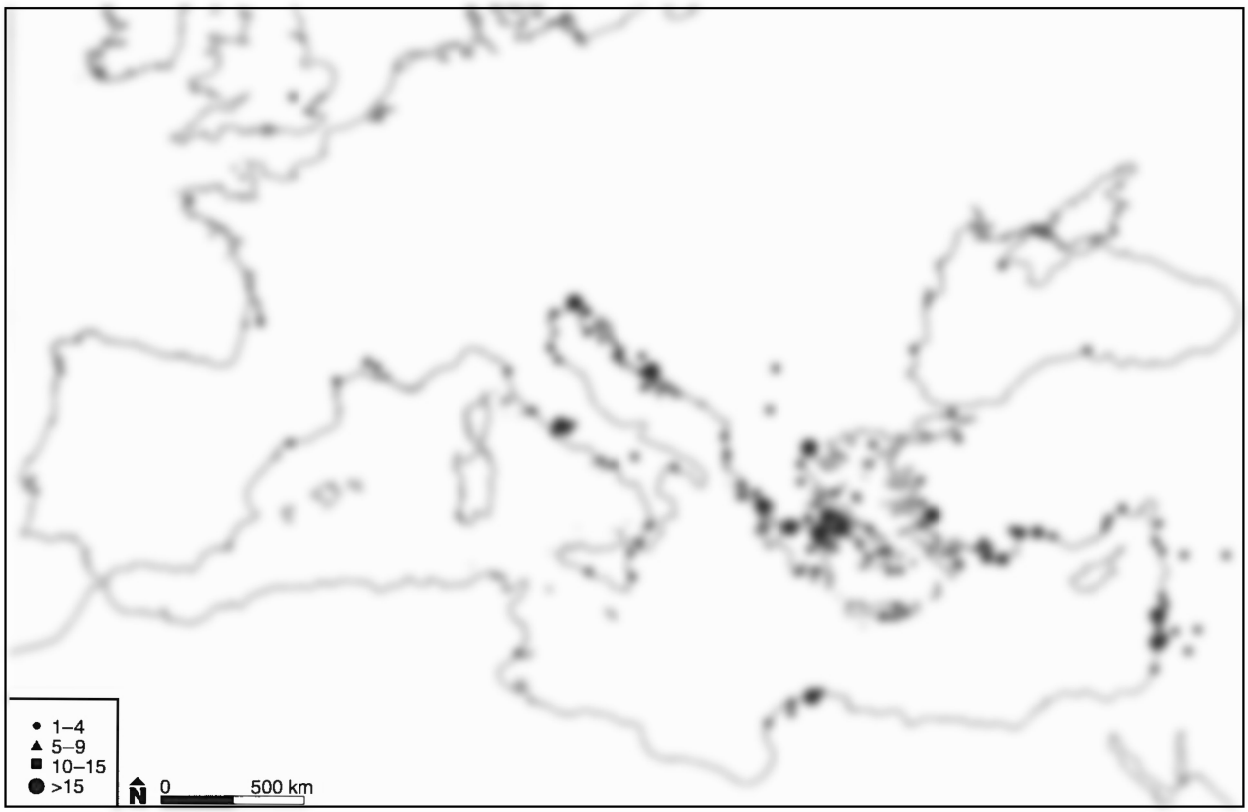


Fig. II.4 – Long distance transport of stone products in the Roman period. Distribution map of Attic sarcophagi, produced in the area of Athens (after Russell 2013).

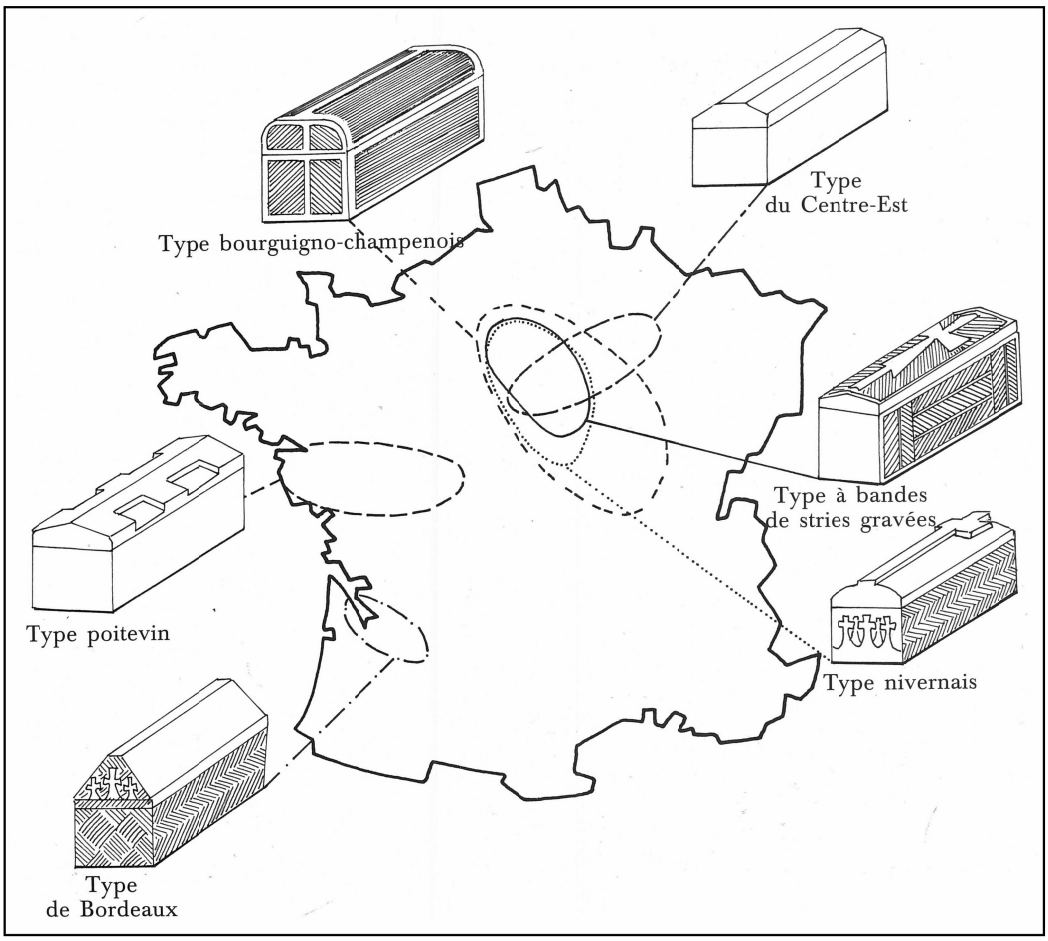


Fig. II.5 – Distribution of the main types of Merovingian sarcophagi in France (after Delahaye / Périn 1991).

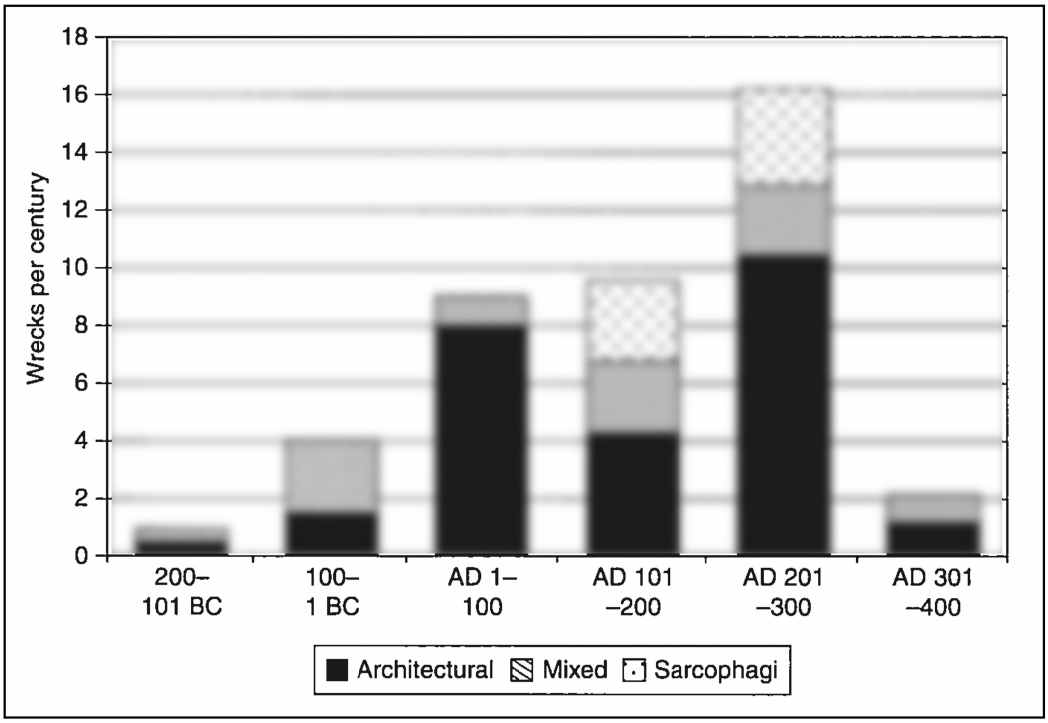


Fig. II.6 – Long distance transport of stone in the Roman period, according to the evidence from shipwrecks with stone cargoes. In the histogram, only examples datable to within one century, with cargo type (after Russell 2013).

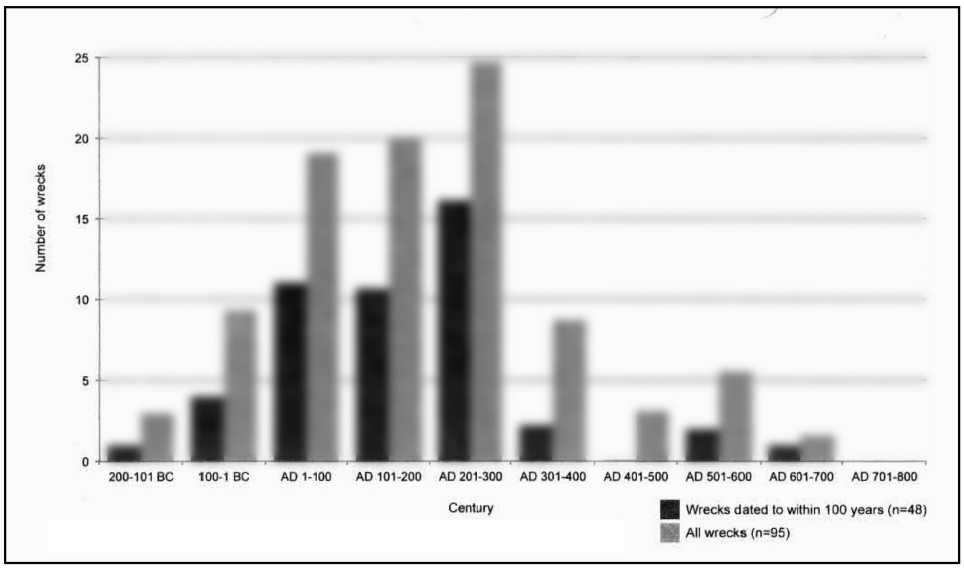


Fig. II.7 – Shipwrecks with stone cargoes are excellent documents for analysing the trends in long distance transport of stone in the long run. In the histogram, the finds are graphed by century (black: shipwrecks datable to within a century). Note the decrease in occurrences from the 4th c., until the zero occurrences in the 8th c. (after Russell 2013a).

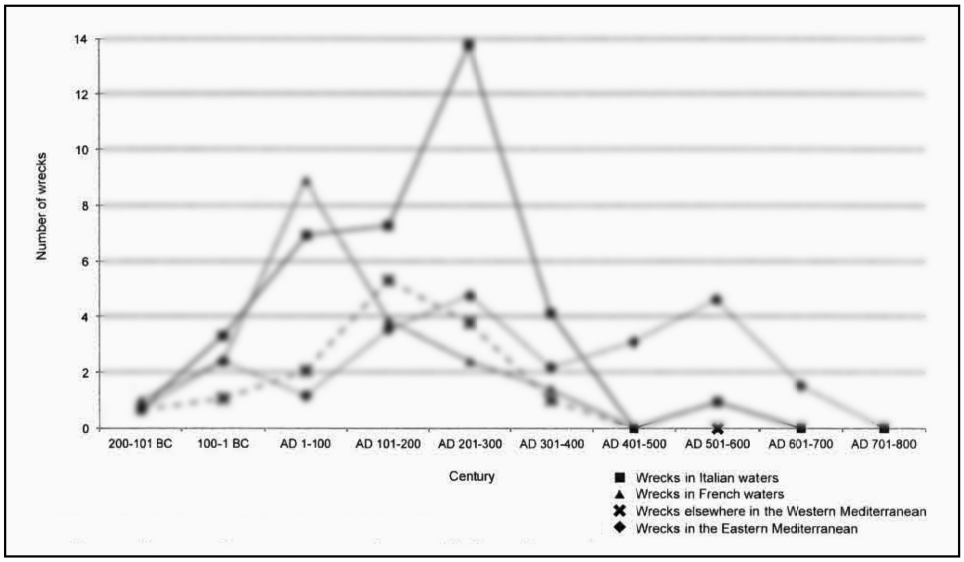


Fig. II.8 – Location of the shipwrecks by century. Note that in the Western Mediterranean the last occurrences date to the 4th c., with the exception of 1 occurrence in Italian waters in the 6th c. (after Russell 2013a).

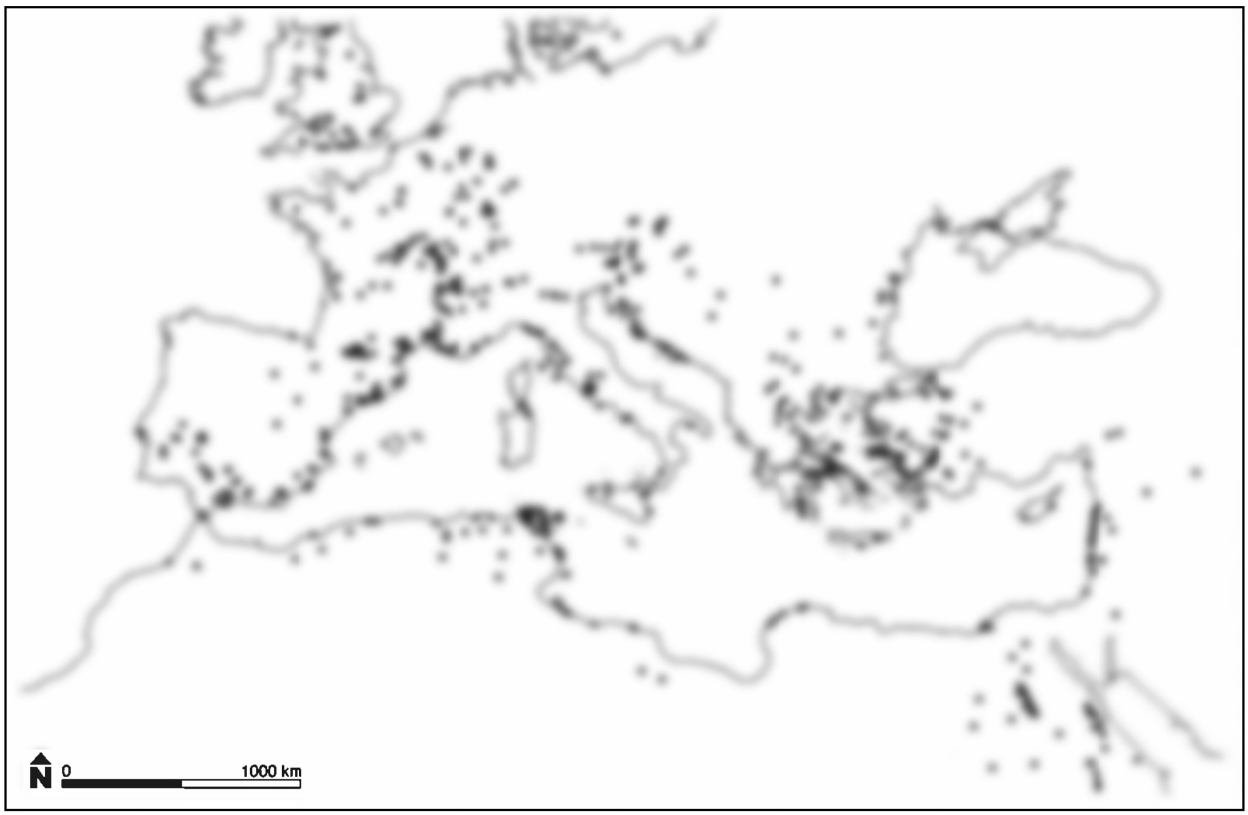


Fig. II.9 – Distribution map of quarries exploited in the Roman period (after Russell 2013).



Fig. II.10 – Traces of extraction of stone blocks in the Roman quarry at El Mèdol, near Tarragona (photo: M. Beghelli).

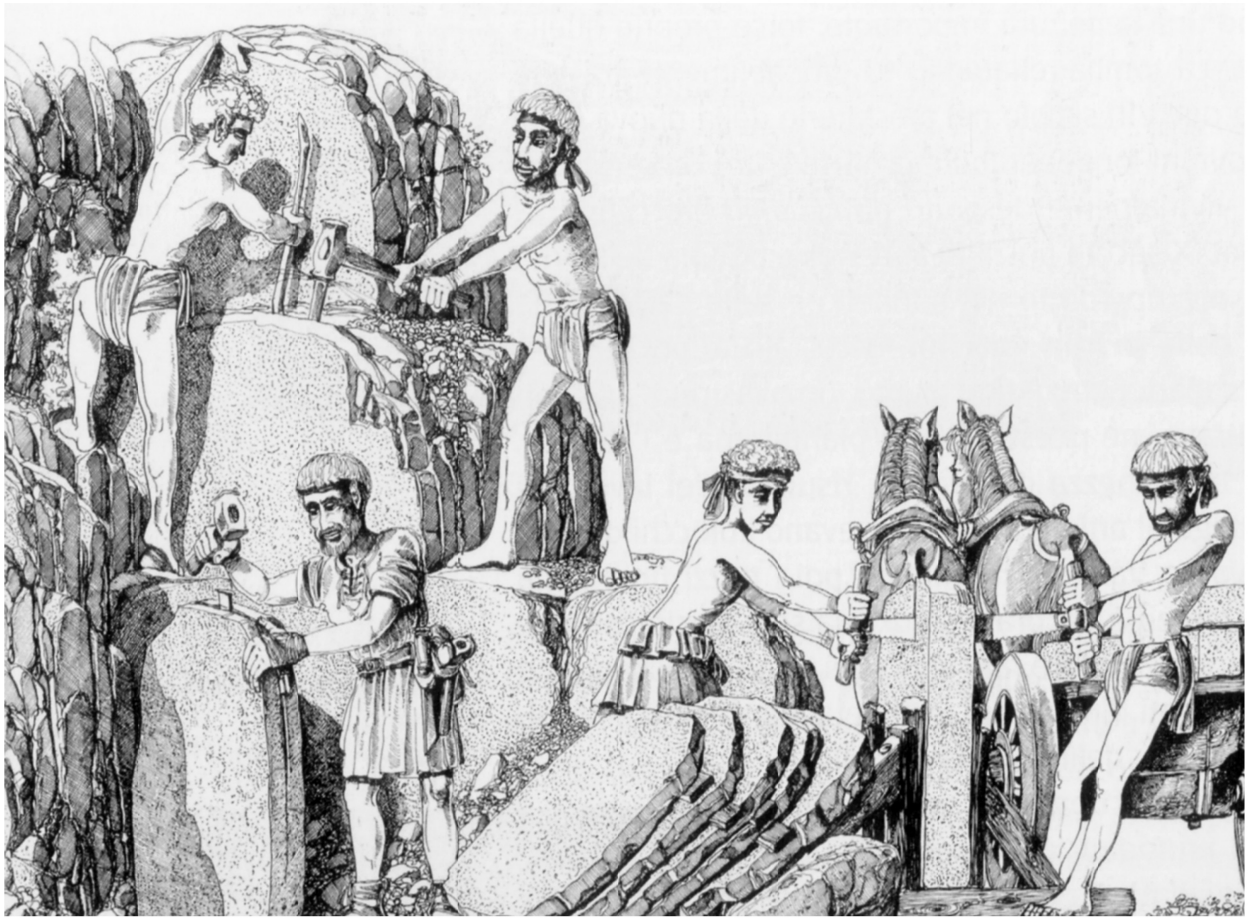


Fig. II.11 – Early Medieval quarrying at Valdieri, Piedmont. The workers are cutting the slabs for a new chancel screen for the neighbouring church of the abbey of S. Dalmazzo, 8th c. In the Early Middle Ages, extraction activities are sporadic in comparison to previous periods, and stone blocks are cut in the approximate final dimensions of the architectural element (after Micheletto 2005. Drawing: S. Salines).



Fig. II.12 – Göflan, South Tyrol. Glacially relocated marble boulders are of high quality and easily accessible, and were therefore exploited both in the Roman and in the Early Medieval periods. In the picture, some blocks with traces of extraction (after Unterwurzacher / Obojes 2012).



Fig. II.13 – Rome, Museo dell'Alto Medioevo. **1**. and **2**.: fragments of a pillar and a slab for a chancel screen, 9th c. The marble employed is reused from Roman sarcophagi, one of which (**2**.) datable to the 3rd c. (after Melucco Vaccaro / Paroli 1995).

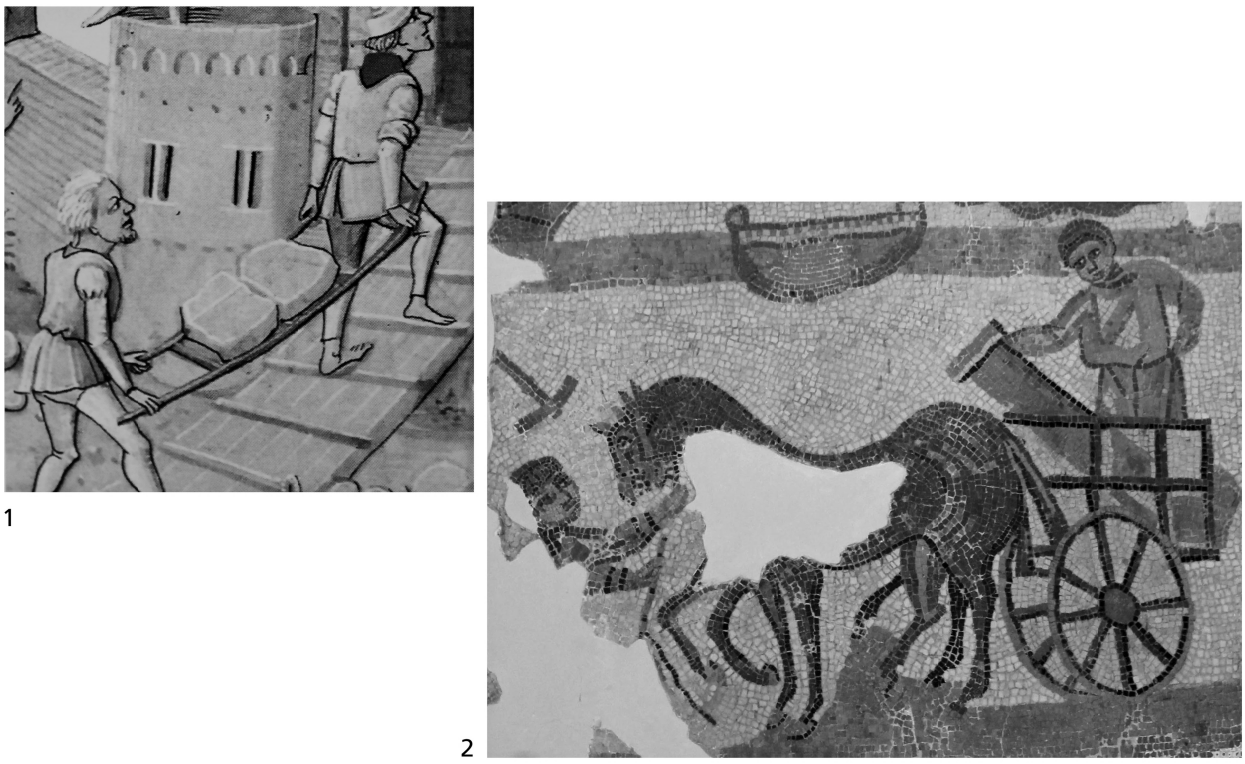


Fig. II.14 – Stone transport. – **1**. Two workers at the building site move stone blocks in a 15th c. illumination (after Cagnana 2012). – **2**. Transport of a column with a cart pulled by horses in a detail from a Tunisian mosaic (late 5th / early 6th c.). The mosaic was found in a Late Antique church at Oued Rmel and represents the construction of the church. Bardo Museum (after Yacoub 1970).

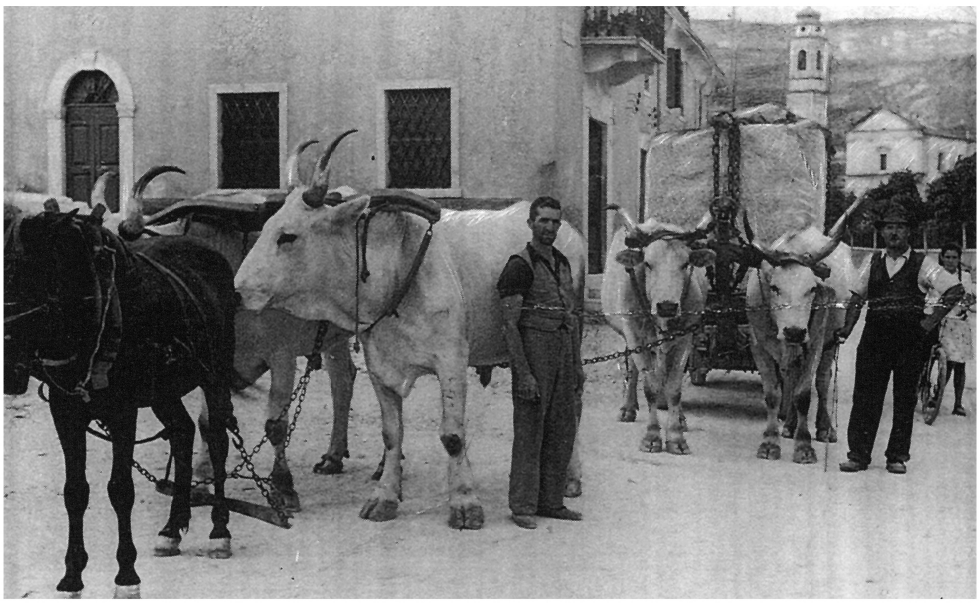


Fig. II.15 – A large block of marble transported on a wagon pulled by four oxen and a horse. Northern Italy, circa mid 20th century (after Brugnoli 1999).

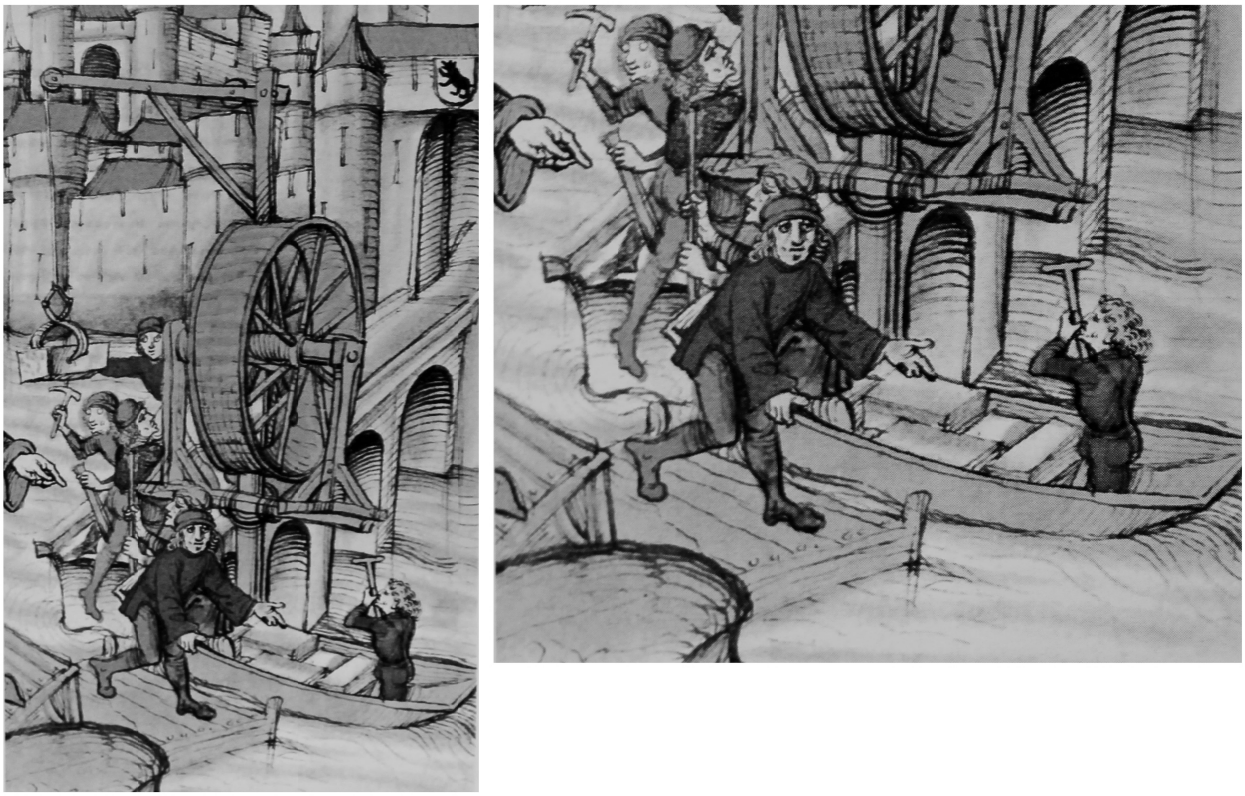
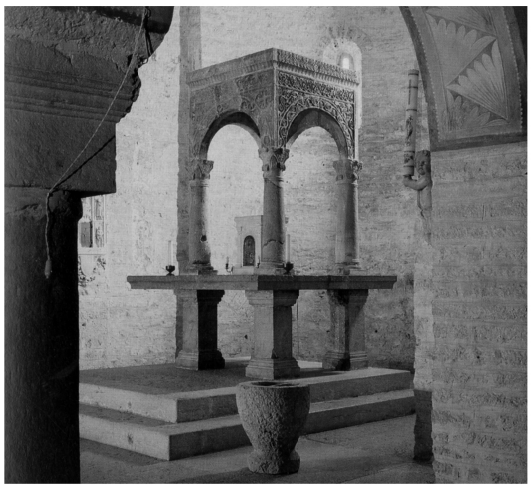


Fig. II.16 – Transport of stonebloks by water in a 15th c. drawing (after Binding 2010).

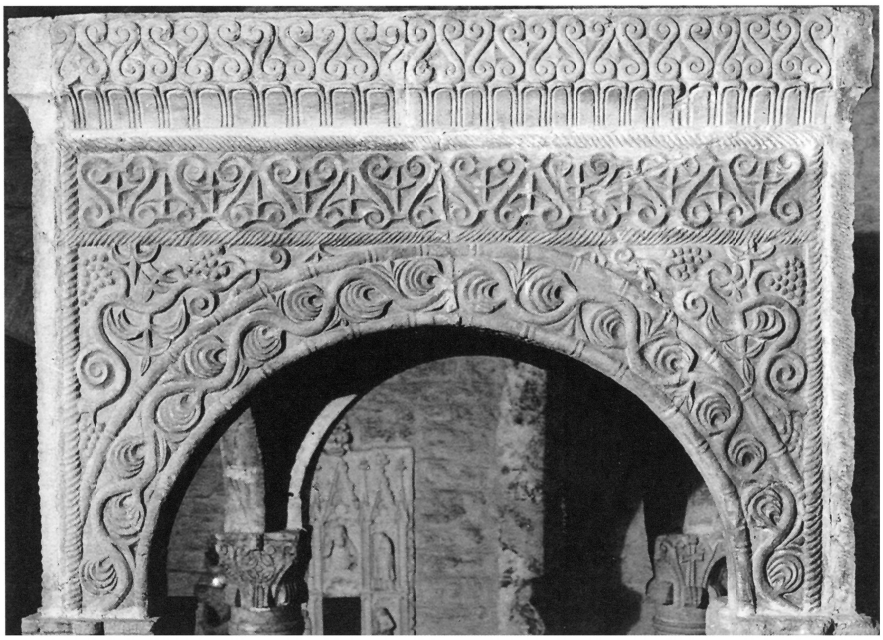
FIGURES
PART III.



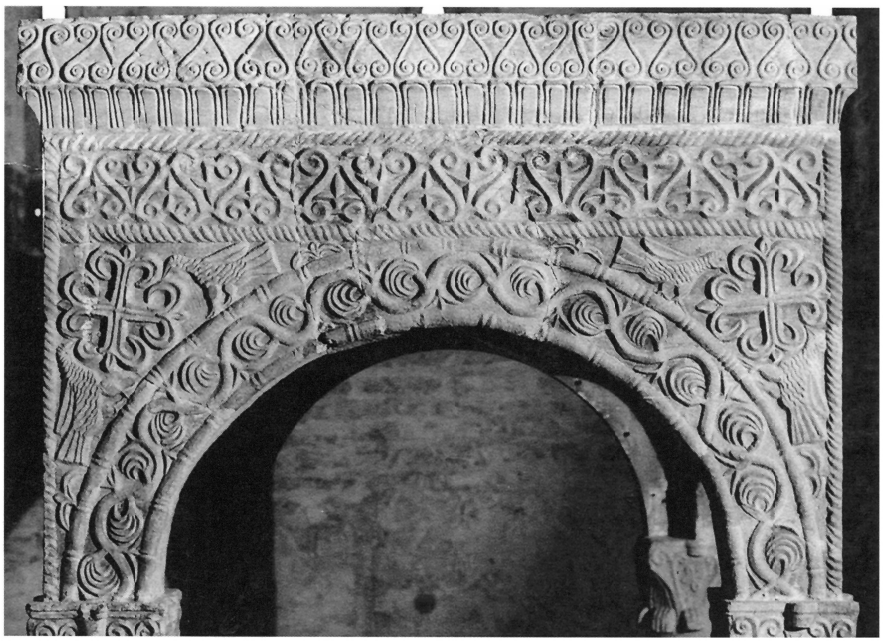
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Fig. III.1 – Sant'Ambrogio di Valpolicella, S. Giorgio, ciborium (712-744, most probably 712-736). **1**. Ciborium (after Lusuardi Siena 1989). – **2**. Inscriptions on the columns (after Lusuardi Siena 1989). – **3**. and **4**. Details of two slabs (after Brugnoli 1999). – **5**. Column, detail (after Lusuardi Siena 1989).



Fig. III.2 – Bardolino, S. Severo, unfinished Early Medieval sculpture (after Verona e il suo territorio 1964).

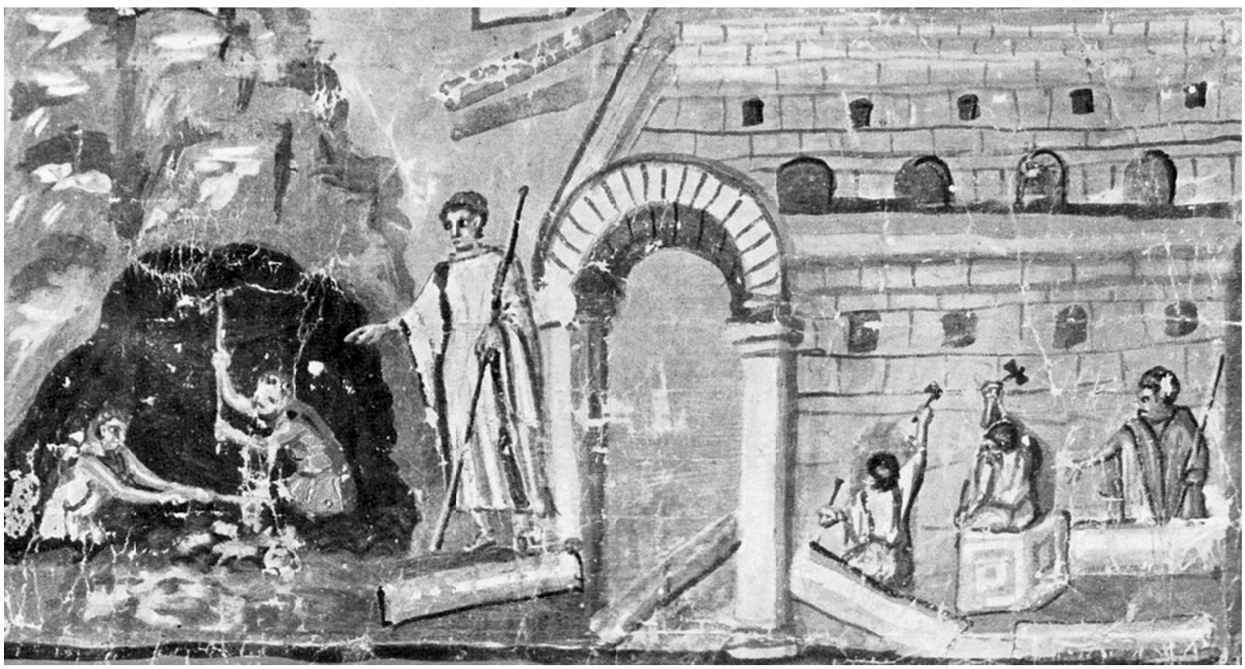


Fig. III.3 – Vergilius Vaticanus, f13r (early 5th c.): sculptors at work at the building site (after Hubert / Porcher / Volbach 1967).



Fig. III.4 – The Carolingian abbey of Centula / St. Riquier in a drawing dating to 1612 (after Roth 1986).

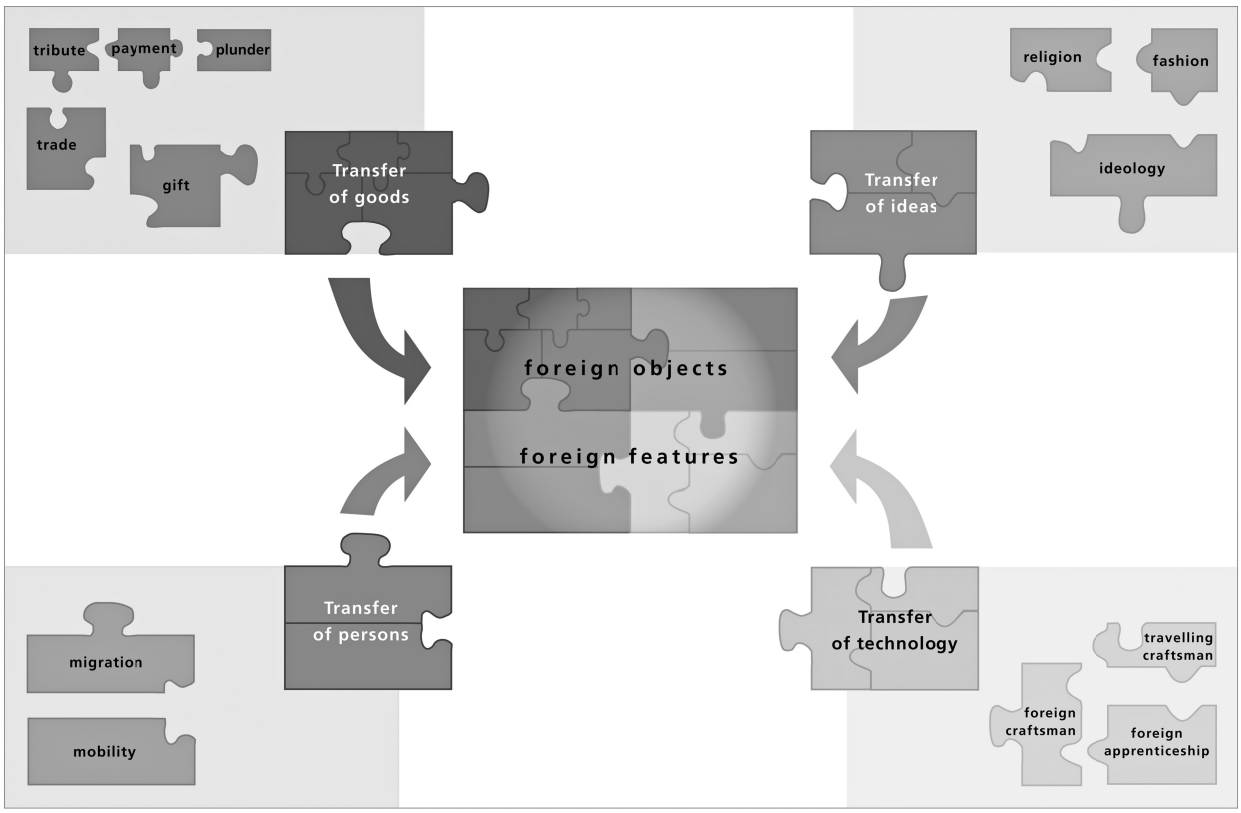


Fig. III.5 – Explanatory model for foreign objects and features in a given territory (after Quast 2009, diagram by Michael Ober, RGZM Mainz).



Fig. III.6 – Torino, S. Giovanni Battista, tombstone of bishop Ursicinus, 610 ca. (after Casartelli Novelli 1974).

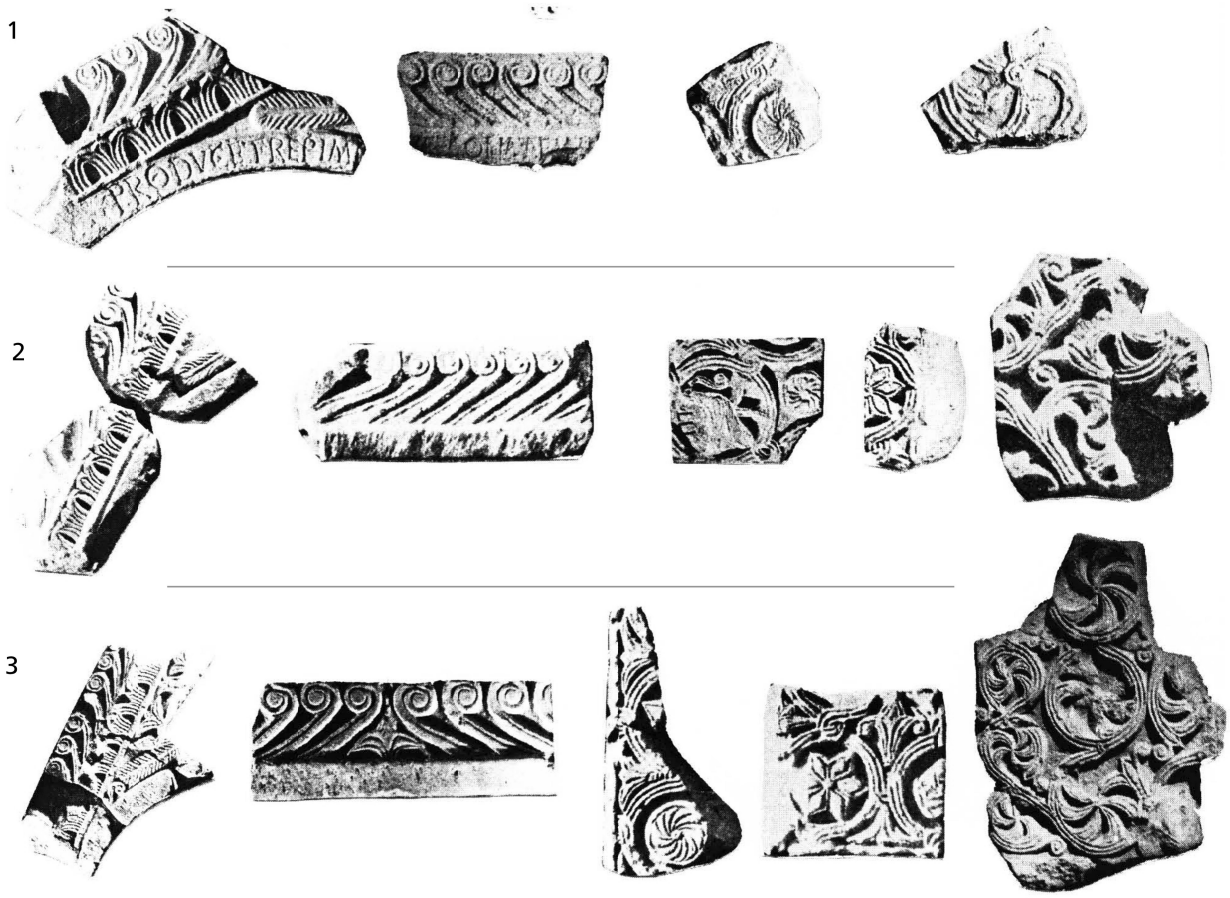


Fig. III.7 – Dalmatia, sculptures made by the same mobile workshop in the period of the prince Trpimir, 845-864 (only three of many locations; only a selection of sculptures). – **1**. Rižinice. – **2**. Vrpolje. – **3**. Plavno (after Jurković 2000).

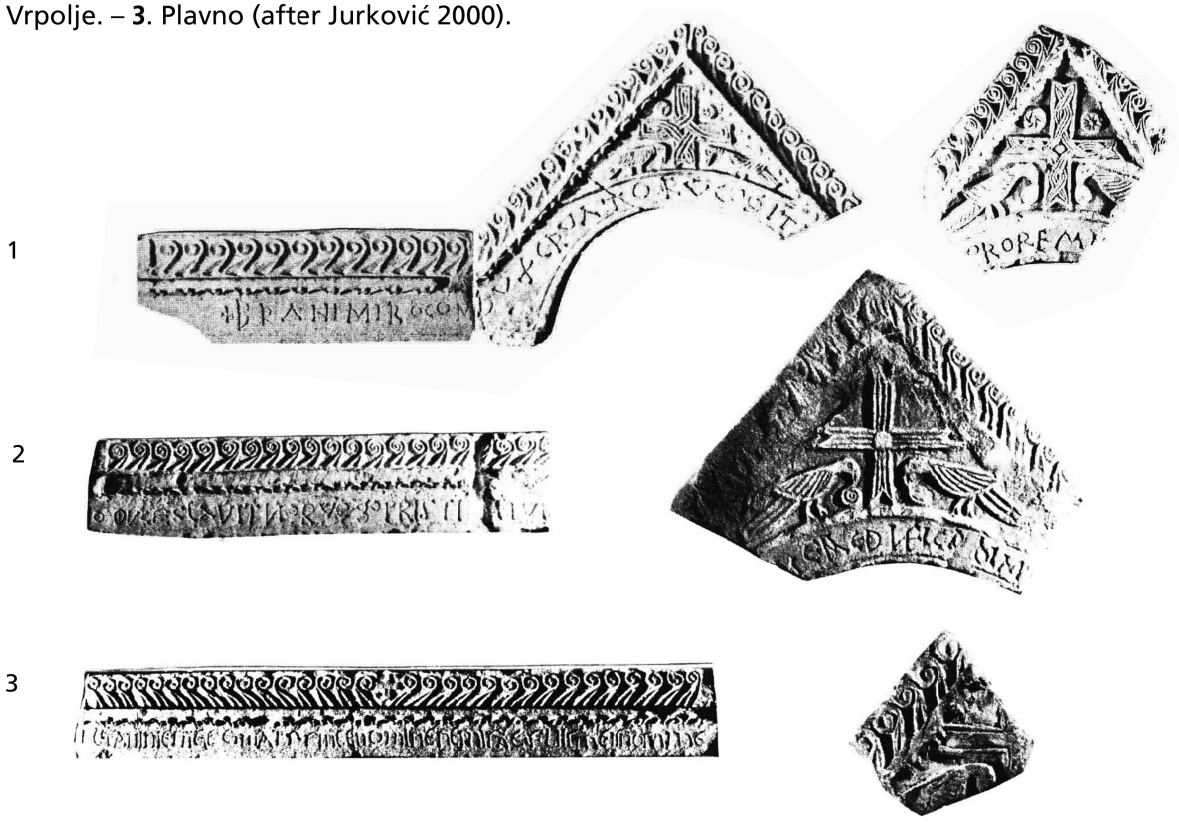


Fig. III.8 – Dalmatia, sculptures made by the same mobile workshop in the period of the prince Branmir, 879-889 (only three of many locations; only a selection of sculptures). – **1**. Sopot. – **2**. Zdrapanj. – **3**. Cetina (after Jurković 2000).

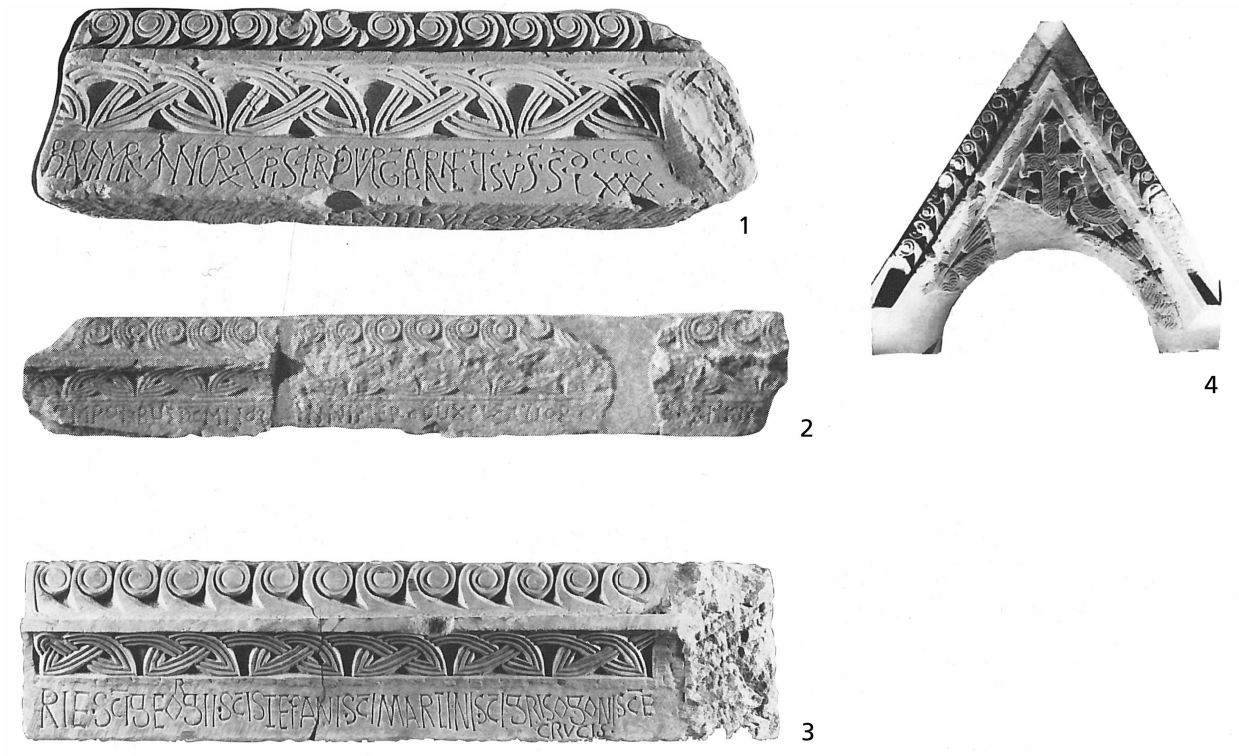


Fig. III.9 – Dalmatia, sculptures made by the same mobile atelier: so-called 'second workshop of the reign of Branmir', 879-889 (only a selection of sculptures). – **1**. Muc. – **2**. Nin. – **3**. Otres. – **4**. Stupovi / Biskupija (after Jakšić 1997).

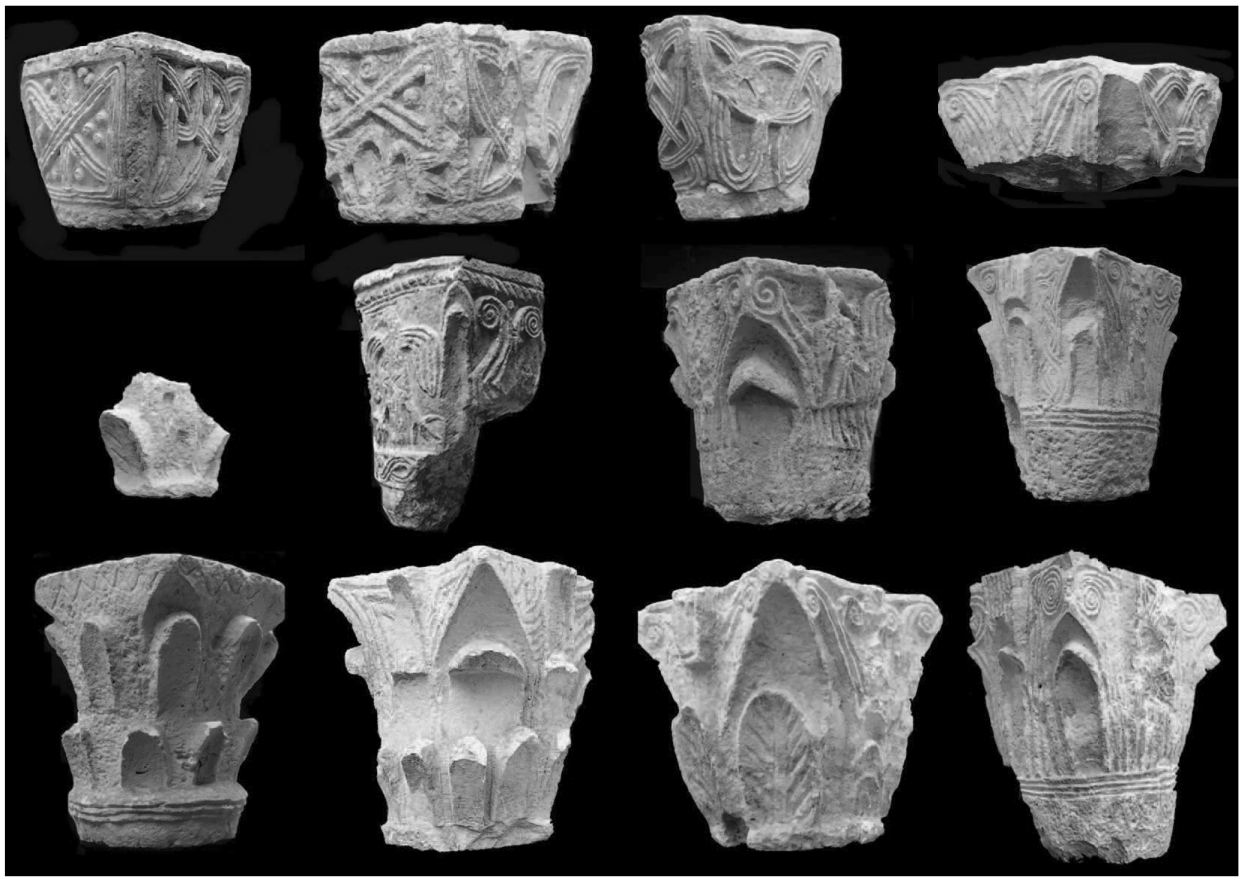


Fig. III.10 – Istria, Bale, Sv. Marija Velika, load bearing capitals (after Jurković / Caillet 2009).



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Fig. III.11 – Split, cathedral and surroundings. Sculptures made by the so called 'Split stonevcarving workshop' (from Rome?), late 8th c. - **1**., **2**., **4**.-**6**. Chancel screen slabs. – **3**. Sarcophage of archbishop John, attested at the 2nd Council of Nicaea in 787. – **7**., **8**. 'Signature-motif': details from 1. and 5. (1., 4. after Piteša 2012; 2. after Marasović 2010; 3., 5., 6. after Basić / Jurković 2011).


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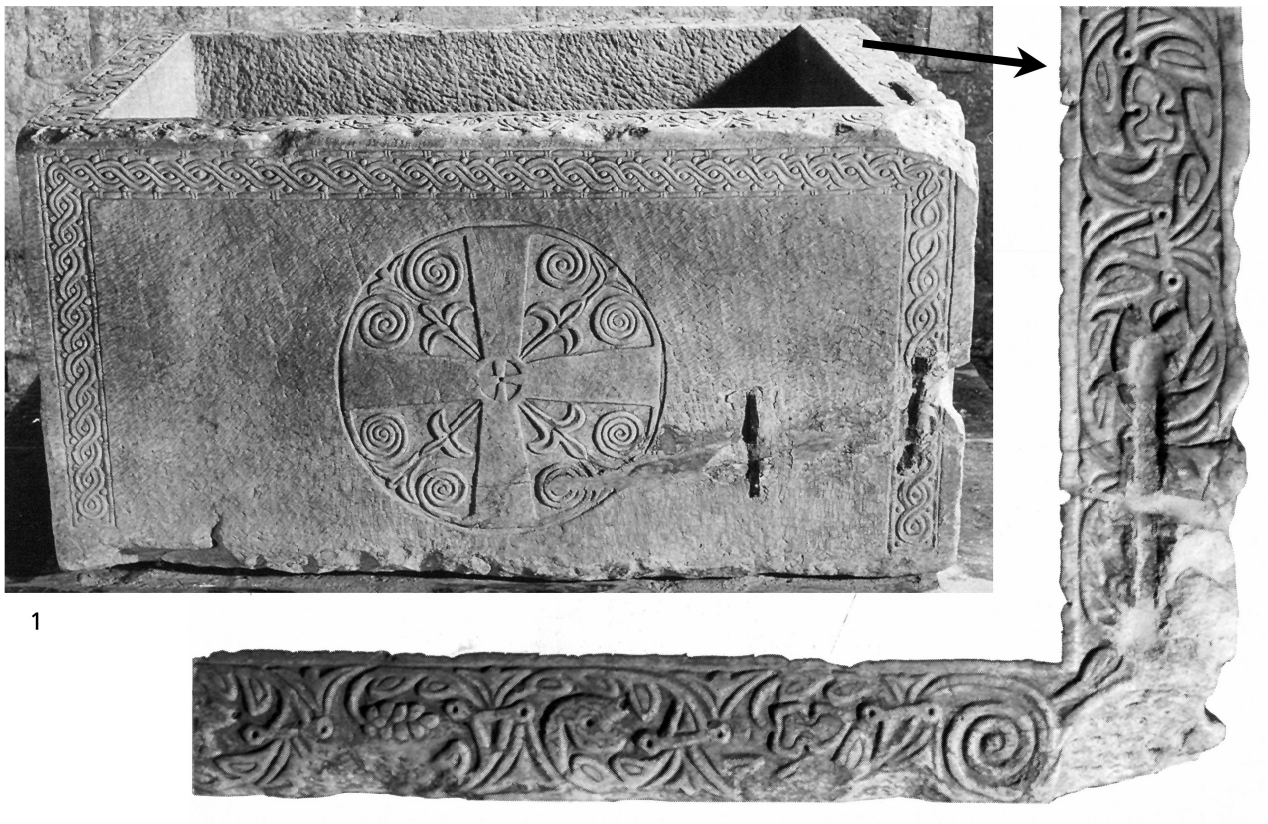

8


(4)


(8)


(2)

Fig. III.12 – Sculptures from the region Friuli Venezia Giulia, made by the same sculpting workshop. **1**.-**5**. Sesto al Reghena, so-called 'Urn of S. Anastasia', second half of the 8th c. (after Lambert 1999). – **6**.-**8**. Cividale del Friuli (after Tagliaferri 1981; drawing nr. 6 after Lusuardi Siena / Piva 2002). – Details are numbered in brackets after the picture they come from.



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(2)



(1)

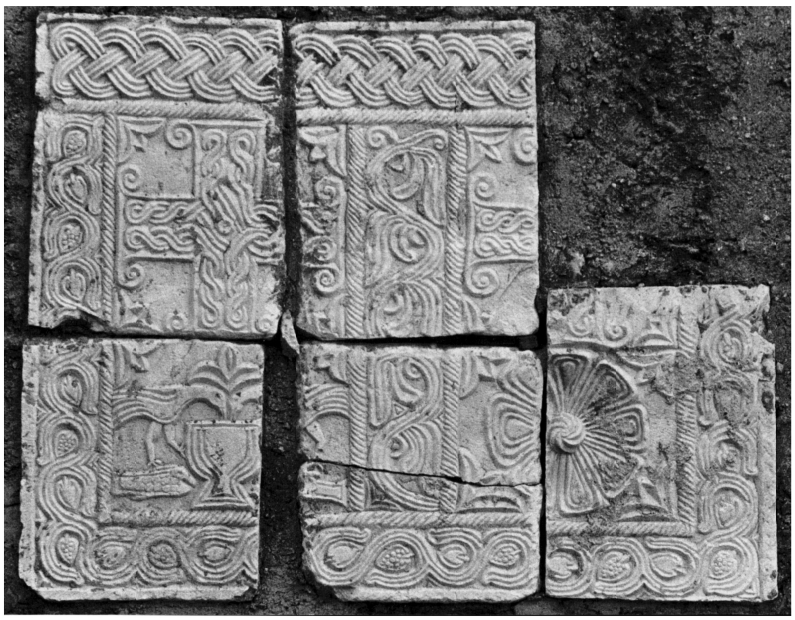


(2)



(1)

Fig. III.13 – Sculptures made by the same workshop (probably from Cividale del Friuli) in Tuscany and in Veneto, second half of the 8th c. - **1**. Rigoli (after Testi Cristiani 2011). – **2**. Megliadino San Fidenzio (after Bertelli / Brogiolo 2000). – Details are numbered after the picture they come from.



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(4)



(3)



(1)



(4)



(2)

Fig. III.14 – A selection of sculptures made by the 'Berico-Benacense' workshop. **1**.-**2**. Cisano (after Lusuardi Siena 1989 and Napione 2002). – **3**.-**4**. Vicenza (after Napione 2002). – Details are numbered in brackets after the picture they come from.

PIEDMONTESE-PROVENÇAL WORKSHOP

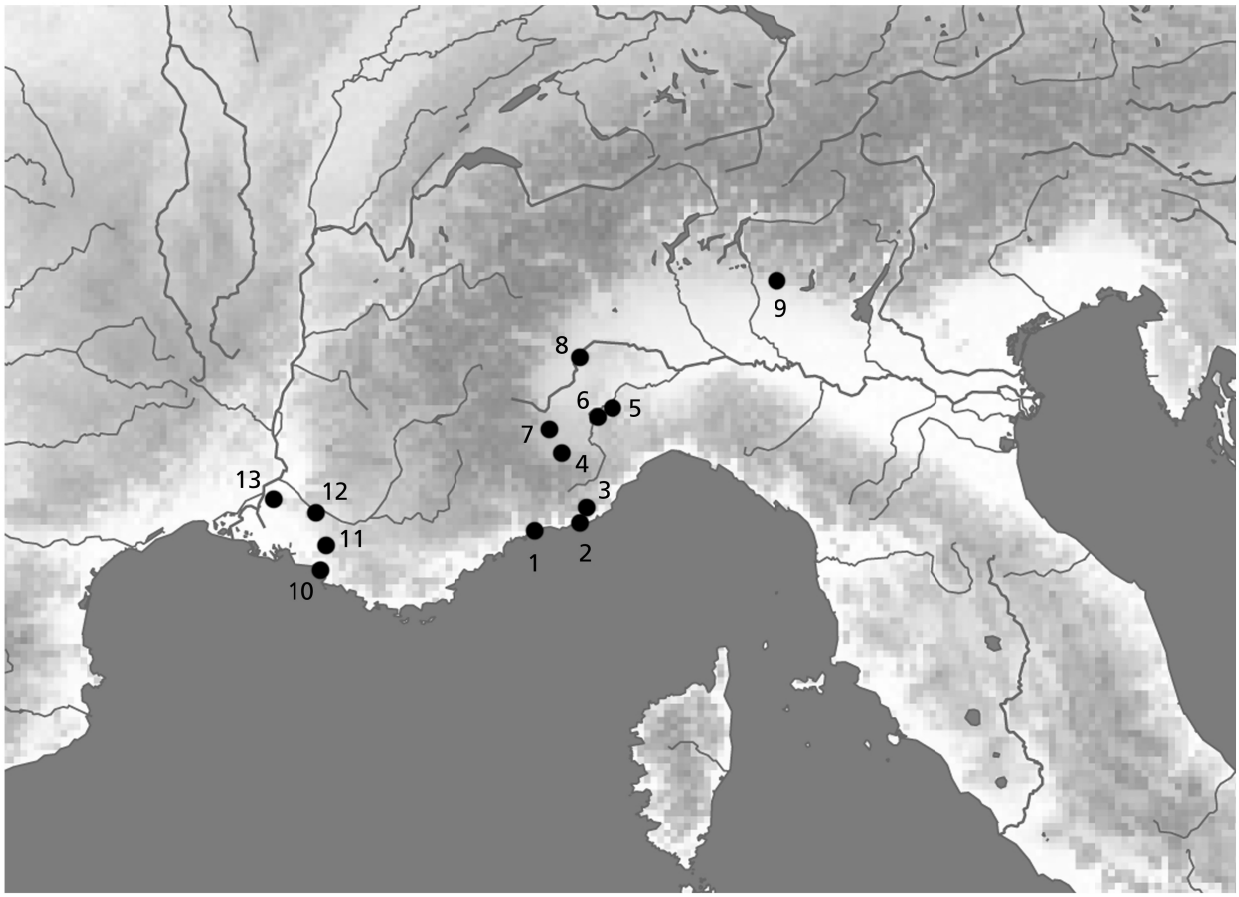


Fig. III.15 – Area of activity of the Piedmontese-Provençal workshop. **1**. Nice-Cimiez (777-787). – **2**. Ventimiglia. – **3**. Dolceacqua. – **4**. Borgo San Dalmazzo. – **5**. Alba. – **6**. Pollenzo. – **7**. Caraglio. – **8**. Torino. – **9**. Bergamo. – **10**. Marseille. – **11**. Aix-en-Provence. – **12**. Apt. – **13**. Avignon. Map: M. Beghelli.

PIEDMONTESE-PROVENÇAL WORKSHOP

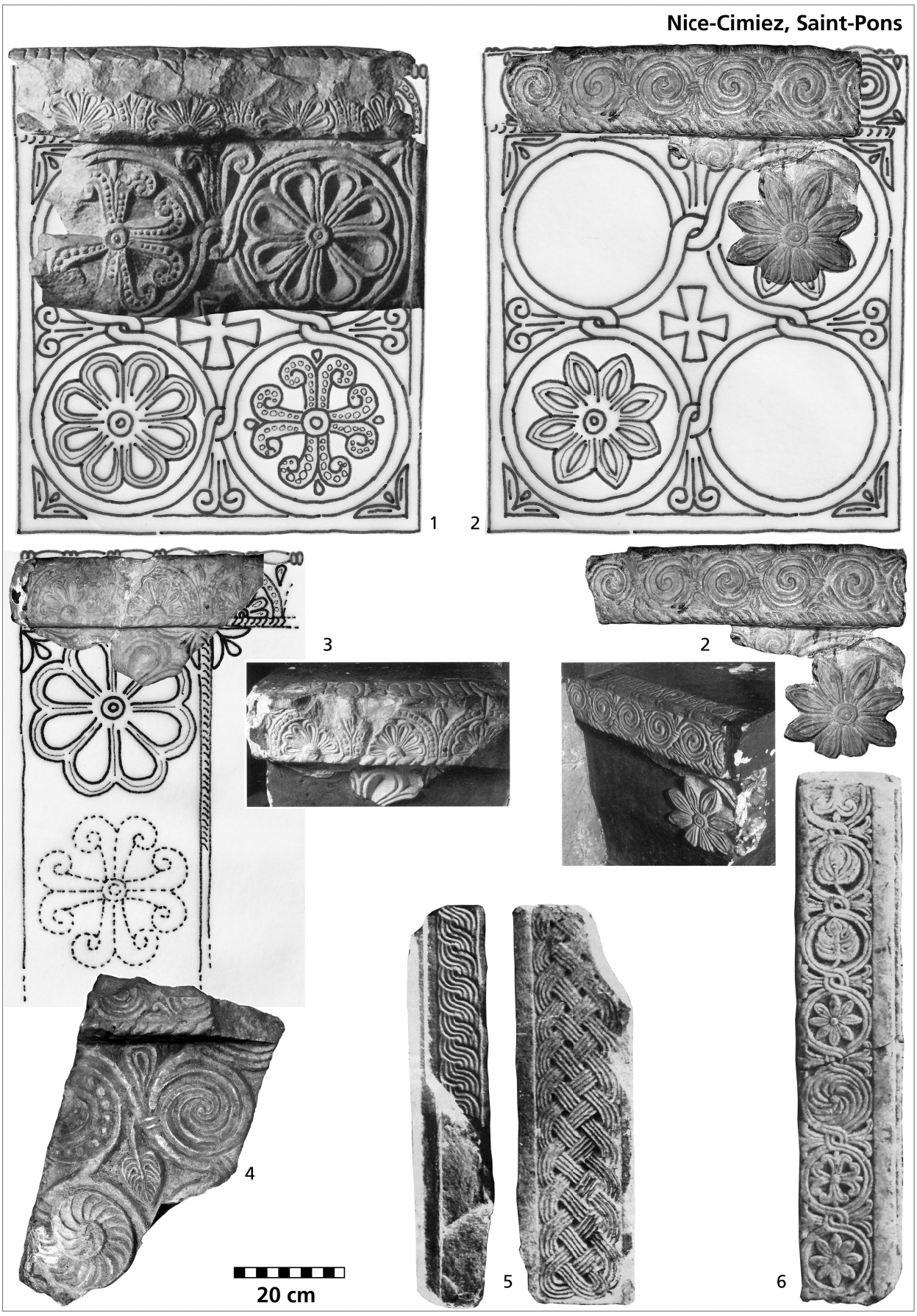


Fig. III.16 – Images after: Buis 2002 (5, 6); Codou 2011 (2-4); Marcenaro 1994 (1); drawings: M. Beghelli.

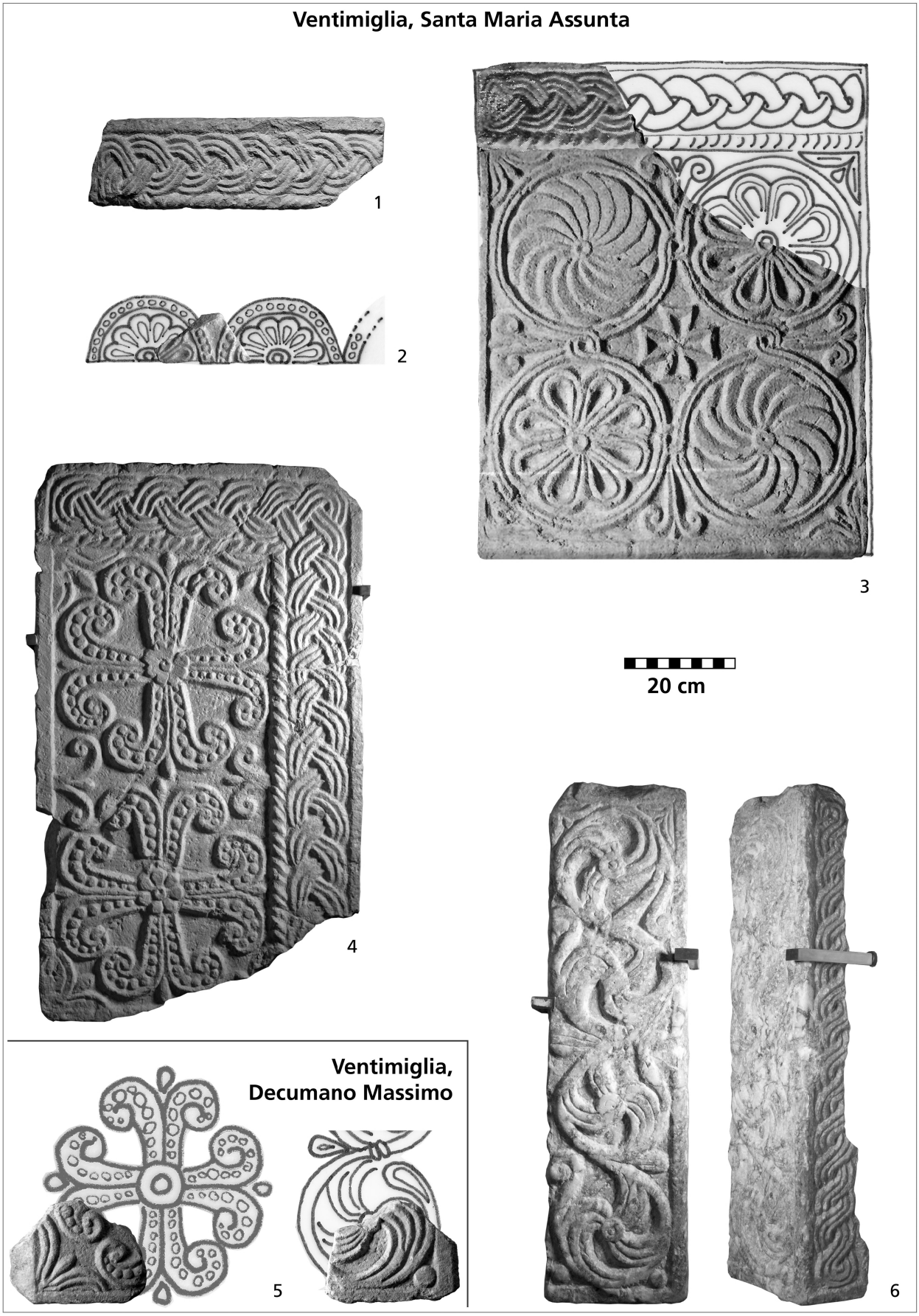


Fig. III.17 – All photos M. Beghelli, except no. 3 (Verzone 1945); drawings M. Beghelli.



Fig. III.18 – All photos M. Beghelli, except no. 7 (Verzone 1945) and 10, right (courtesy SABAP).

PIEDMONTESE-PROVENÇAL WORKSHOP

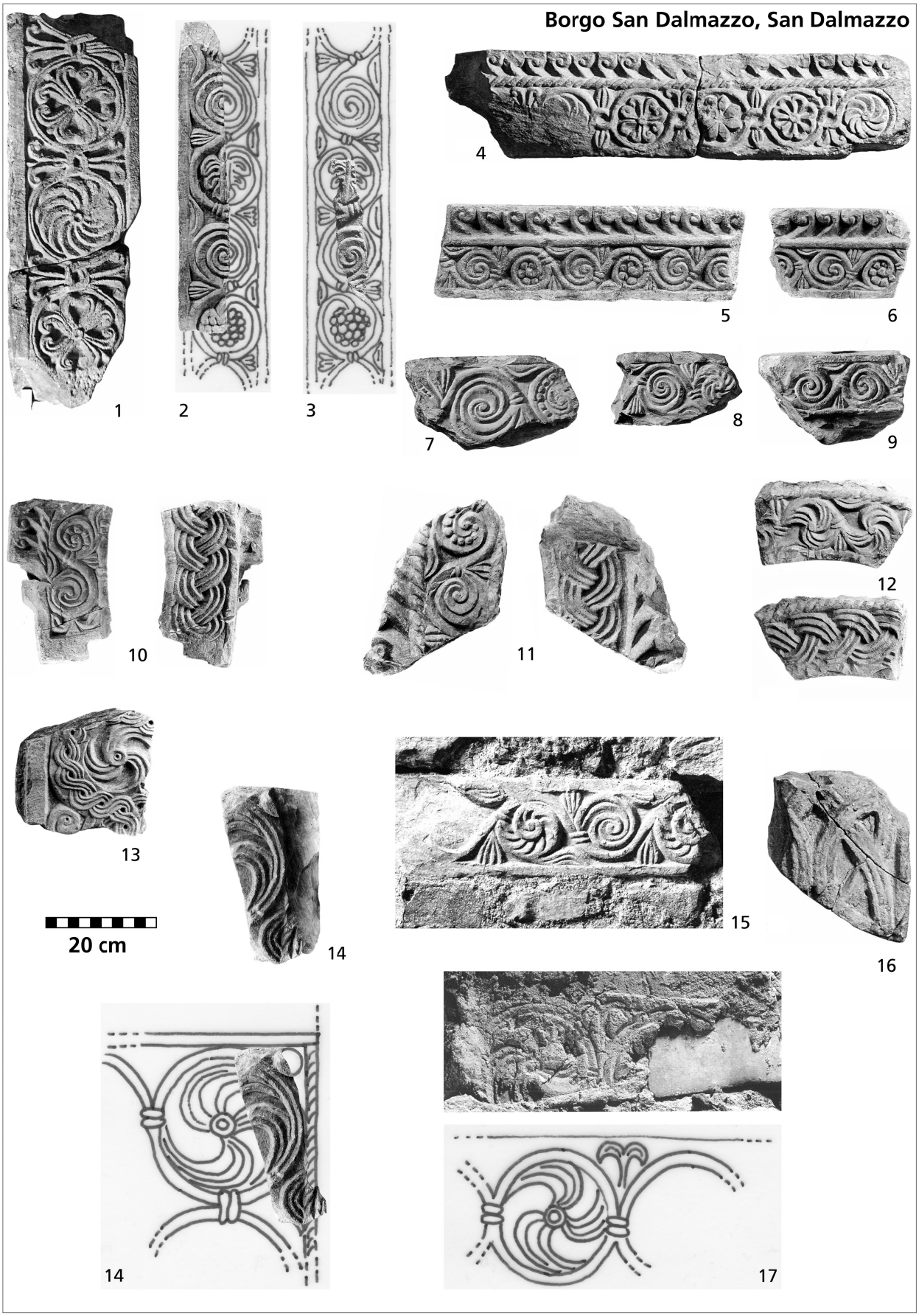


Fig. III.19 – Photos after: Crosetto 1999; drawings: M. Beghelli.

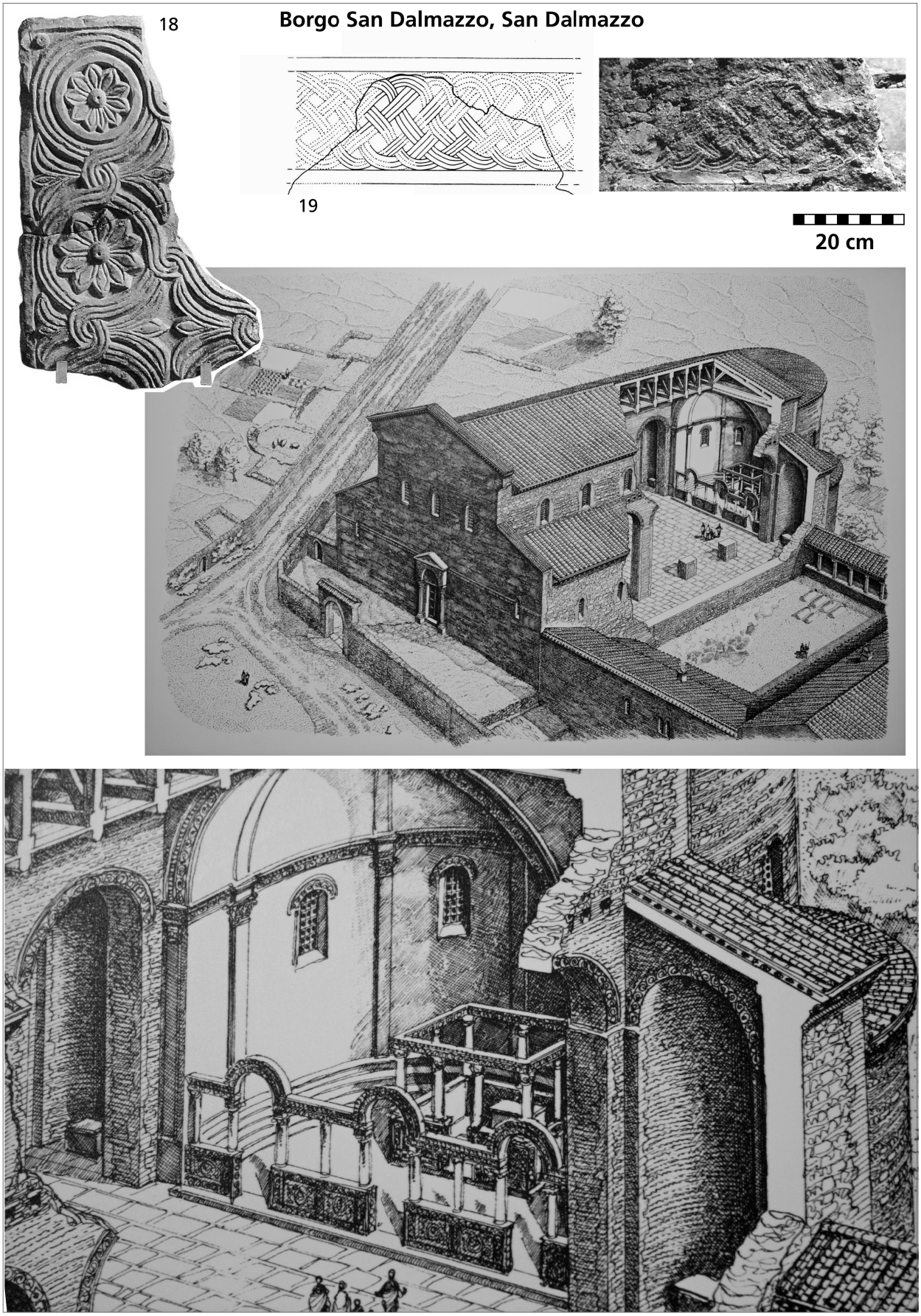


Fig. III.20 – Images 18, 19: after Crosetto 1999; reconstruction of the church in the 8th century: after Micheletto 2005 (drawings S. Salines).

PIEDMONTESE-PROVENÇAL WORKSHOP



Fig. III.21 – Photos 1, 4, 7, 8, and drawings: M. Beghelli; photos 2, 3, 5, 6: after Crosetto 2013a.

PIEDMONTESE-PROVENÇAL WORKSHOP



Fig. III.22 – Images 4, 8: photos M. Beghelli; 1-3, 6: after Crosetto 1999; 5, 7: after Crosetto 2013a

PIEDMONTESE-PROVENÇAL WORKSHOP

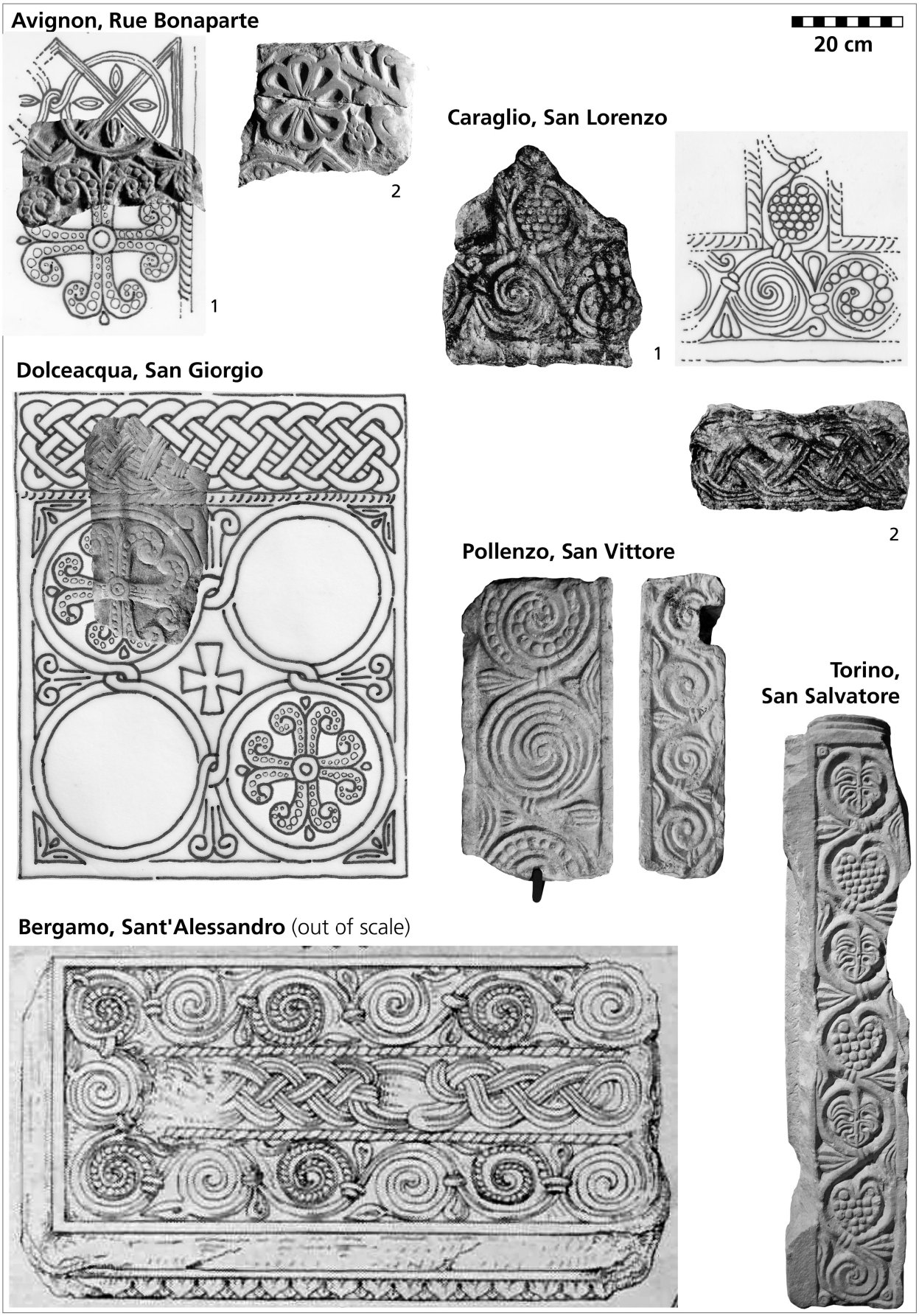
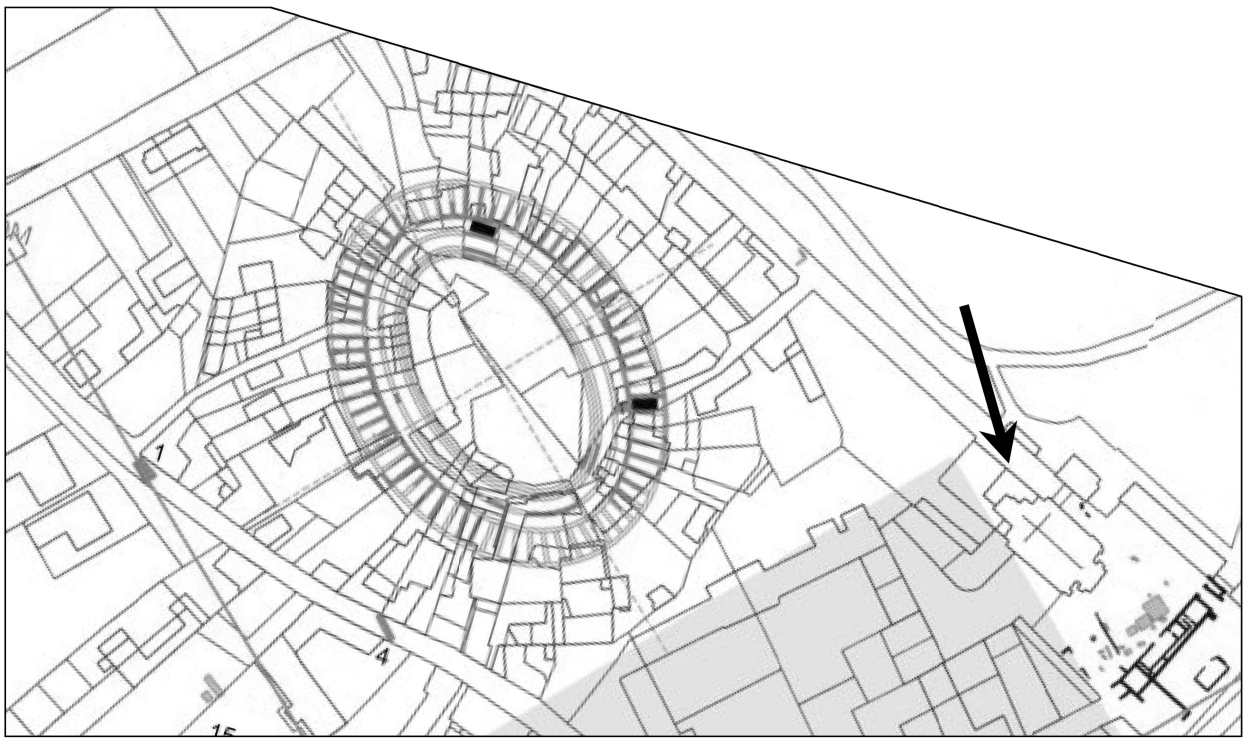


Fig. III.23 – Avignon: Buis 1975; Caraglio: Casartelli Novelli 1974; Dolceacqua: Bellezza1996; Pollenzo: J. Pinar; Torino: M. Beghelli; Bergamo: Caldarini Mazzucchelli 2004; drawings: M. Beghelli.



1



2

Fig. III.24 – Pollenzo, the area of the church of S. Vittore (reconstructed in the 19th century). The houses still follow the planimetry of the Roman amphitheatre. **1**. Bird's-eye view (Google Maps). – **2**. Plan (after Preacco 2004).



Fig. III.25 – Images 1, 6-10: photos M. Beghelli; 2-5: after Drocourt 1973.

PIEDMONTESE-PROVENÇAL WORKSHOP

Marseille, La Major



1



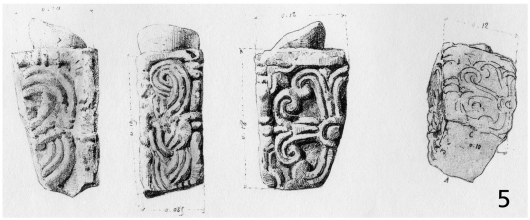
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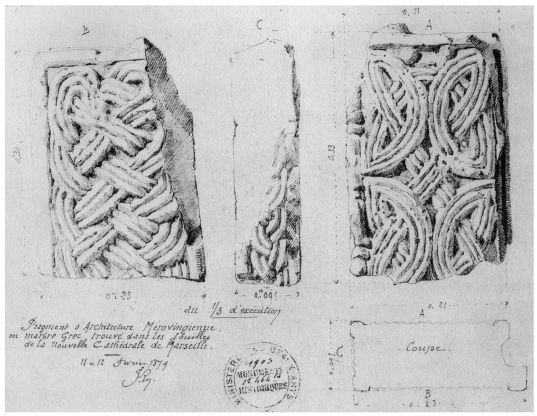
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20 cm



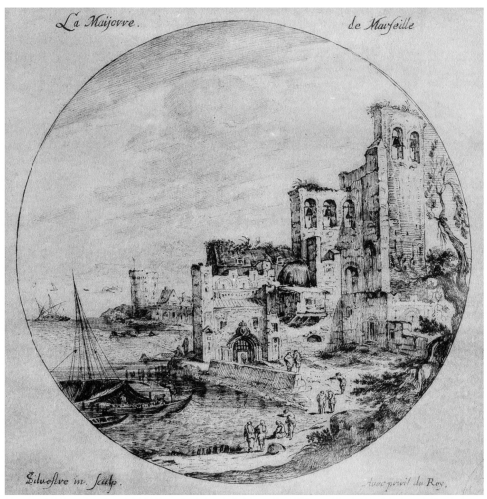


Fig. III.26 – All the images after Roustan 1905 except no. 6 (photo M. Beghelli).



Fig. III.27 – Images 1, 3: after Buis 1979; 2: photo M.Beghelli; 4: Buis 1975; 5: Hubert 1969. Below: the old arrangement of the Early Medieval sculptures in the altar (Rohault de Fleury 1883).

PIEDMONTESE-PROVENÇAL WORKSHOP

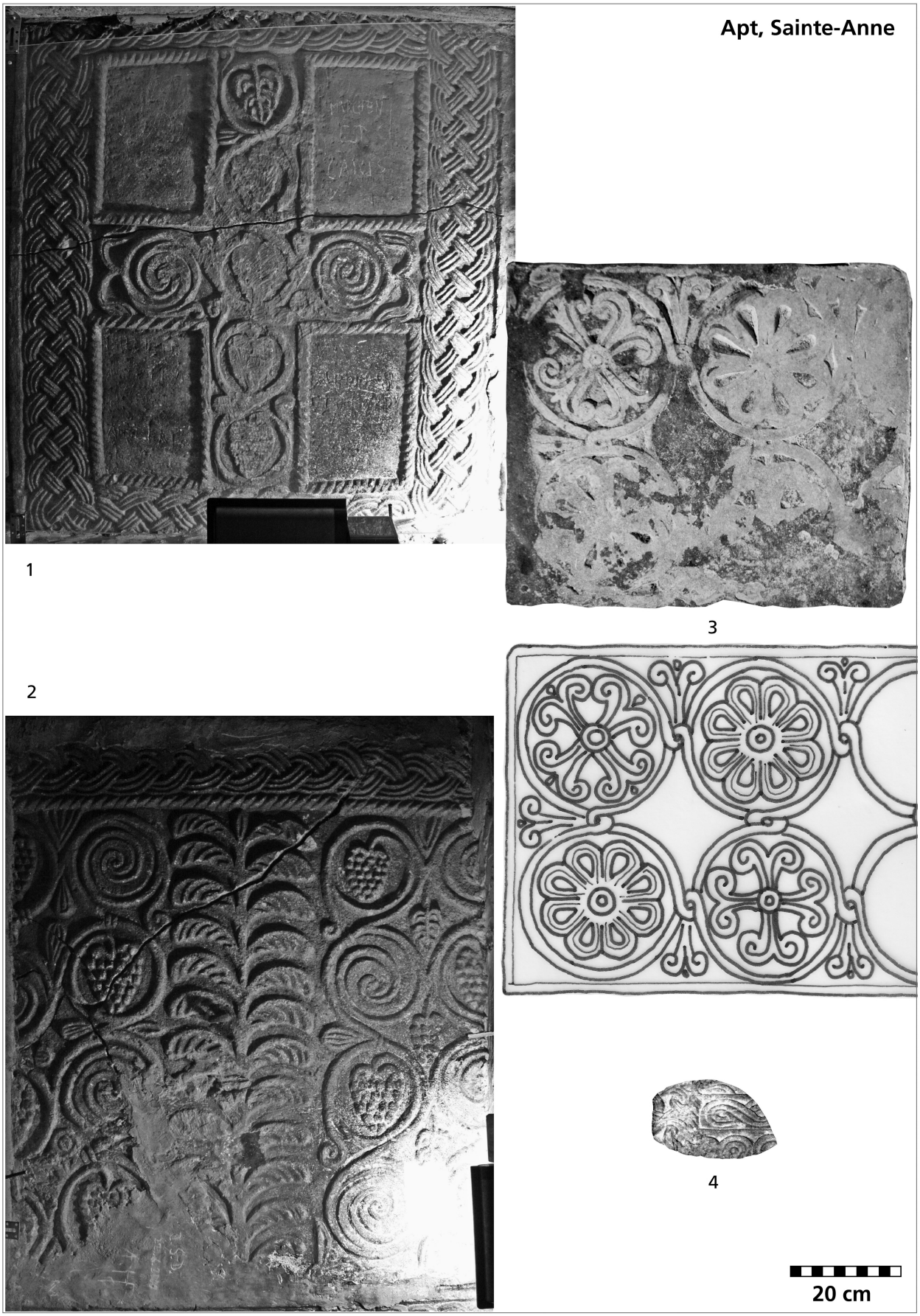
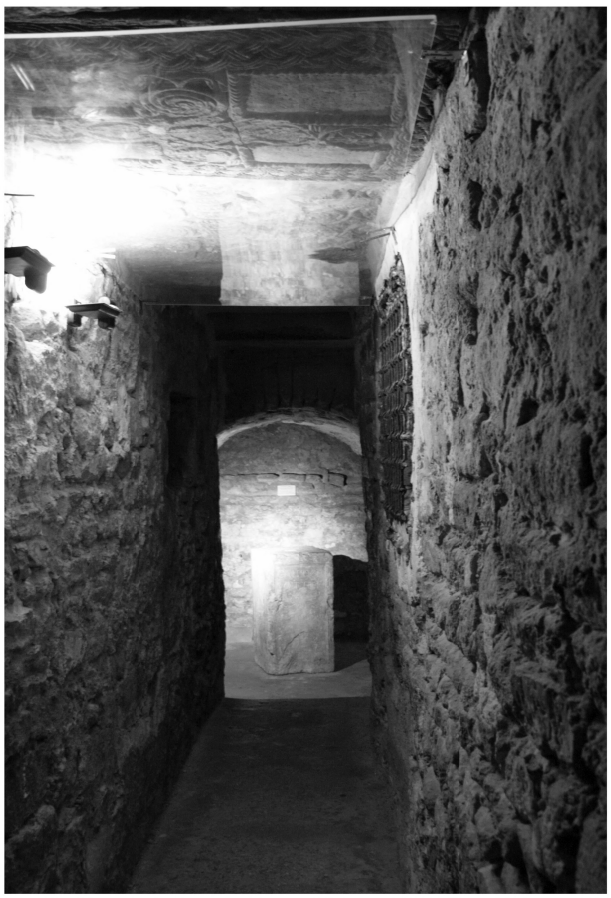
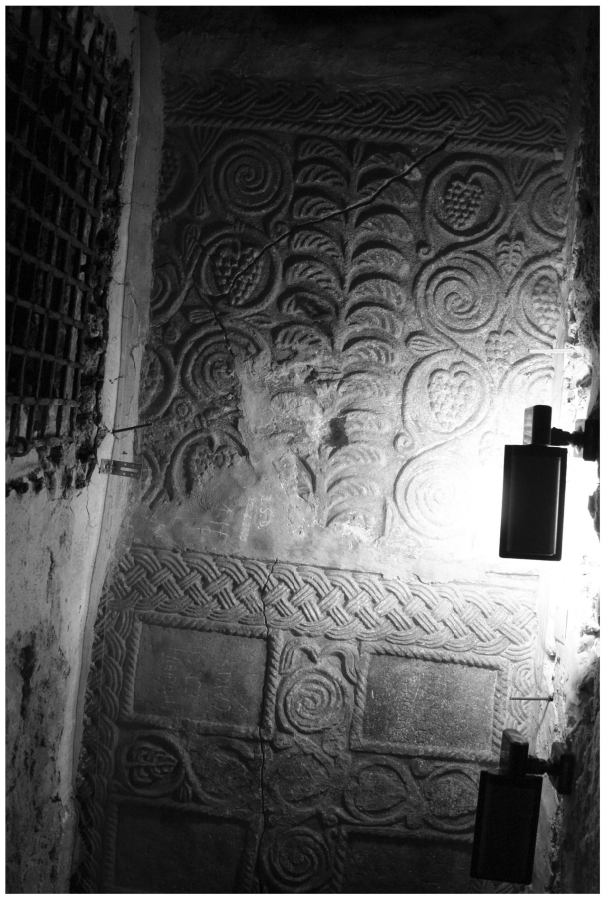


Fig. III.28 – Images 1, 2: photo M.Beghelli; 3: photo Y. Codou, drawing M. Beghelli; 4: after Buis 1975.



1



2



3

4

Fig. III.29 – Apt, Sainte-Anne. **1**. and **2**. Early Medieval sculptures re-used in the ceiling of the corridor leading to the lower crypt (part of an original Roman building). – **3**. The upper crypt. – **4**. Admirers of Early Medieval sculpture visiting the church (photos: M. Beghelli).

Individual fragments not belongng to the Piedmontese-Provençal production



Fig. III.30 – **1**. Borgo San Dalmazzo, San Dalmazzo (Crosetto 1999). – **2**. and **3**. Bergamo, Sant'Alessandro (Ibsen 2013; Caldarini Mazzucchelli 2004). – **4**. Alba, San Lorenzo (Crosetto 2013a).

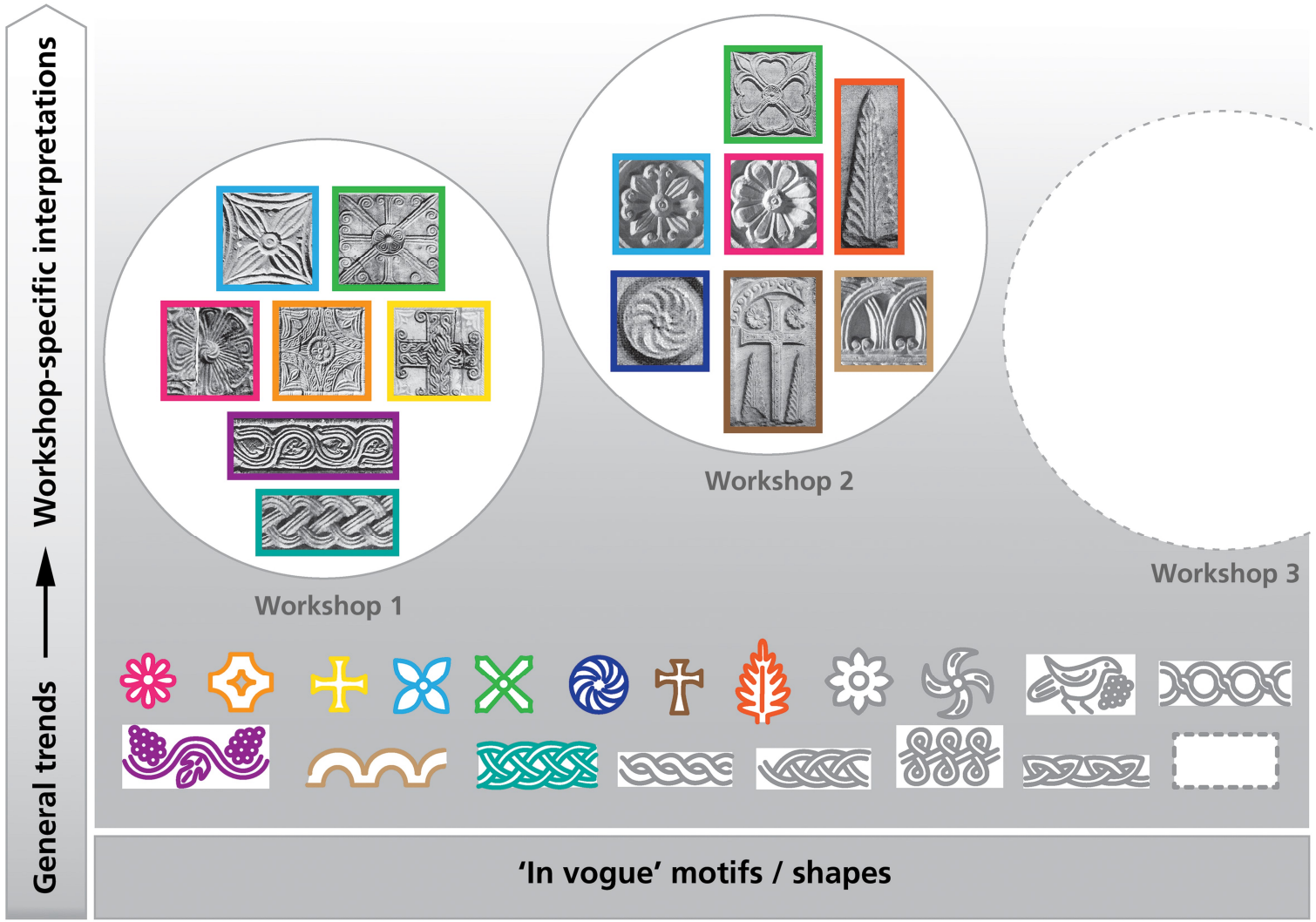


Fig. III.31 – Each group of sculptors selected and used only some of the most popular decorative shapes or motifs in a certain period (**general trends**), which were interpreted in a specific and characteristic way (**workshop-specific interpretations**). In the example, the Berico-Benacense atelier ('Workshop 1', photos after Napione 2002) and the Split atelier ('Workshop 2', photos after Basić, Jurković 2011). Note how even simple motifs (e.g. the flower with rounded petals, pink; or the cross, yellow) can be done in very different variants. – Graphics: Vera Kassühlke, RGZM, Mainz.

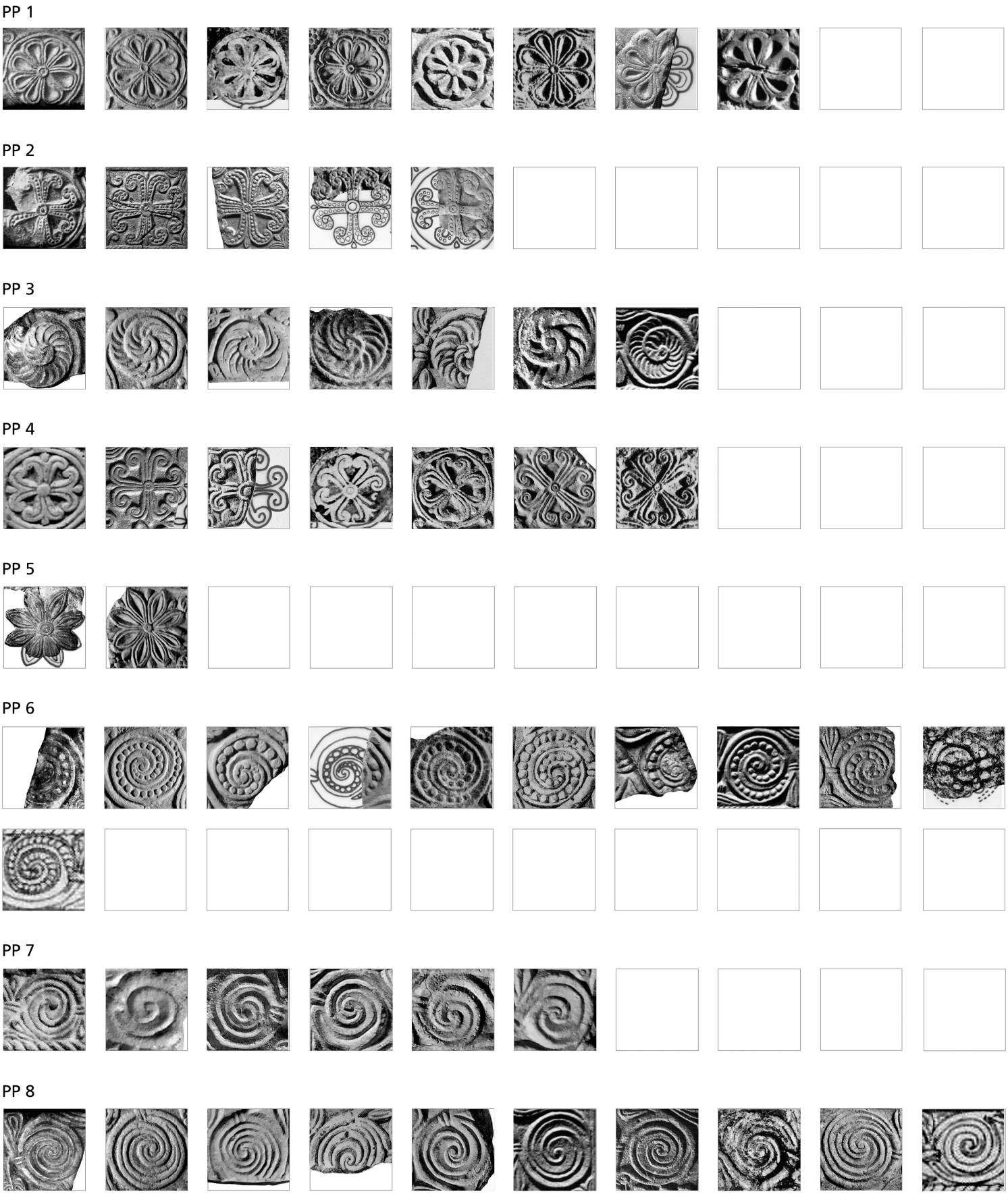


Fig. III.31-A – Piedmontese-Provençal (**PP**) workshop, types used for the seriation. Only one example per site. – **PP 1**, from left to right: Nice-Cimiez, Ventimiglia, Apt, Marseille St-Victor, Borgo San Dalmazzo, Aix-en-Provence, Alba S. Lorenzo, Avignon. – **PP 2**: Nice-Cimiez, Ventimiglia, Alba S. Lorenzo, Avignon, Dolceacqua. – **PP 3**: Nice-Cimiez, Ventimiglia, Alba S. Lorenzo, Marseille St-Victor, Marseille La Major, Borgo San Dalmazzo, Aix-en-Provence. – **PP 4**: Nice-Cimiez, Alba S. Lorenzo, Marseille La Major, Apt, Borgo San Dalmazzo, Marseille St-Victor, Aix-en-Provence. – **PP 5**: Nice-Cimiez, Marseille St-Victor. – **PP 6**: Nice-Cimiez, Ventimiglia, Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Marseille St-Victor, Marseille La Major, Borgo San Dalmazzo, Aix-en-Provence, Pollenzo, Caraglio, Bergamo. – **PP 7**: Nice-Cimiez, Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Borgo San Dalmazzo, Pollenzo, Torino. – **PP 8**: Nice-Cimiez, Ventimiglia, Alba SS. Frontiniano e Cassiano, Marseille La Major, Borgo San Dalmazzo, Aix-en-Provence, Apt, Caraglio, Pollenzo, Bergamo. – Photos: details from previous figures.

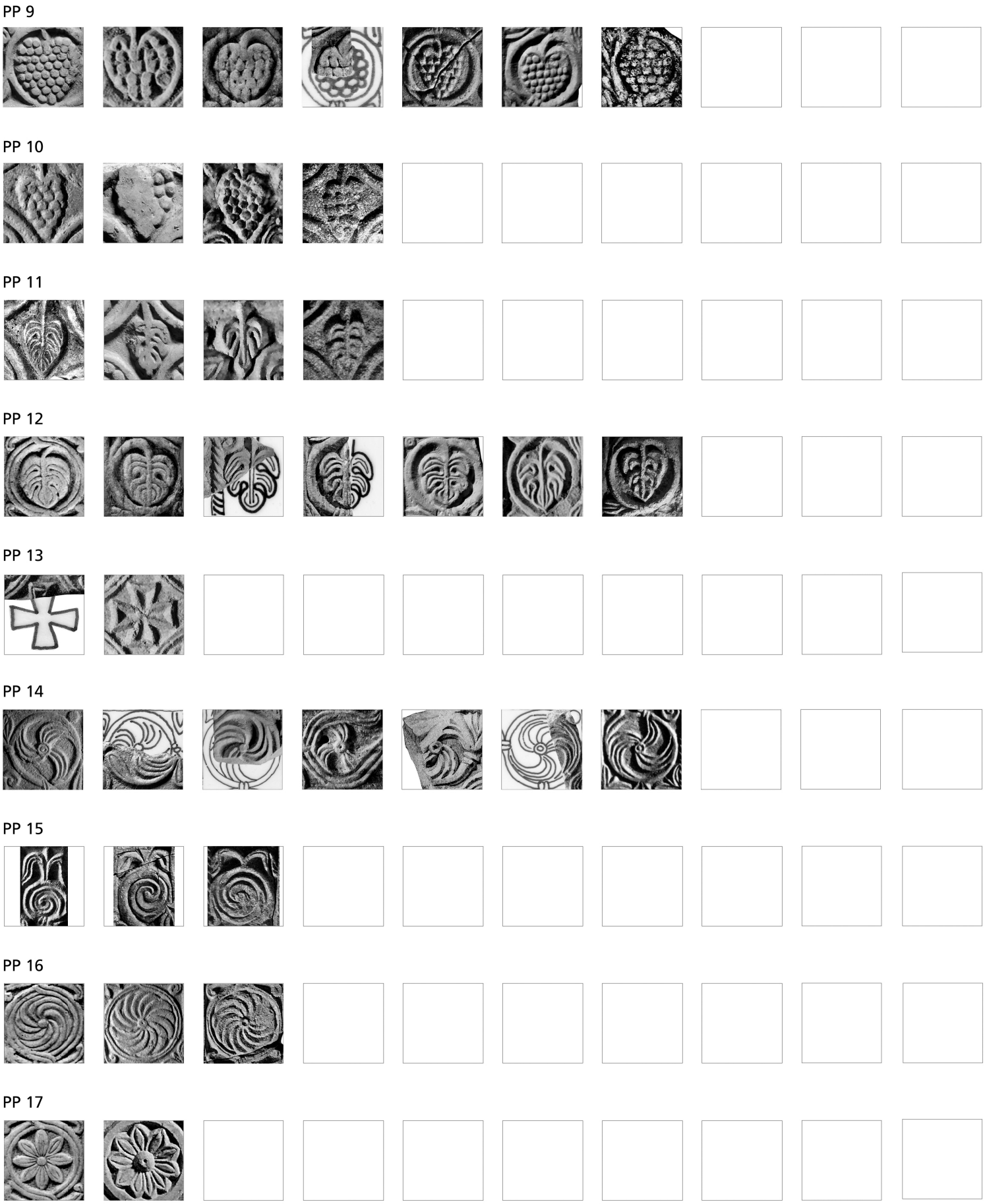


Fig. III.31-B – Piedmontese-Provençal (**PP**) workshop, types used for the seriation. Only one example per site. – **PP 9**, from left to right: Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Marseille La Major, Borgo San Dalmazzo, Apt, Torino, Caraglio. – **PP 10**: Ventimiglia, Alba S. Lorenzo, Marseille St-Victor, Apt. – **PP 11**: Nice-Cimiez, Alba S. Lorenzo, Marseille St-Victor, Apt. – **PP 12**: Nice-Cimiez, Marseille La Major, Marseille St-Victor, Borgo San Dalmazzo, Torino, Alba SS. Frontiniano e Cassiano, Apt. – **PP 13**: Nice-Cimiez, Ventimiglia. – **PP 14**: Ventimiglia, Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Marseille St-Victor, Marseille La Major, Borgo San Dalmazzo, Aix-en-Provence. – **PP 15**: Alba SS. Frontiniano e Cassiano, Borgo San Dalmazzo, Apt. – **PP 16**: Nice-Cimiez, Ventimiglia, Borgo San Dalmazzo. – PP 17: Nice-Cimiez, Borgo San Dalmazzo. – Photos: details from previous figures.

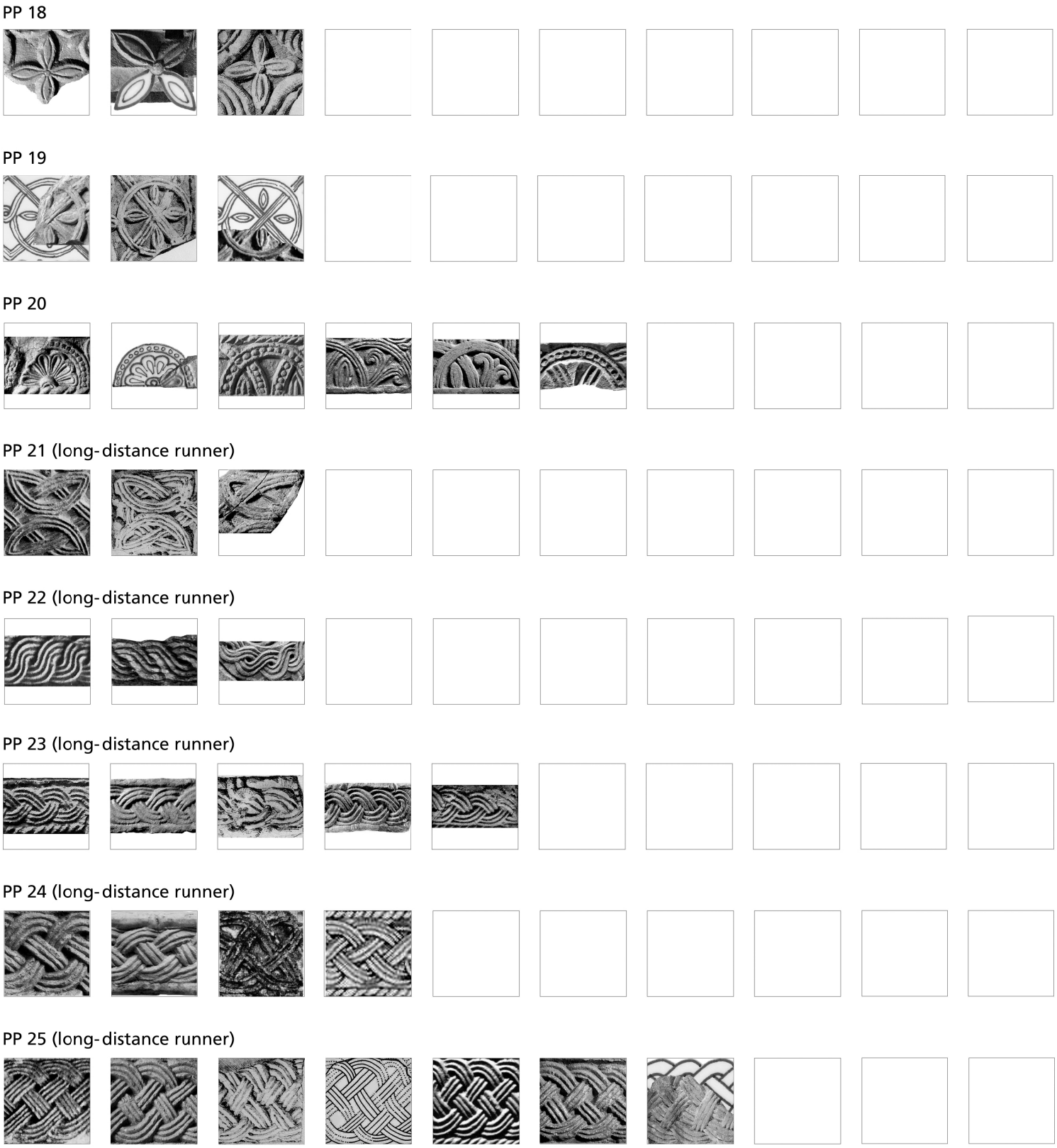


Fig. III.31-C – Piedmontese-Provençal (**PP**) workshop, types used for the seriation. Only one example per site. – **PP 18**, from left to right: Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Marseille La Major. – **PP 19**: Alba S. Lorenzo, Marseille La Major, Avignon. – **PP 20**: Nice-Cimiez, Ventimiglia, Ventimiglia, Alba S. Lorenzo, Alba SS. Frontiniano e Cassiano, Aix-en-Provence. – **PP 21**: Marseille St-Victor, Marseille La Major, Borgo San Dalmazzo. – **PP 22**: Nice-Cimiez, ventimiglia, Borgo San Dalmazzo. – **PP 23**: Ventimiglia, Alba S. Lorenzo, Marseille La Major, Borgo San Dalmazzo, Apt. – **PP 24**: Alba S. Lorenzo, Marseille St-Victor, Caraglio, Bergamo. – **PP 25**: Nice-Cimez, Alba S. Lorenzo, Marseille La Major, Borgo San Dalmazzo, Aix-en-Provence, Apt, Dolceacqua. – Photos: details from previous figures.



Fig. III.31-D – Outliers (types from individual fragments not belongng to the Piedmontese-Provençal production). From left to right: **O 1**, Bergamo; **O 2**, Borgo S. Dalmazzo; **O 3**, Alba, S. Lorenzo; **O 4**, Bergamo; **O 5**, Bergamo. – Photos: details from previous figs.

EARLY WORKSHOP OF VENTIMIGLIA

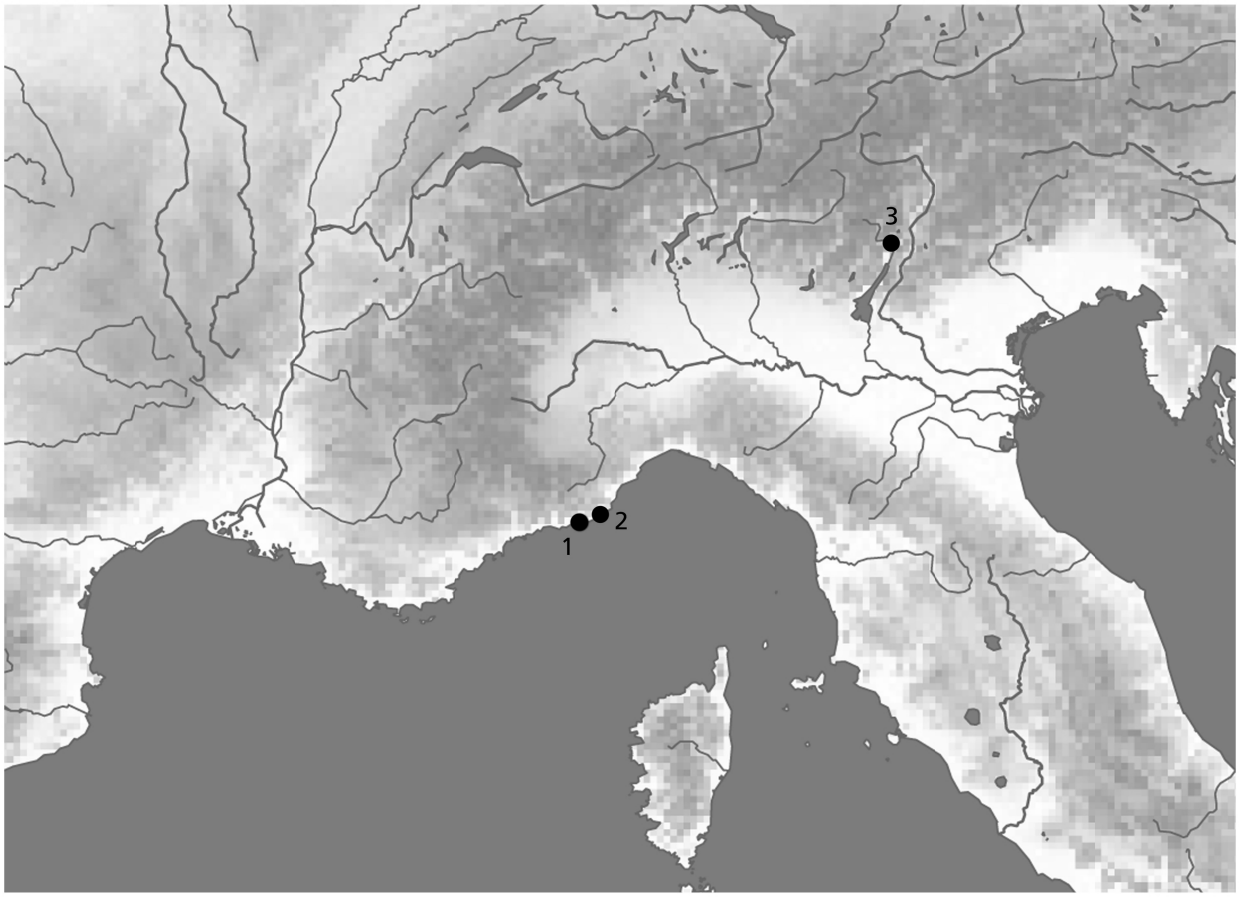


Fig. III.32 – Area of activity of the 'early workshop of Ventimiglia', that probably worked at the cathedral before the Piedmontese-Provençal workshop (early 8th century?). **1**. Ventimiglia. – **2**. Sanremo. – **3**. Stenico.

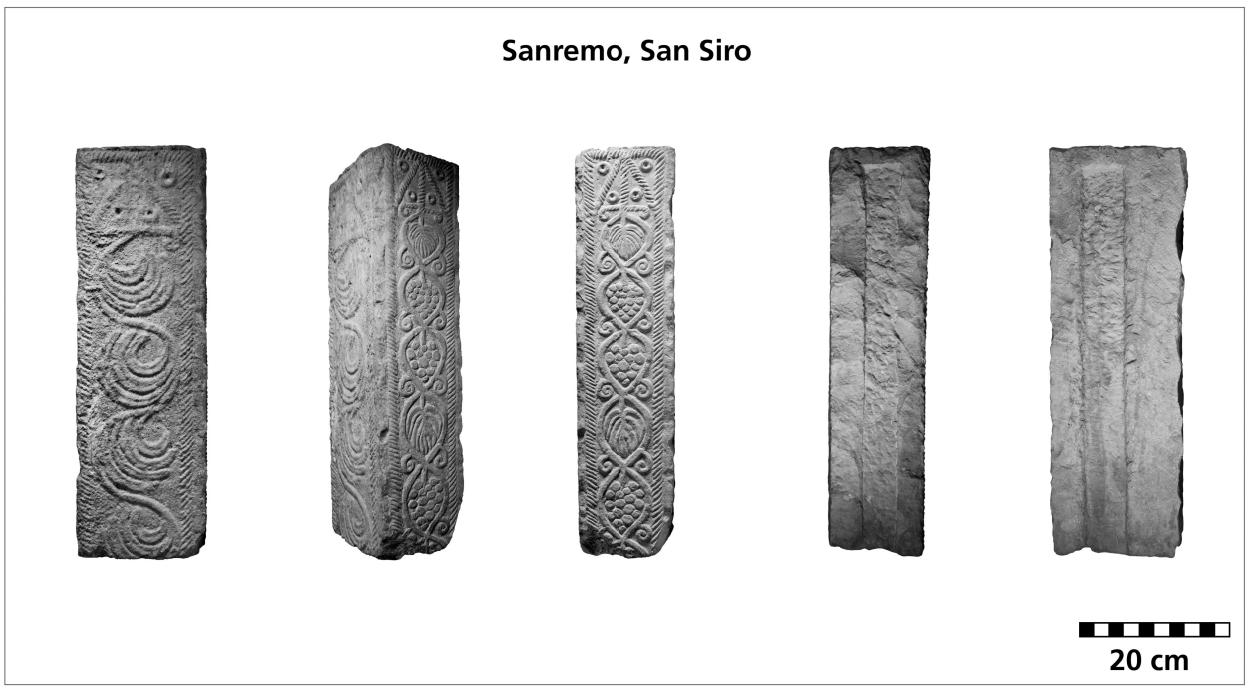


Fig. III.32-A – All photos M. Beghelli.

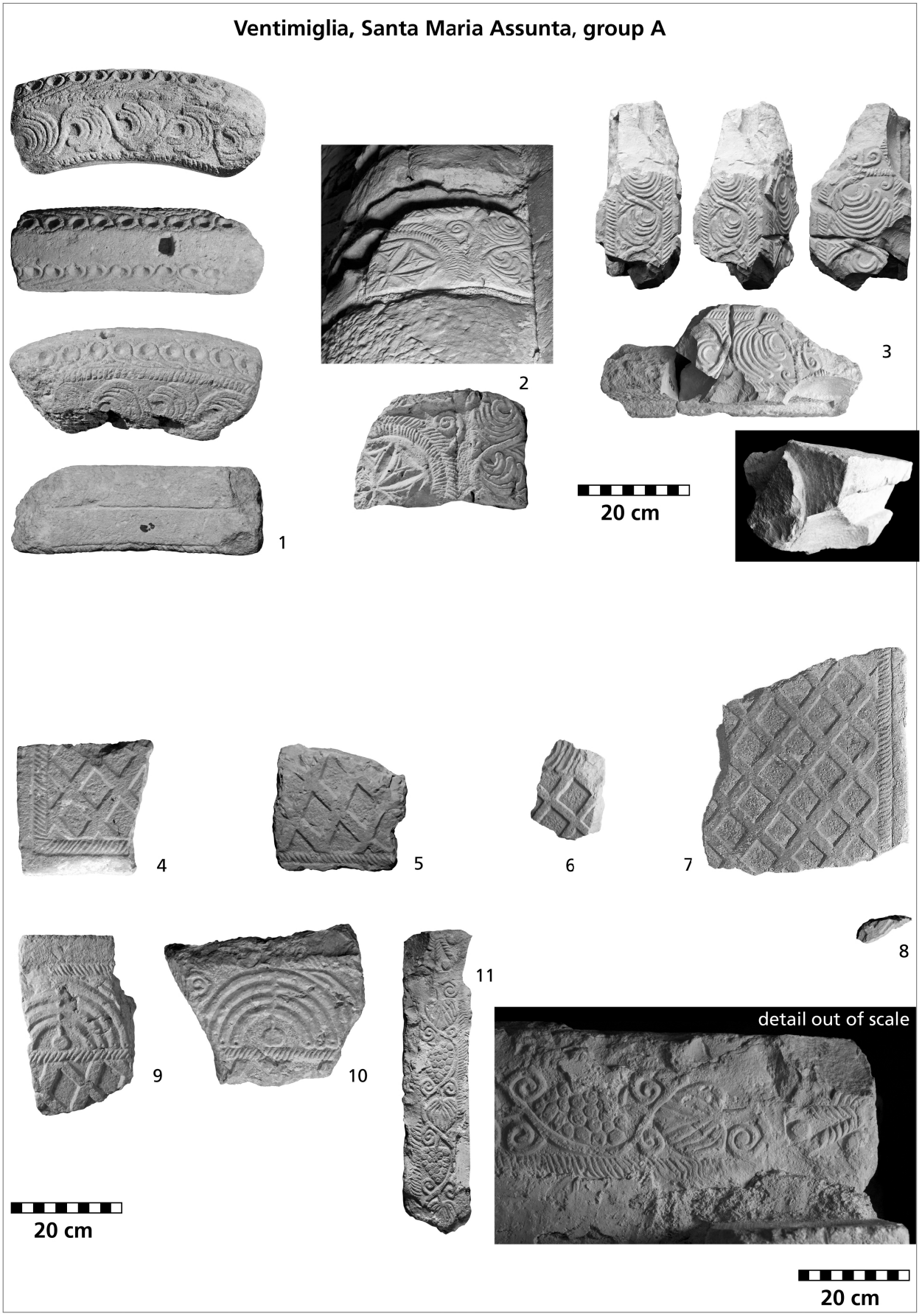


Fig. III.33 – All photos M. Beghelli except nos 1 (courtesy SABAP) and 7 (Gandolfi 1995).

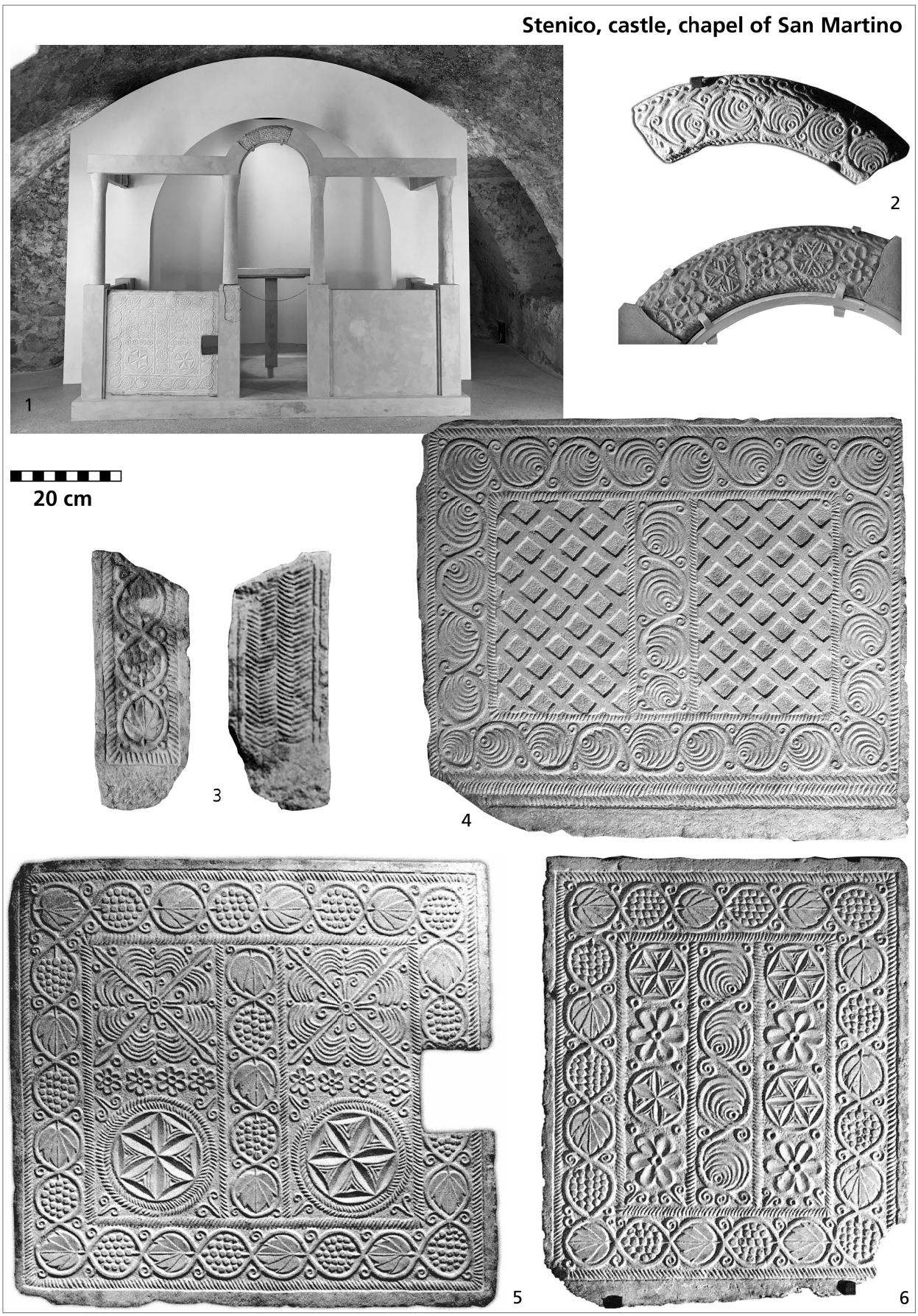


Fig. III.34 – 1: photo P. Vedovetto; 2 above, 5, 6: after Porta 2013; 2 below, 3 left: courtesy Museo Castello Buonconsiglio Trento; 3 right: after Cecchelli 1928; 4: after Bertelli / Brogiolo 2000.

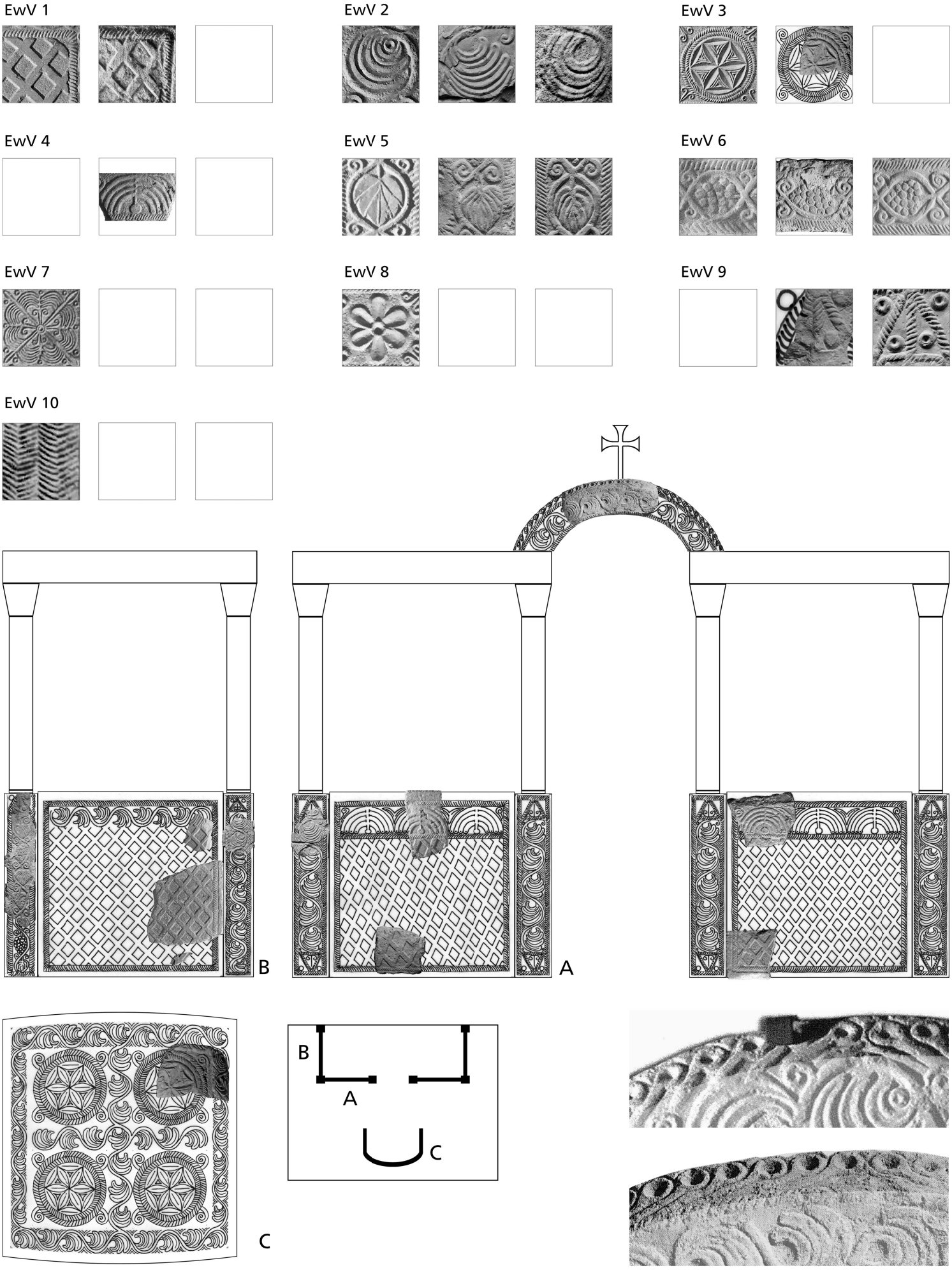


Fig. III.35 – Early workshop of Ventimiglia (**EwV**). Above: types used for the seriation. Only one example per site. For every type, from left to right: Stenico, Ventimiglia, Sanremo (not all types are present in every site). Below: reconstruction and possible plan of the chancel screen and ambo at Ventimiglia (A: front; B: side; C: ambo), and details of the arches at Stenico and Ventmiglia (note that even small details like the running dogs are identical). – Photos: details from previous figures; drawings: M. Beghelli.

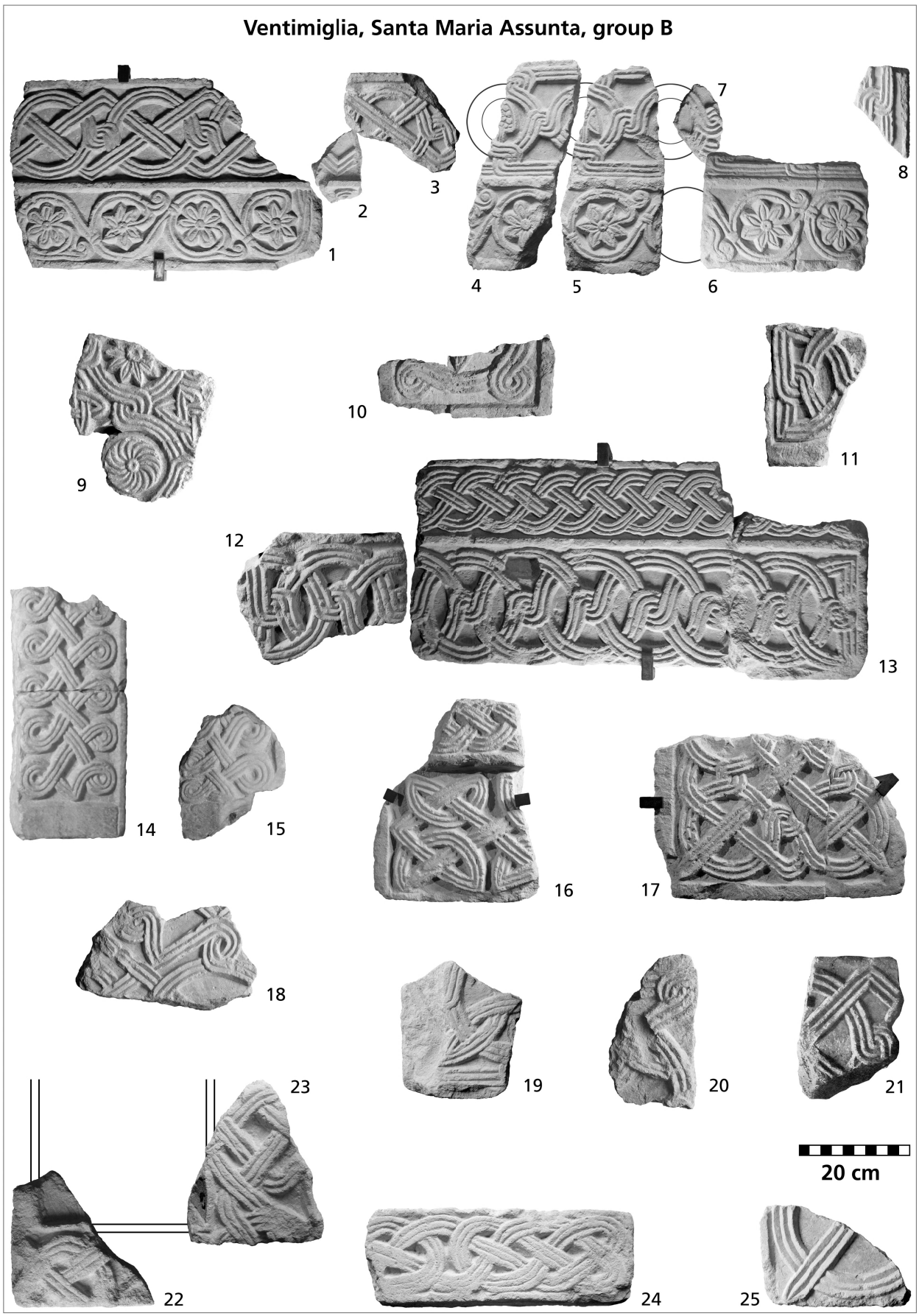


Fig. III.36 – All photos M. Beghelli except nos. 9, 11, 15 (courtesy SABAP) and 21 (Verzone 1945).

WORKSHOP MONTICELLO D'ALBA

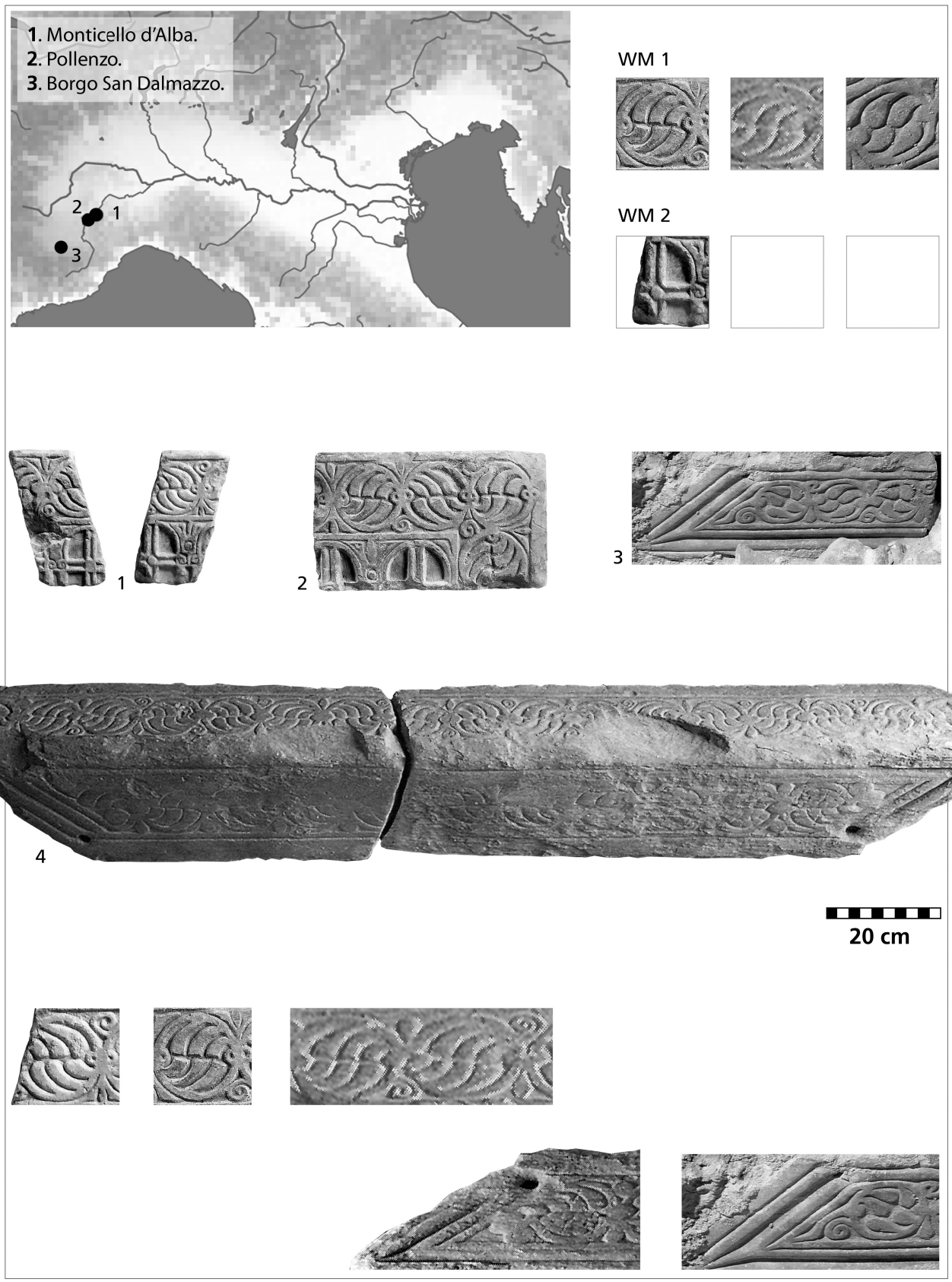


Fig. III.37 – Workshop Monticello d'Alba (**WM**). Above: distribution map and types used for the seriation. Only one example per site. For every type, from left to right: Pollenzo, Monticello d'Alba, Borgo San Dalmazzo. – Below: fragments and details. **1., 2.** Pollenzo. – **3.** Borgo San Dalmazzo. – **4.** Monticello d'Alba (1, 2 after Crosetto 2004; 3 after Crosetto 1999; 4 after Crosetto 1999a).

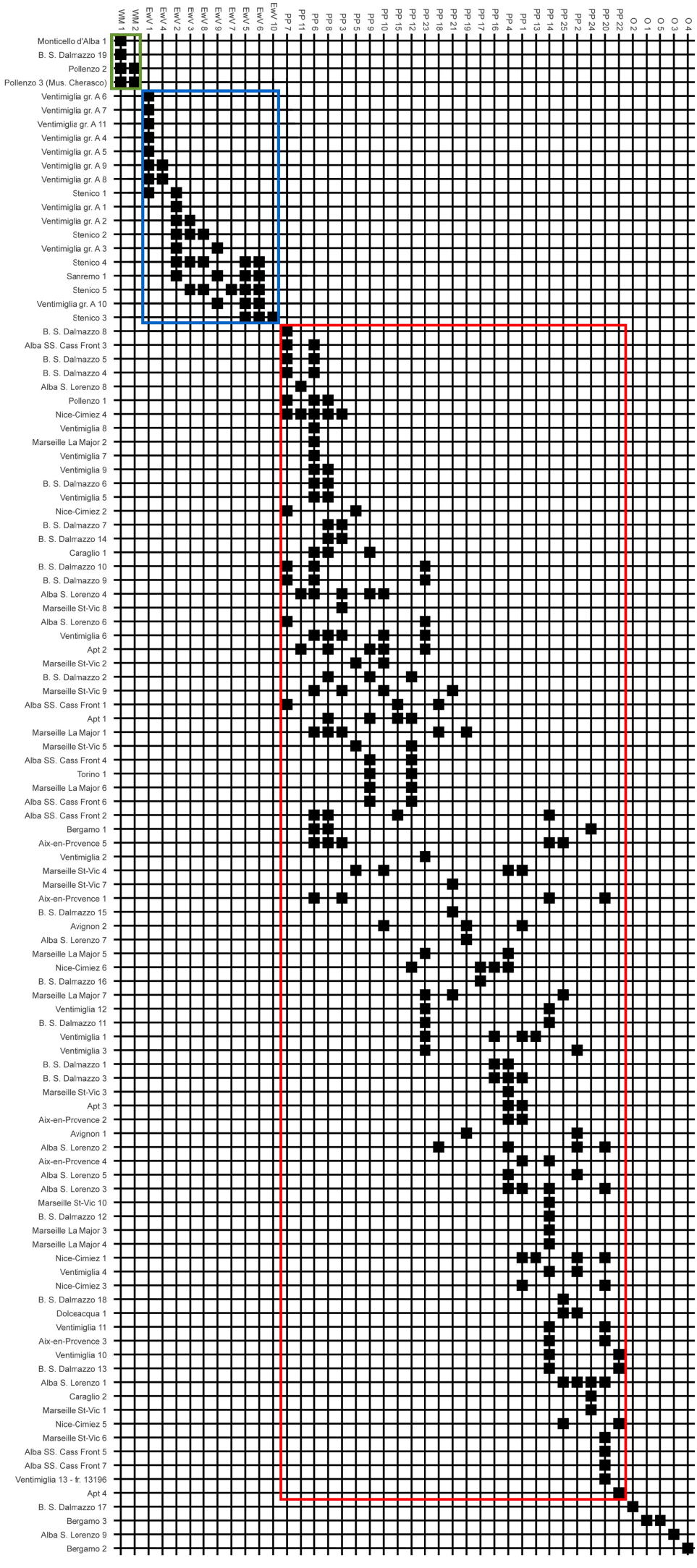
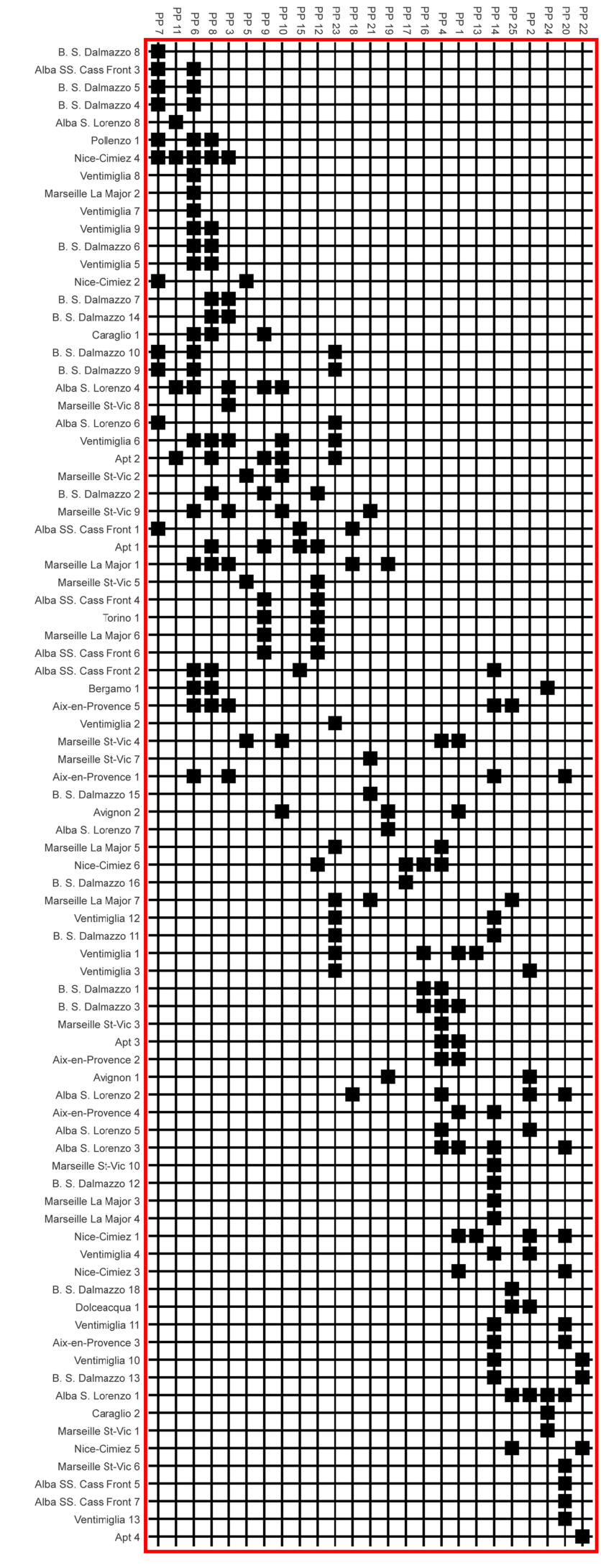


Fig. III.38 – Seriation (unconstrained) performed with the software Past on the 109 analysed fragments. Each row represents a sculpted fragment, each column a type (i.e. a motif). The three resulting groups (i.e. three different sculpting ateliers) are highlighted in coloured rectangles: note that they have no type in common.

Green rectangle: workshop Monticello d'Alba (**WM**); blue rectangle: first workshop of Ventimiglia (**EwV**); red rectangle: Piedmontese-Provençal workshop (**PP**).

The rectangles are enlarged in the next figure. Materials from the 'Late workshop of Ventimiglia' are not included in the seriation (see text, Paragraph III.4.10).



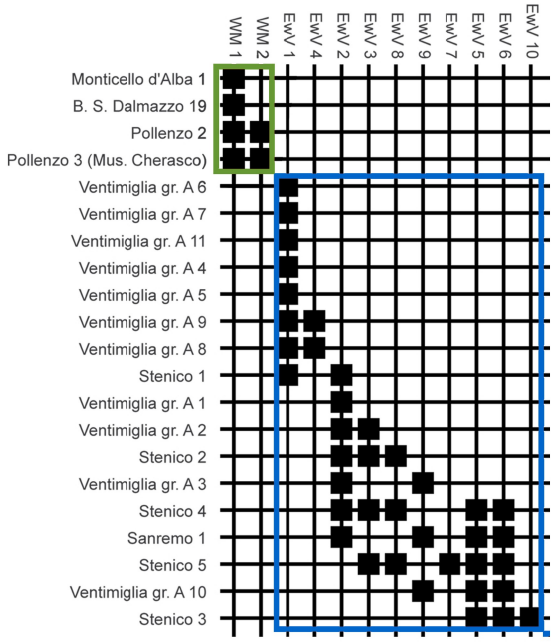


Fig. III.38-A – Details from the previous figure.

Green rectangle: workshop Monticello d'Alba (**WM**); blue rectangle: first workshop of Ventimiglia (**EwV**); red rectangle: Piedmontese-Provençal workshop (**PP**).

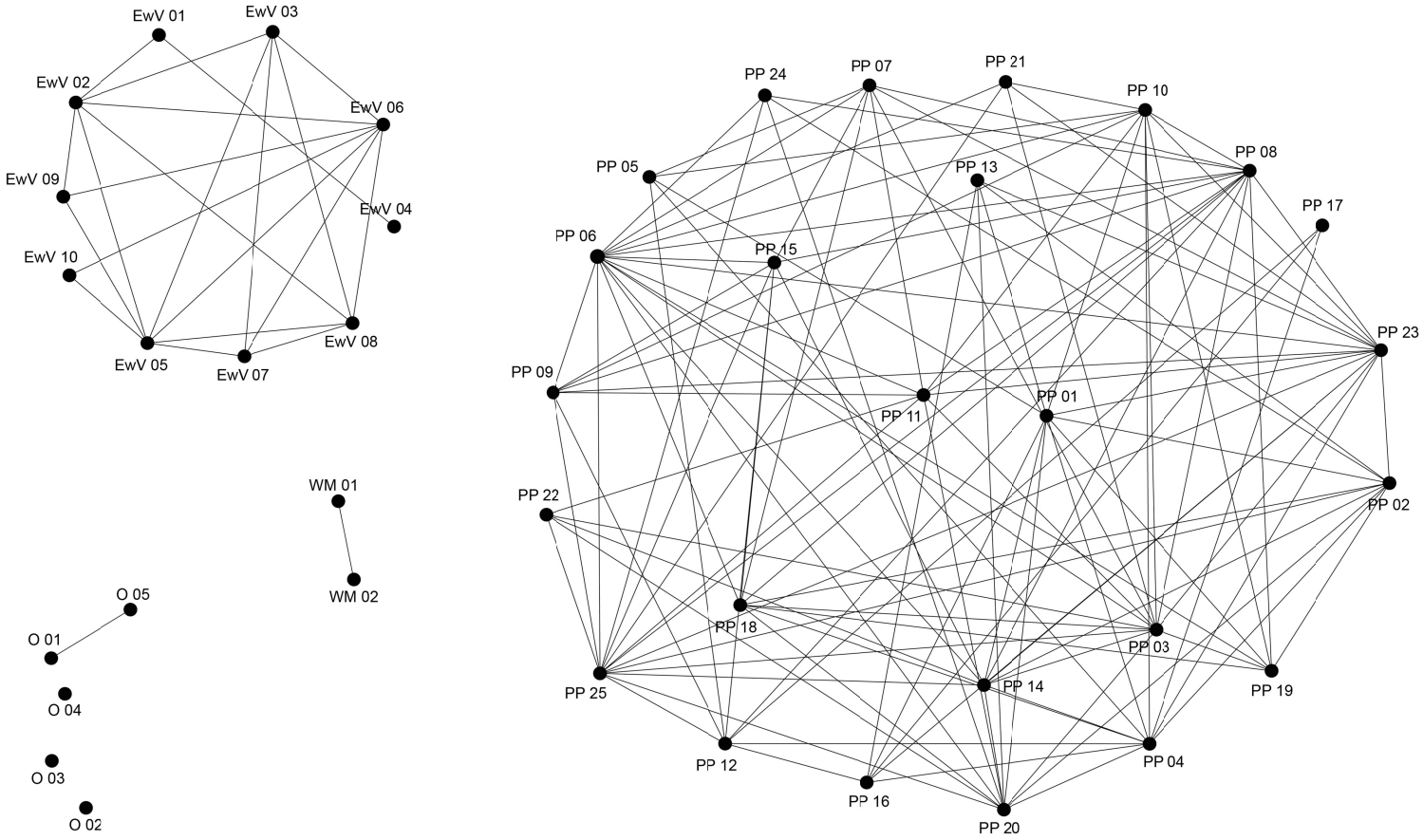
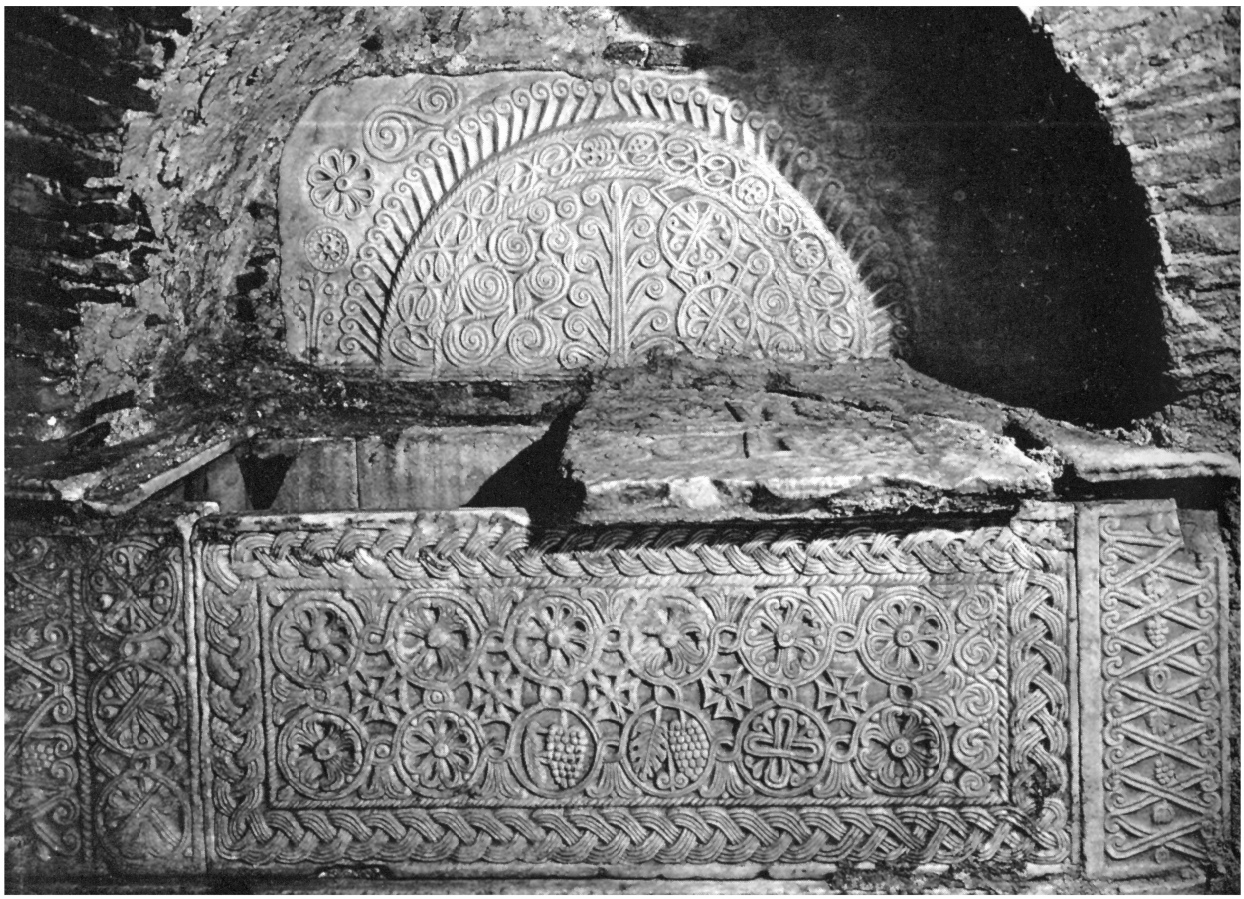


Fig. III.38-B – Graphic representation, obtained with the software Gephi, of the relationships between types (dots) attested on the same stone find (lines), based on same dataset as the previous figures. **PP**: Piedmontese-Provencal workshop; **EwV**: Early workshop of Ventimiglia; **WM**: workshop Monticello d'Alba; **O**: outliers.



1

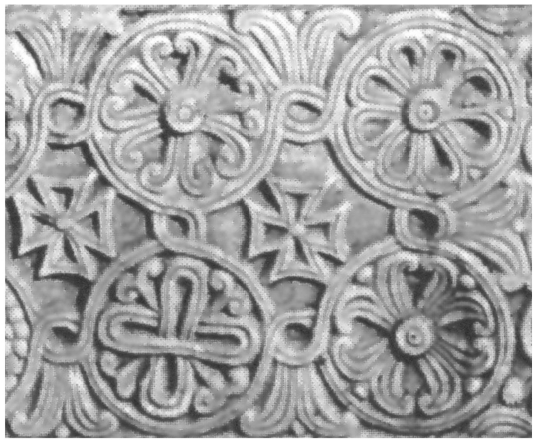


2

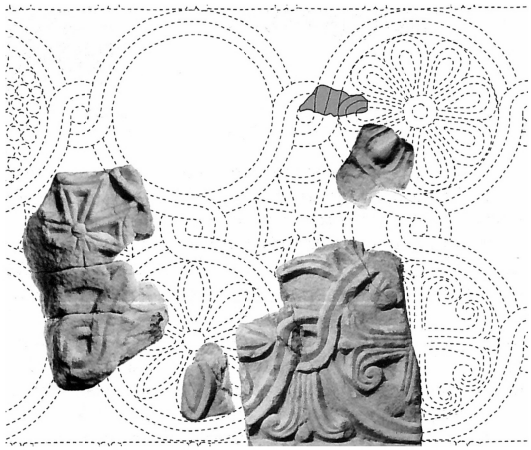
Fig. III.39 – **1**. Albenga, Baptistery, arcosolium tomb (after Hubert 1969). – **2**. Pavia, Museum, so called 'sarcophagus of Theodota' (two slabs; after Magistra Barbaritas 1984).



3



(1)



4



(1)



(2)



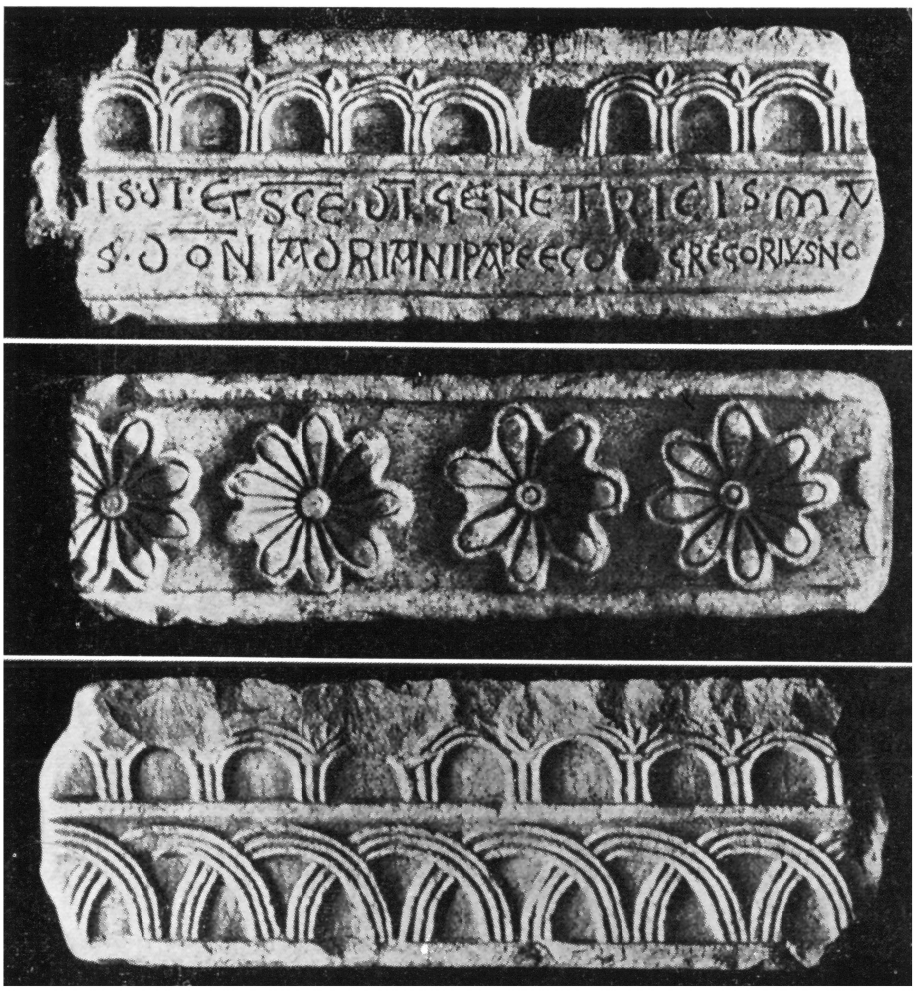
(3)

Fig. III.39-A – **3**. Bobbio, tombstone of Cumianus, 712-744 (after Destefanis 2008). – **4**. Novalesa (after Uggé 2004). Details from this and the previous figure are numbered in brackets after the picture they come from.

FIGURES
PART IV.



1



2

Fig. IV.1 – Examples of sculptures bearing the name of the commissioner. – **1**. Dalmatia, Rižinice, gable arch of the pergula of the prince Trpimir, 845-864 (after Piteša 2012). – **2**. Rome, S. Maria in Cosmedin, architrave of the pergula donated by Gregorius notarius at the time of pope Hadrian I, 772-795 (after Melucco Vaccaro 1974).



Fig. IV.2 – Cencelle, detail of the monumental inscription with the monogram of Leo IV (847-855), and some fragments of stone furnishings from the episcopal complex (after Leopoli-Cencelle 1996).

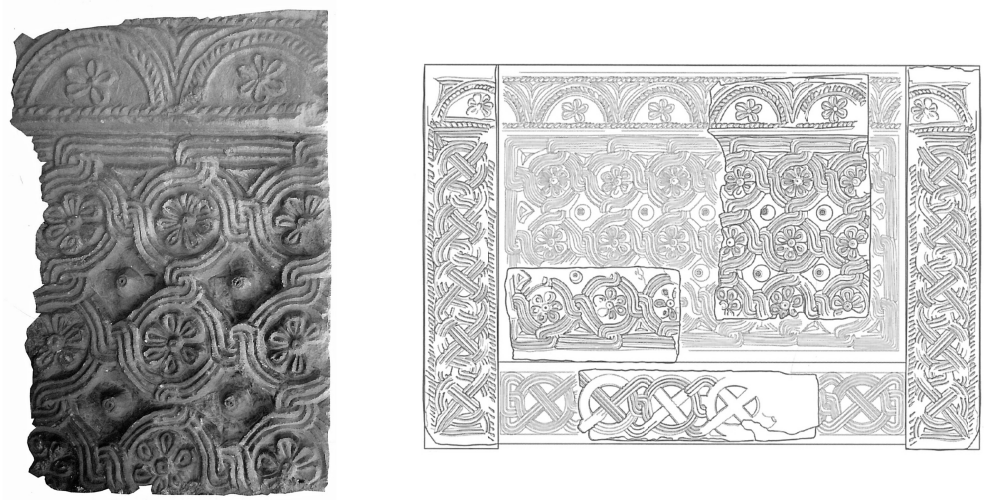


Fig. IV.3 – Tenno, S. Lorenzo, chancel screen slab and reconstruction (after Vedovetto 2011).

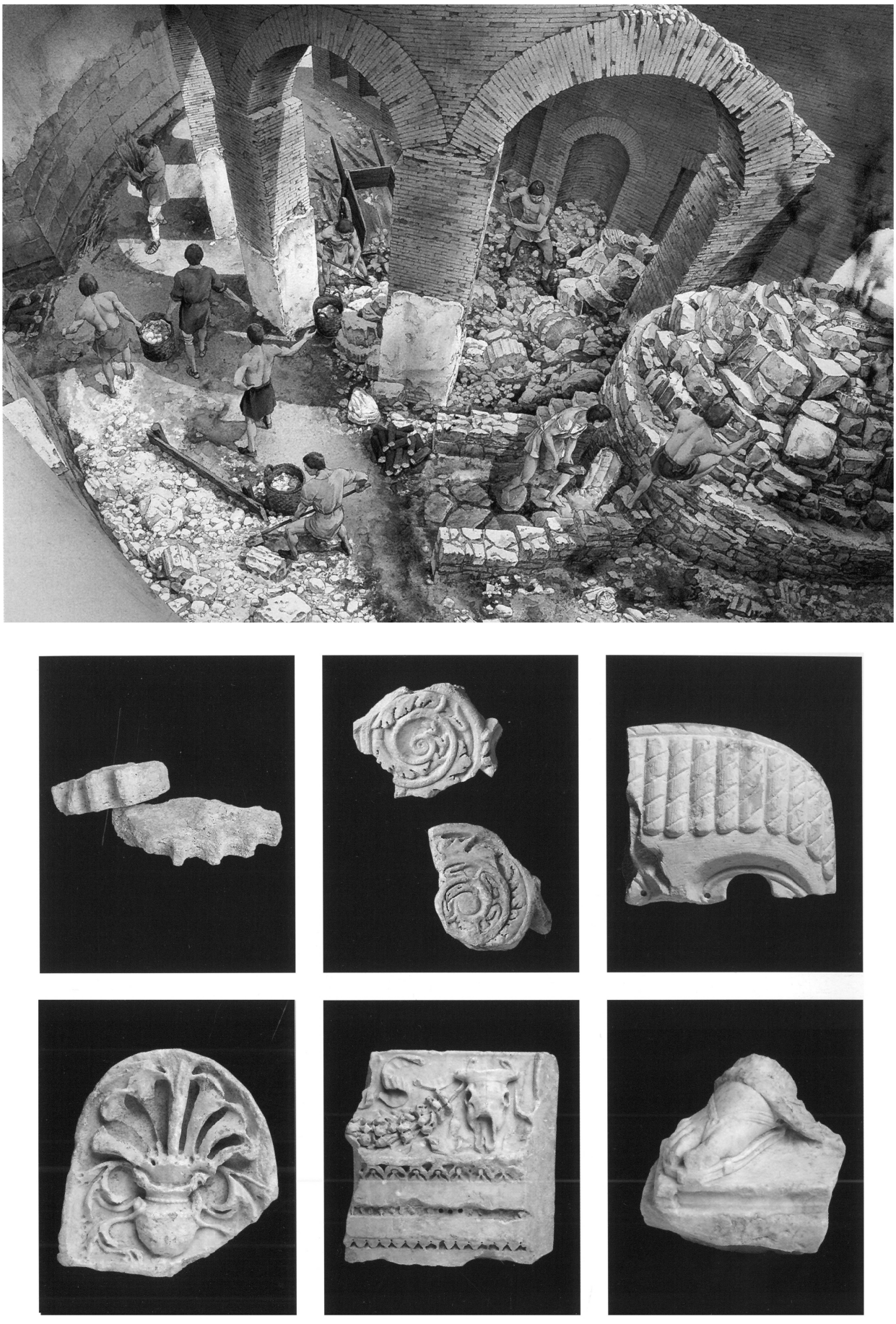


Fig. IV.4 – Rome, reconstruction of the Early Medieval limekiln at the Crypta Balbi and some of the 'raw materials' found in it (after Manacorda 2001).

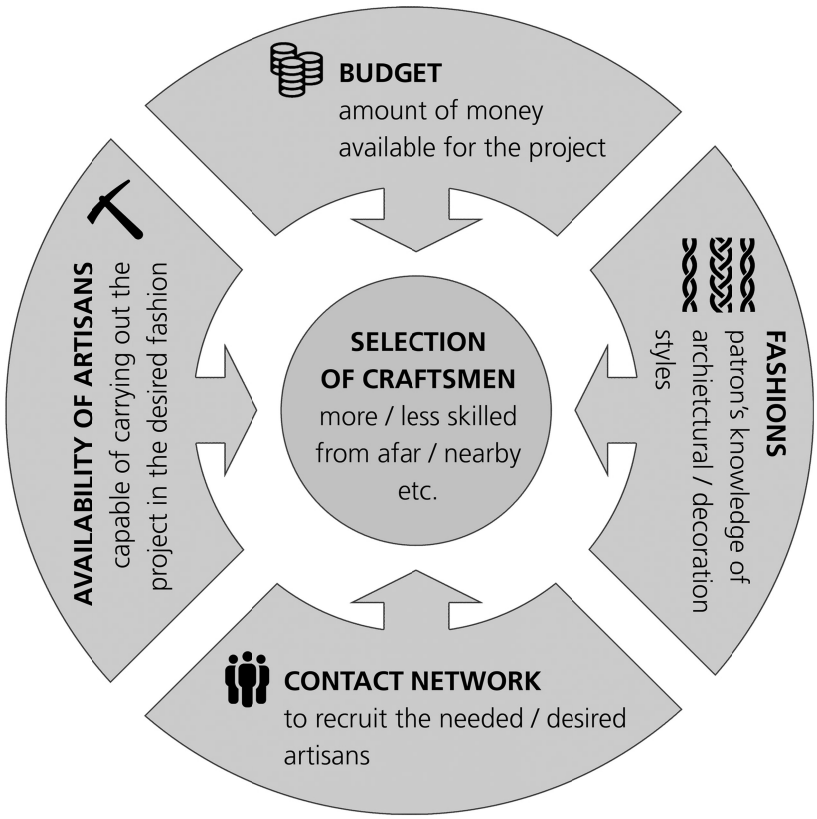


Fig. IV.5 – Factors influencing the selection of the craftsmen (diagram: M. Beghelli).

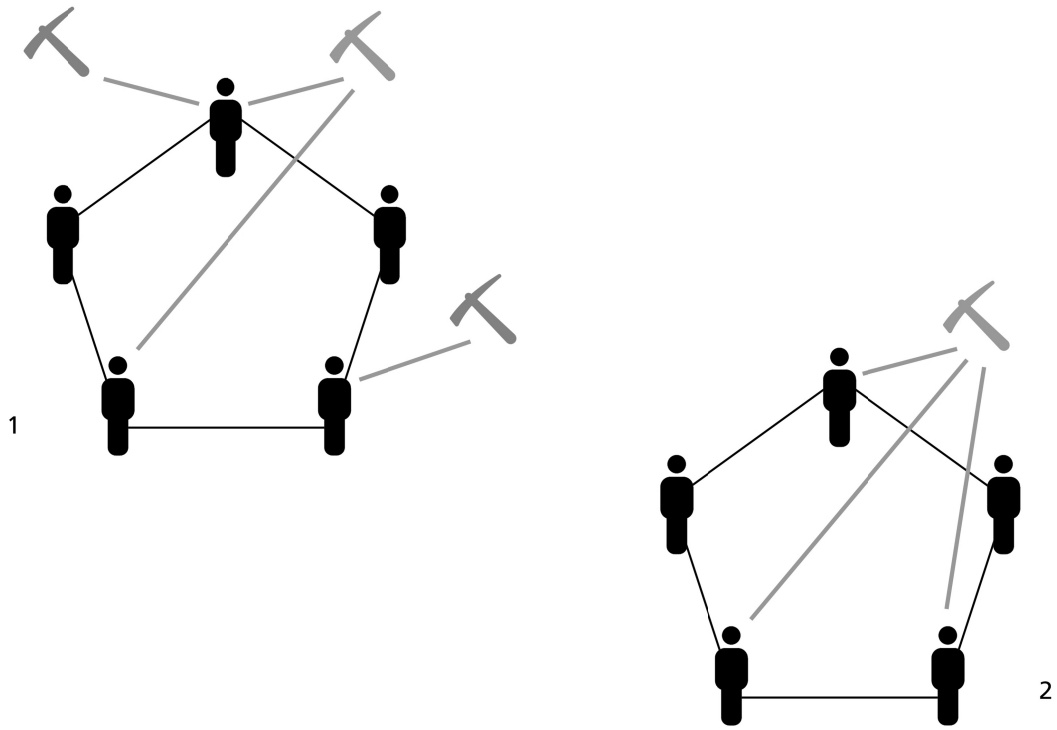


Fig. IV.6 – Elite-networks and selection of craftsmen, different possible models. Not every member of a given network directly knows / can summon artisans, but the ones who do not can turn to those who can fetch the chosen craftsmen. – **1**. Different workshops are contemporarily active in a given area. Some elite-members are in contact with more than one workshop, and vice-versa. This situation is more probable around the most important cities, in periods of economic and political stability. – **2**. Possible 'monopoly' of a given area (and during a certain period) by just one workshop, that serves all the 'nodes' of the elite network in the territory. This could have occurred in areas of secondary importance, or during periods of economic and political instability (diagram: M. Beghelli).



Fig. IV.7 – Commissioners and financers of buildings tend to visit the construction site, in the Early Middle Ages as well as nowadays. In the picture, opening of the works for the new building of RGZM, Mainz, 18th September 2015: Roman cornicen; Falko Daim, former director of RGZM; Doris Ahnen, minister of finance Rheinland-Pfalz; Vera Reiß, minister of Education, Science, Culture Rheinland-Pfalz; Michael Ebling, mayor of Mainz (after RGZM Jahresbericht 2015).

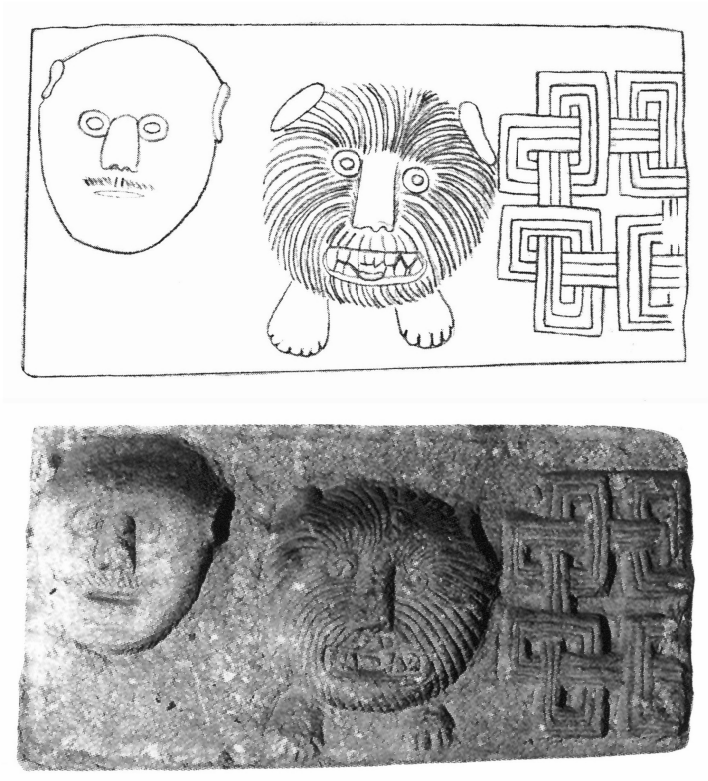


Fig. IV.8 – Early Medieval sculpture was not only manufactured by very skilled craftsmen (like those who produced the works seen in the previous figures of this work). Yet the sculptures that betray an inexperienced hand are the most difficult to date and contextualise, precisely because they generally have no convincing parallels. In the figure: sculpted stone from Maia Bassa / Untermais, South Tyrol (after Johannson-Meery 1993).