

ICMA Master Carvers Series

These are drafts for vols. 6 and 7 of *The Ark of God*.

A resource for discussion and information.

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20 *The capitals of the Laon cathedral choir gallery* John James

TABLE OF CONTENTS FOR PART 1

	Outcomes of this analysis
3	Summary of conclusions
5	The arrangement of piers and distribution of designs
6	Identifying and separating individual carvers
7	The 38 readily identifiable carvers
10	The Timeline chart of masons
13	Time to carve the capitals
14	Notations and geometry
15	South to north tilt
16	Examples that confirm the tilt
18	Short-term carvers
19	The wall piers
20	Providing access through the corners
21	Supporting each other, mimicry
22	Did carvers come individually or in gangs?
	The next stage in Part 2

The capitals discussed here may be examined in larger format in vols. 3-5 of *The Ark of God*, and when completed and professionally edited these studies will be published in volumes 6 and 7.

This is number 20 of an on-going series describing Early Gothic carving masters for discussion and comment

1	Introduction to the carvers.
2	The SS Master (1097-1143)
3	Distinguishing the Rinceau Carvers
4	Master Jérôme and the Saint-Denis chevet (1120-1146)
5	The Gripple Master (1102-1138) and the history of Bury and the Saint-Aubin cloister
6	GrippleSon and the Crusader Recession (1148-1172)
7	Palmier, master and carver and the building of Notre-Dame-d'Etampes (1123-1164)
8	Construction Timetables
9	The Duke Master and Saint-Martin-des-Champs (1101-1145)
10	Master Félix, the traveller (1107-1143)
11	Who made decisions in the Grégoire team? The colonnettes at Chartres (1138)
12	The Comet Master (1075-1110)
13	The Facet Master and the story of Mogneville (1089-1123)
14	The Bannière Master (1075-1120)
15	Master Victoire, and sharing at Saint-Loup-de-Naud (1108-1143)
16	The Old Duke (1082-1108)
17	The jamb panels of the Bourges south porch (1128)
18	Rameau the Weaver (1103-1145) and Saint-Martin-des-Champs
19	Time to carve
20	The capitals of the Laon cathedral choir gallery (1164) - PART 1

Outcomes of this analysis

The study of a single campaign of carving involving an enormous number of separate stones and a large and diverse range of sculptors offers a rare opportunity to study a major workshop in action.

1. **The carvers:** Nearly all the 221 remaining capitals could be allocated to 61 individuals.
2. One third came in small teams of two or three, the others arrived as individuals.
3. Less than a dozen of these carvers can be identified elsewhere in the cathedral.
4. The majority came for this purpose only, being independent and possibly itinerant.
5. Without gang foremen the master mason himself would have instructed each individual sculptor.
6. Three quarters were capable of the most intricate and undercut work.
7. The majority did not arrive together, nor did they stay until the end.
8. The work was probably executed in the gallery under lean-tos next to the pier being carved.
9. Towards the end some who were free helped their fellows complete work that had lagged behind.
10. Most carvers were allocated to a particular pier.
11. The average time each spent on the site was 31 working days.
12. To complete all the sculpture took about four months.
13. At least six carvers worked for only a few days, possibly *en route* elsewhere.

1. **The tilt from south to north** existed from the foundations upwards.
2. The north gallery floor had not been laid when the first capitals were carved.
3. Therefore tasks were apportioned from south to north.
4. Sculptors who worked on many piers confirmed the north to south tilt.
5. Capitals at the entry into the south transept were carved by those already on the site.
6. Some carvers working on the north transept piers stayed on to work in the triforium.
7. The tilt made the erection of arches and vaults more efficient.

The walls

1. Wall piers were somewhat later than the arcade, and carved by different men.
2. The wall capitals may be divided into four phases.
3. The quality of the wall piers declined as work proceeded northwards.
4. To provide access for materials parts of the external corner piers were held back.

Site organisation:

1. capitals visible from the choir were to be highly decorative.
2. Elsewhere no preference was shown for foliate over broadleaf.
3. Usually there was one carver to each wall pier, and two to each arcade pier.



Arrangement of the nine capitals on a pier

The capitals of the Laon cathedral choir gallery (1164) - PART 1.

The purpose of this study is to identify each of the carvers of the capitals from the first building program in the gallery from around 1164, and to use that information to gain insights into working methods, the time needed for each carving and medieval building practices.

I began the analysis in 1982 while passing a winter in the French Alps, ostensibly to ski but in fact laid up with a disjointed knee cap that simply ‘fell out’ while doing a turn.

Over the years I kept returning to this file, until 15 months ago I assembled the first draft using InDesign. I have been improving it ever since, and though still a draft it is now in a state that can be shared.

In total, we can account for 219 capitals, plus 3 totally replaced, plus the 16 lost in the rebuilding: 238 stones altogether. Each is on a separate stone. There are nine on the arcade piers and five on the wall piers, plus seventeen four-sided capitals over mid-bay shafts [r]. The details are sharp and in excellent condition. They are exquisitely carved and have been a pleasure to study. Some are among the most delicate ever made. When the choir was extended after 1176 nearly all the capitals from the four piers of the hemicycle and a few from the walls were reused. We thus have an almost complete collection of carvings from one campaign.

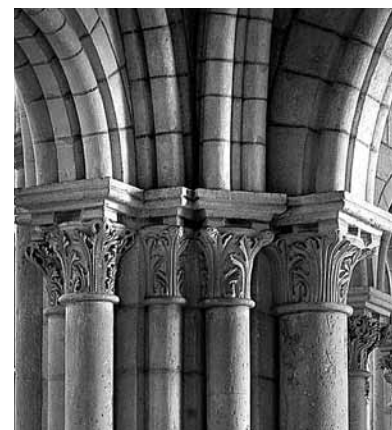
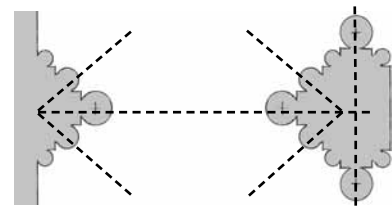
The analysis shows that 61 masons worked on the extant capitals on 32 piers. Some were carved by specialists brought in for the purpose and some by the masons already on site. Many were finished with great delicacy, while a few are relatively simple, even crude.

Summary of conclusions

The master mason could not have advertised, but would have had to travel, either personally or through assistants, to gather these men and arrange to engage them. But knowing where to look is not the same as knowing whether they were already busy or willing to break their current employment. They may have been impressed, as masons were for royal works by Richard in constructing his Welsh castles, but are we sure that the bishop of Laon, powerful as he was in his diocese, could have done this? Or even wanted to?



Laon cathedral, south gallery showing the central shaft between the piers, and below a plan of a typical wall pier with five shafts and an arcade pier with nine, in which three support the arches of the opening into the choir while the inner three support the ribs and doubleau of the gallery.



Arrangement of the nine capitals on a pier

How would the master have found so many men, available and willing to come at whatever notice he was able to give them? How would he have gone about looking for them? If they came from great distances would there not have been delays while they finished their prior engagements before travelling to Laon?

Many arrived as individuals, some as members of small gangs. Analysis shows they did not all arrive at the same time, nor did they leave together. They came and went when they could and departed as soon as they had completed their allotted task. There were less at work at the beginning and a general falling off in numbers towards the end. Some may already have been on the site having been carving capitals on the aisle below, and some stayed on afterwards to work on the triforium.

I had at one stage considered the possibility that all 61 masons were already engaged on the site and the carvers were simply drawn from the pool of available masons. This would have meant that highly skilled sculptors would have been among the men carving plinths, torus moulds and window details, and perhaps even ashlar walling. I do not doubt that this would have happened, but the quality of the best is so high I think it more likely that many were specialist sculptors who came for this specific task and withdrew to other occupations when they had finished their five or six weeks at Laon.

It became clear that men were allocated piers, probably as they arrived on the job, and that this process proceeded from the south to the north in an orderly fashion with only one directive: That the capitals visible from the choir should be highly decorative. It seems this was the only aesthetic direction to come down, except of course the dimensions and alignment of the capitals themselves. No preference was given for foliate over broadleaf. They are mixed indiscriminately over the inner shafts.

They may have been carving under lean-tos on the gallery level itself, each with their own allotted space next to the pier they were working on. Such an arrangement would have reduced the risk of damage by minimising movement, and ensured that the complex junctions between the stones could be accurately visualised. This is not to suggest that the capitals were carved *in situ*. One could not have created such delicacy with considerable undercutting and symmetry by working from underneath.

As the erection of the walls caught up with the arcade piers the carvers for the wall piers may have moved into the same space. Otherwise the walls would have had to wait until all the nearby piers had been completed, which would have stretched the time needed and held back the laying up of the arches. As each pier was finished, the lean-tos were removed and the sculptors gave way to other gangs who would carve the capitals in the wall piers, and after them to others who erected the shaft caps and the arches.

Sculptors with skill moved and worked more as individuals or small gangs than as large organised teams. The less skilled may have been members of permanent teams of freemasons, just being the more competent among them, but it would seem that the highly competent moved freely, worked as required and travelled from place to place for relatively short stints.

There is no indication they were divided into gangs of eight or ten, as we would do. Without gang foremen instructions would have come straight from the master mason to each individual sculptor who would carry out his allotted task until it was finished, or until the master assigned him another.

It was the same on other sculptural programs where the most skilled carvers arrived individually, and left no evidence they were required on the site in any permanent way. At Chartres and Le Mans, at Saint-Denis



Laon cathedral, south gallery facing north

and Bourges no one seems to have stayed longer than a season. In every study so far in the ICMA *Master Carvers Series* the evidence points to individuals seeking *ad hoc* engagements without becoming members of permanent teams. The old concept of a workshop of settled craftsmen is fallacious, at least as far as the most skilled sculptors were concerned.

Even at Saint-Loup-de-Naud, where the portal could have been carved in one sustained project, the members seem to have come and gone in the same manner.^{ICMA #15} With one exception they did not participate in the carving of the nave capitals that were on the same level, but that concentrated only on the one task of the portal sculpture, and left as soon as their tasks were finished. Being expensive no client would have wanted them around for longer than was necessary. Laon was no different.

With many working together for so many weeks the shed would have become a hothouse for shared information. Men would have been discussing their ideas and techniques in a unique atmosphere very conducive to innovation and change. See the sharing of a particularly complex terminal in Part 2.

The arrangement of piers and distribution of designs

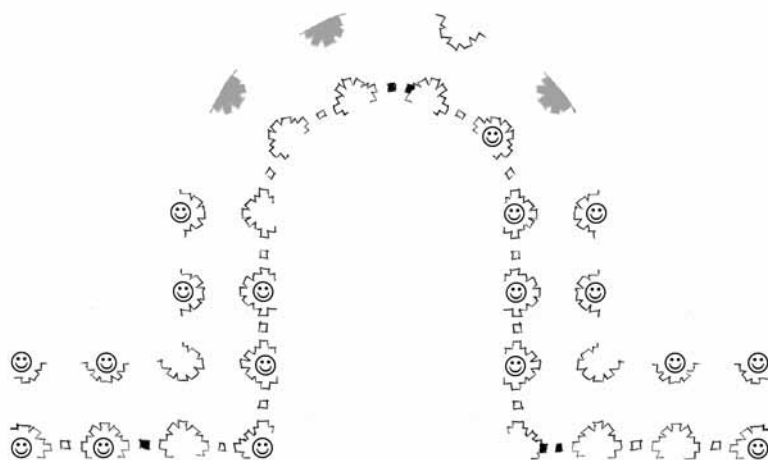
There are 18 arcade piers and fourteen wall piers [r]. They include the four piers in what is today the straight bays 5 and 6, and which had once been part of the hemicycle. The designs of eighteen piers, both in the arcade and on the wall, follow consistent patterns. This means that in the walls all five capitals were the work of one man or one group to a common design, and in the arcades the four outer capitals that can be seen from the ground were by one master and the five inner were by another. These consistent arrangements are marked with a Smiley [r].

When the hemicycle was demolished around 1176,^{ICMA #8 & 17} most of the capitals and masonry was stored in a shed that was presumably at ground level, and reused some years later only after the new work had been raised to the gallery level.

All the reused capitals are in the style of the 1160s except for one replacement from the 80s that lies on the eastern face of ES6. Some must have been damaged or lost in the process as those from the three wall piers disappeared, and the fourth was rebuilt on the south wall in bay 10.

In three of the four hemicycle arcade piers the arrangements are not consistent. The capitals were installed without regard for any common design. In the fourth, now at ES5, placement was consistent except for the leading stone on the western face. Assuming this one had been misplaced, and that it was meant to have matched the east-facing capital as part of a coherent arrangement, the missing capital is to be found on the western end of the adjacent pier, ES6w. If this had originally been with its fellows, then the number of consistent piers would have been 17.

The arrangement of designs for the others piers from the hemicycle is confused. But in two of them it is possible to rearrange the stones by design type so there would be one manner in the flanking pairs visible from the choir, and another on the interior. If the re-erection gangs had understood



Laon cathedral, gallery straight bays with those rebuilt from stones from the demolished hemicycle shown in their approximate location. Post 1170 and new capitals in black. Piers with consistent arrangements have Smiley faces. Notice that the outer corner piers are not consistent, possibly because the cranes may have been here and delayed the work a little.

the design policy of the earlier master, then the number of consistent piers would have increased to nineteen.

Consistency shows that each carver was allocated his own pier. Their roles were circumscribed by the four or five stones they were to complete over an average thirty day engagement. This was not teamwork, but cooperation *inter pares*. Few would have had formal arrangements with each other, but acted as independent craftsmen employed for a short period towards a common purpose. Very like subcontracting tradesmen on a modern house.

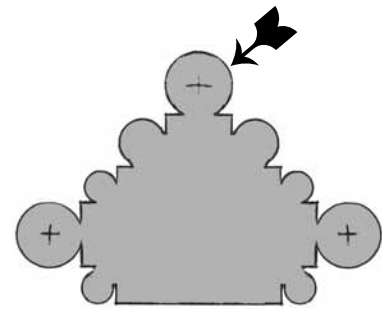
Identifying and separating individual carvers

I found the most effective way to identify the carvers was to have copies of every individual stone set out on a large table with the computer nearby that could call up larger views. Often more than one picture would be required as details can appear different depending on the angle of the view, and the deciding information was invariably in the details.

Being individual photos, they could be grouped and shuffled in various condign ways to highlight both the differences and the similarities. The process was not unlike what I have been describing for individuals over the other articles in this series. I arranged all the capitals on the table, sorted them into similar packs, and then pored over the details. Most were readily assignable. I have spent more time on those that would not fit into convenient groups than on those that were easier. I have learned most by concentrating on the more difficult. In this way each man’s uniqueness was discernible.

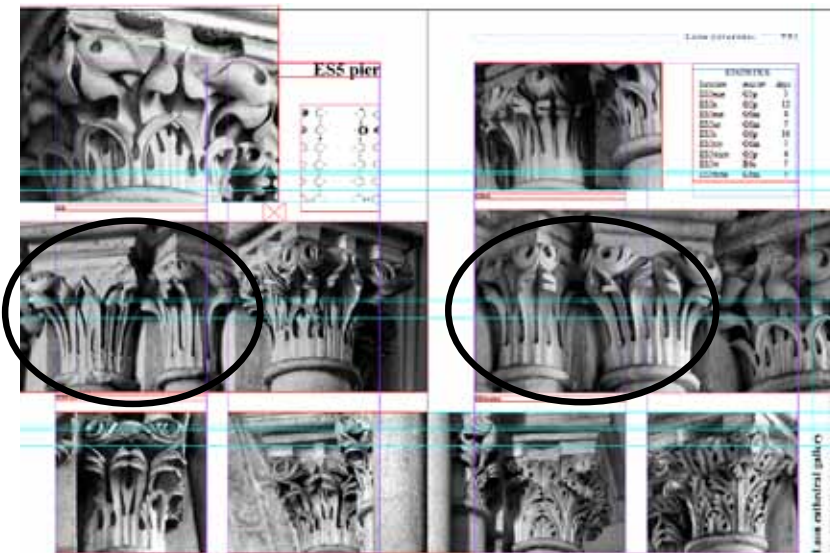
Some designs were clearly by individuals and some by members of small teams with strong design control. Even there, differences between individuals stand out, if only in the detailing.

I will describe the process through the ES5 pier. In *The Ark of God* each arcade pier is illustrated on a double page. This one is on pages 750-51 [b]. To help visualise the relative positions imagine you are circling the pier clockwise “with the small outer capital on the choir side of the pier at the bottom of the page, starting on the left, and the others arranged clockwise. The doubleau capital is at the top [arrow r].”^{v.4:713} On the thumbnail of the double page I have used circles to locate the four capitals by Fabrice [b].



Gallery pier

DRAFT



Ark of God v.4:750-51 on pier ES5. The four internal capitals by Fabrice are circled.

This is not the same carver as either of the adjacent capitals to the right of each circle. The more decorated stone on the right of the right-hand photo was by Lazare [r]. The two by Fabrice are reproduced in [r2].

Superficially the two are similar, with large corner fronds that turn down and back, upturned tips, and a strongly maintained division between the simple cohesive base and the emerging fronds.

Yet the curves are different, the tips more elongated on the Lazare capital, and the lobes more clearly defined on those by Fabrice. One has overlapping fern-like elements at the bottom that weave across the larger stalks, whereas the other does not. All stalks emerge from a common ground some distance above the astragal, but the Fabrice junctions are in line whereas on Lazare's the upper ones emerge higher up [r].

Similarly in a more obvious comparison in the left circle on the thumbnail of the double page. Fabrice's two capitals are next to a highly foliated arrangement by Franck. The layouts have similar upward pointing fronds and little ferns low down [arrows, b], but not the same finish.

One might think that the three in [b1] were by an assistant rather than Fabrice himself, as they look too thin and the gaps between the fronds are too wide. Allowing for the damage to the central fronds and one of the terminals, the authorship is unmistakable.



Lazare ES5s



Fabrice and Lazare ES5sw,ssw,s



Fabrice EN6ene,ne



Franck ES6w



Franck ES5ene

The 38 readily identifiable carvers

Each of those piers with Smilies on page 5 has a unique template, and each sculptor may thus be identified for the specific group of capitals they were asked to carve. The plan has been repeated with carvers named on it on page 9. The photos show one characteristic capital for each carver. The captions include the name, the number carved and the major location for the work of that master. It may be valuable to check the style of each man's carving in *The Ark* to see there are few significant variations.

Each man was given a group of contiguous stones to work on, usually an entire wall pier or half an arcade pier. There were no rules on how to carve, nor whether they had to be foliate or broadleaf, with the one exception that those visible from the choir should be foliated and more decorative than the others.

Though some of these men may



Abelard 8 capitals in SE4 and Se4 piers



Adrien 5 capitals all in SE2 pier



Aubert 4 capitals all in SE3 pier1



Benoît 5 capitals all in the Se3 pier

have carved additional capitals on other piers, the core identity is represented in the ones illustrated here. From this we can suggest clear identifications for 38 individuals. Between them they carved 187 capitals. This has left only 34 stones by 23 sculptors, ten of whom were transients.

These men form the backbone of this analysis, though all will require more discussion in Part 2.

The shaft capitals and their carvers have been excluded from this list, though in most cases they were the work of these same people. They too will be discussed



Clément 5 capitals all in ES2 pier



Cyprien 5 capitals all in ES2 pier



Denis 5 capitals all in ES3 pier



Dominique 4 capitals all in ES3 pier



Etienne 4 capitals in ES4 pier



Eugène 5 capitals in ES4 pier



Gervais 3 capitals in Es2 wall pier



Fabrice 4 capitals in ES5 pier



Franck 3 capitals in ES5 pier



Serge 4 capitals all in NE3 pier



Hercule 5 capitals in ES3 wall pier



Hervé 5 capitals in Es4 pier



Lucien 4 capitals all in Es10 pier



François 2 capitals in EN6 pier



Laurence 4 capitals in EN5 pier

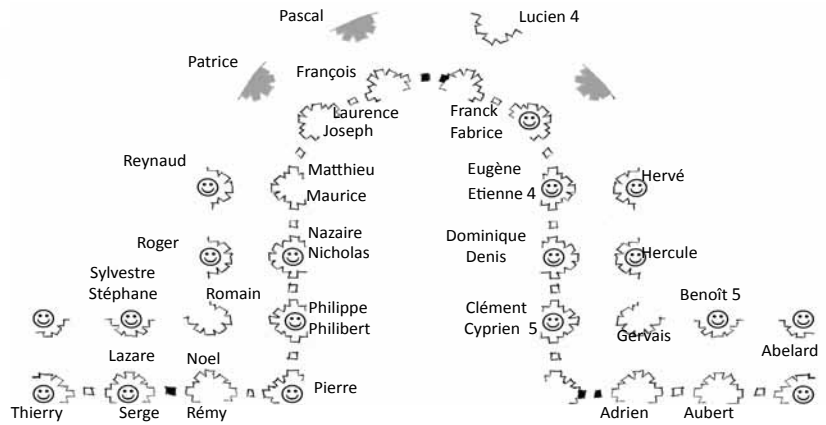


Lazare 5 capitals in NE3 pier

in the next part. It is enough in this article to establish that most of the carvings in the gallery can readily be attributed to individual carvers.

In the plan I have noted the piers where the representative designs for the 38 men are found [r].

I have placed the photographs



Location of the most representative capitals carved by the 38 a recognisable group in a similar manner.



Joseph 2 capitals mixed up in ambulatory



Matthieu 5 capitals all in EN4 pier



Maurice 4 capitals all in EN4 pier



Nazaire 5 capitals all in EN3 pier



Nicholas 4 capitals all in EN3 pier



Noel 4 capitals in NE2 pier

alphabetically to reflect the order of work, being south to north. But I have varied some so they may be grouped by designs, as with some on the walls and the F and N groups.

I have assumed that those who worked on the three inconsistently assembled ambulatory piers may also have carved the capitals over the adjacent shafts, on the manner of the other piers. So Joseph with two capitals may have carved all five on one of the wall piers, and similarly with François and Jacques.

These men and their sculpture are the foundation for this study. Most of the arcade shaft capitals and stones carved on other piers may be connected with these 38, so that taken together we have reasonable identities established for nearly all the capitals. The form the basis for the creation of the Timeline for the masons. The colour chart is on page 11.

Photos continued next page.



Pascal 2 capitals, probably ex one east wall pier



Patrice 2 capitals probably ex one east wall pier



Philibert 5 capitals all in EN2 pier



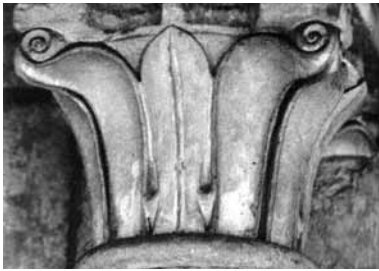
Philippe 4 capitals all in EN2 pier



Pierre 4 capitals all in EN1 pier



Rémy 3 capitals in NE2 pier



Romain 3 capitals on right of En2 pier



Reynaud 5 capitals all in En4 pier



Roger 5 capitals all in En3 pier



Sylvestre 3 capitals all in Ne3 pier



Stéphane 2 capitals in Ne3 pier



Thierry 3 capitals all in NE4 pier

The Timeline chart of masons

The chart on the next page shows the order in which tasks were apportioned among the carvers. The scale was not designed to represent time, though it might. It is unlikely that all 61 carvers would have arrived together. It is more probable that masters trickled in singly or in groups, and as they arrived were pointed towards the next pier to be carved. On the chart there is no moment when all were at work at the same time.

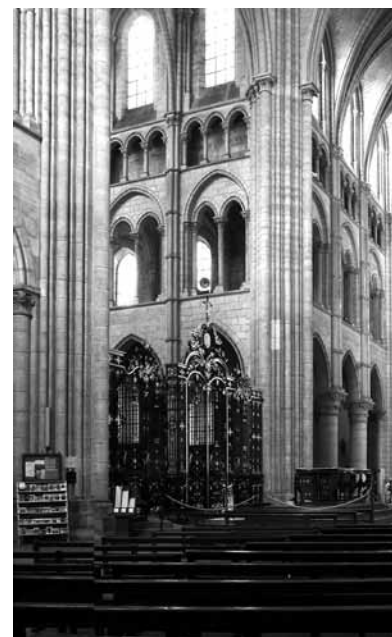
The piers are listed in the vertical scale in carving order anti-clockwise from south to north. The location of the exceptions in the corners was determined from those who worked on more than one pier. Along this scale the names of the men have been chosen alphabetically for ease of reference.

With this number of capitals it would not have been advisable to carve them out of order, which is why I suggest that one pier would be given to each gang or each individual as the men arrived on site. Physically, the best arrangement would have been for the capitals of each pier to be carved next to the pier itself, stored where there could be no confusion about where they were to be placed, and erected as soon as possible.

The last thing a master would have wanted would be a collection of 240 capitals occupying an enormous amount of space on the floor of a workshop at ground level, and having to hunt through them to find the particular one he needed for the pier he was erecting. The more I thought about the site organization the more reasonable it became to envisage lean-tos constructed for the men at their own location.

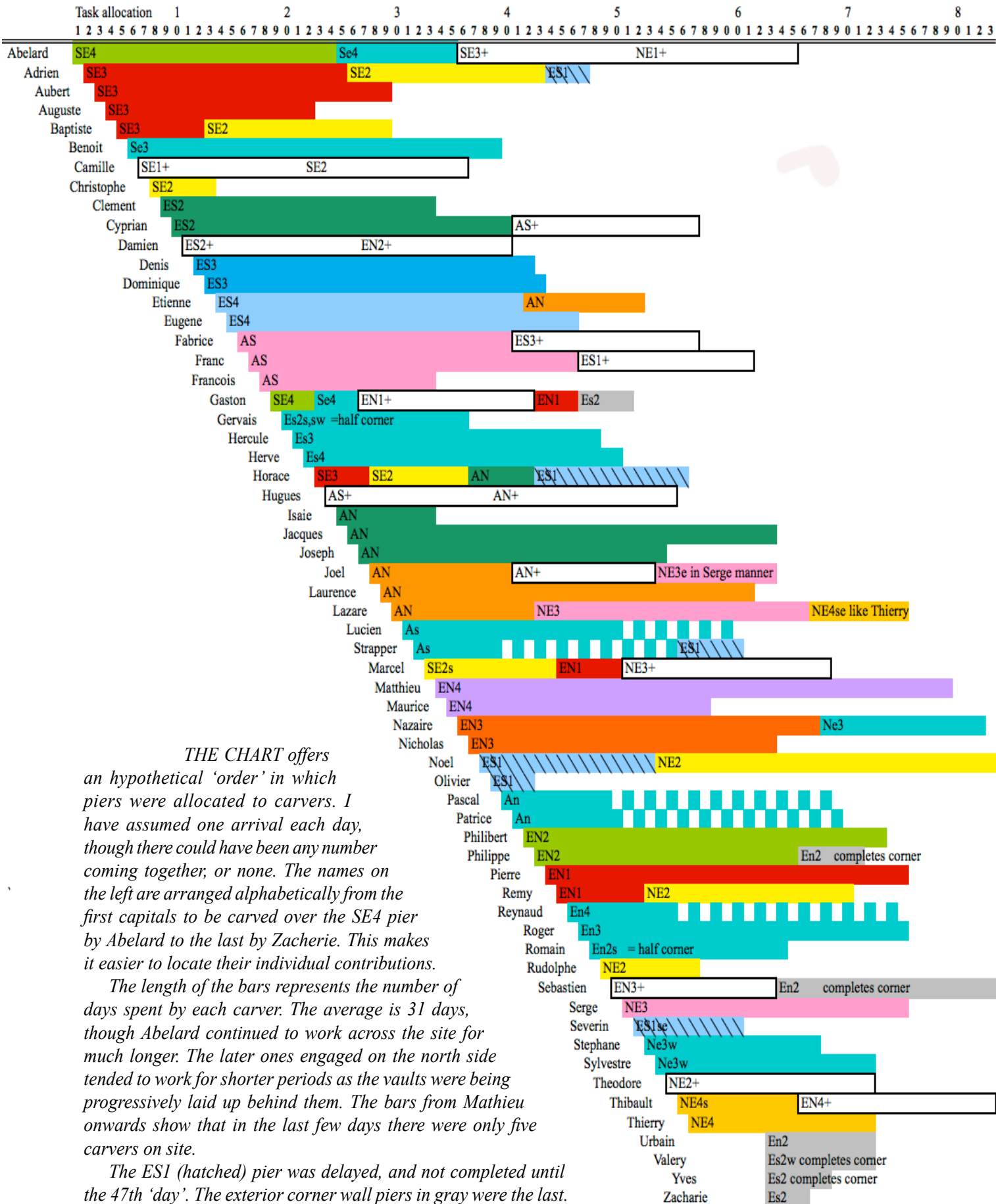
On the chart each pier has its own colour.

The shaft capitals are white and framed, and took some 14 days to carve. It was only when one was carved by someone whose other work can be located that I could determine their place on the vertical scale. Though I have not made a separate study of the erection process, the shaft capitals would have been essential to building the outer wall, inevitably a fairly slow stage. The shafts needed strutting to hold them vertical, the paired arches needed centring and the whole needed bracing until it could



Laon cathedral north transept and choir

TIMELINE FOR MASONS



THE CHART offers an hypothetical 'order' in which piers were allocated to carvers. I have assumed one arrival each day, though there could have been any number coming together, or none. The names on the left are arranged alphabetically from the first capitals to be carved over the SE4 pier by Abelard to the last by Zacherie. This makes it easier to locate their individual contributions.

The length of the bars represents the number of days spent by each carver. The average is 31 days, though Abelard continued to work across the site for much longer. The later ones engaged on the north side tended to work for shorter periods as the vaults were being progressively laid up behind them. The bars from Mathieu onwards show that in the last few days there were only five carvers on site.

The ES1 (hatched) pier was delayed, and not completed until the 47th 'day'. The exterior corner wall piers in gray were the last.

be secured into the cells of the vaults. The timber work would have taken a lot of space in the gallery, and therefore could be erected only after the carvers had vacated their trestles.

I have given the carvers French names rather than a code, as I have in the other studies in the *Master Carvers Series*. This may not be to everyone's liking, but we need a simple way to present complex identifications in a manner that will support the reader's recall. Cyprian is certainly more memorable than G6e.

As I assembled the chart and ordered the men in an anti-clockwise sequence the flow of tasks fitted into a reasonable working chronology. Etienne, for example, worked on the ES4 pier [r1]. When he had completed that task he was moved over to one of the ambulatory piers on the north side. The chart shows there was need for an extra hand at that time as Joël had been moved from the ambulatory pier to carve a shaft capital [r2]. Etienne's move to the north coincided with Joël's change of task. Other examples have helped to anchor the timing of many campaigns.

In most cases the arcade piers were the work of two men, and the wall piers of one. Where there are similar designs with different detailing a number of men may have come as a gang, with the foreman presumably being asked to carve the more prestigious stones facing into the choir. Gang names start with the same letter, so there were three men in the D-group (led by Damien?) and there were three in the N-group (led by Noël?).

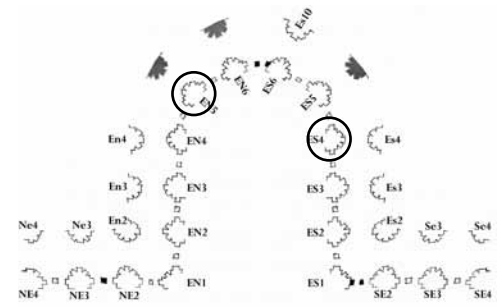
Not included in the chart are the small external capitals that flank the gallery windows, some of which were carved by these same men. They are small and would have taken only a couple of days each. They sit just above the inside wall capitals, and would have been finished afterwards [r3].

Exceptions would be in the last of the wall piers where men may have been drawn from among the ordinary masons working on the vaults. These were not specialist carvers, but men from the other crews called in to complete a section so the last acts of erection could be finalised.

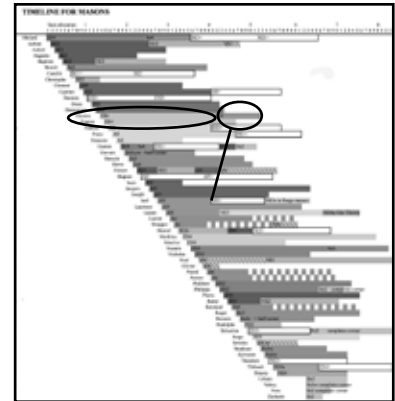
Towards the end of their time, as the gangs were winding up, work on some piers would have lagged behind, and masons who had finished their allotted tasks on a completed pier would naturally have been asked to help those in another gang who were not yet complete. The example of Lazare has already been examined.

In theory, some major carvers from the first half of the campaign, like the Damien group, could have stayed on to do more work, but did not. They left. Did they have commitments elsewhere and could only dedicate five or six weeks to this project before having to leave to fulfil other engagements? Or was the Master Mason running out of work to give such skilled men? Damien arrived on day 11, and he and his three men had finished by day 43. The miniature Timeline chart may help you find your way around a complex situation on the large colour chart on page 8. It shows that by day 43 nearly every pier was bespoke [r]. In other words, men left when there was no more for them to do, or at least no piers left to allocate. By the time the first-comers were ready to carve another pier most of them had been portioned out, and so the men who had arrived earlier began to fade away.

The Timechart shows that as this happened the workshops grew empty. Only half a dozen carvers were working in the last week or so. The fact that the numbers trail off in the north transept confirms that this was the last stage.

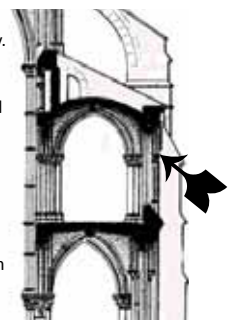


Circles mark where Etienne began on the south and where he moved to afterwards to help on the ambulatory.



This miniature chart is to help the discussion. Here the ellipse locates the work of Etienne and Eugène on the ES4 pier, and the circle the later work on the AN pier, presumably when Joël started to carve one of the shaft capitals.

Laon cathedral, section through the south gallery. The window capitals sit just above those in the gallery. They were carved with its vaults, not with those on the interior. Work stopped at the clerestory sills around 1168, so the flying buttresses would have been in the later program with the wall of the clerestory.



Time to carve the capitals

Working from the carving times considered in the previous study, #19 in the *Master Carvers Series*, I calculated the time needed to carve each capital in a soft *calcaire* stone. I decided to slightly increase those times to allow for originality whereas the Balinese designs were traditional. The basic times listed here were founded on a well-finished broadleaf design without undercutting or decoration.

A small two-sided stone has been timed at 3.5 days, a three-sided under a rib six days and the larger ones under the doubleau and arcade arches eight days. The four-sided broadleaf capital over the intermediate shafts was set at eleven days. Finishing a plain-surface broadleaf with care and precision was not a simple process. It was very time-consuming for the compound curves and smooth finish had to be completed to perfection. If they had used scrapers (serrated or plain) would they have been flexible enough even if made of bronze, and if chisels could they have been used without nipping or nudging the surface? Whatever the decoration, the smooth even finish formed the standard.

Those figures were then multiplied by a factor for the amount of decoration and its complexity, taking into account finely decorated patterns such as herringbones, and the degree of undercutting, especially in the terminals and crockets.

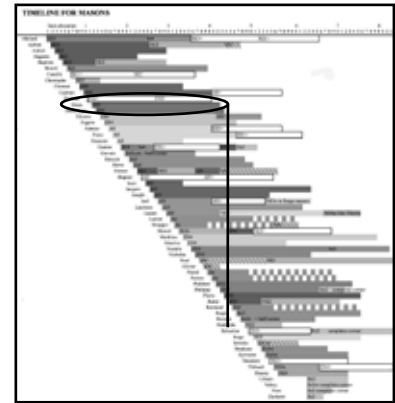
The calculations were made in Excel. The figures for the ES5 pier show the three sizes, the broadleaf time for each size, and the complexity factor [b]. The days estimated to carve each capital are noted on the right column, with a total of 68 man/days to complete the whole pier. In Part 2 this information will be tabulated for the whole gallery.

location	carver	size	basic time	factor	days
ES5ene	Franck	x	3.5	1.50	5.25
ES5e	Franck	x	8.0	1.50	12.00
ES5ese	Fabrice	x	3.5	1.25	4.38
ES5se	Fabrice	x	6.0	1.25	7.50
ES5s	Lazare	x	8.0	1.50	12.00
ES5sw	Fabrice	x	6.0	1.25	7.50
ES5sws	Fabrice	x	3.5	1.25	4.38
ES5w	Joseph	x	8.0	1.20	9.60
ES5wnw	Franck	x	3.5	1.50	5.25
					68

Calculations of time to carve the capitals on the ES5 pier.

The factor varied from 1 to 1.5 from the simplest to the most deeply and intricately sculpted. From this the largest capitals with the most dazzling designs would have taken 15 days or more. If it is shown that these figures are not precise, they do at least reflect a relative timing. Only the relative timing matters in this discussion, and altering the absolute values would have little effect on the analysis that follows.

The number of days worked by each of the 61 carvers are noted in the bar chart [r1]. Only 13 worked for more than 34 days, while the overwhelming majority were carving for 25 to 30. The time needed to complete an arcade pier was fairly standard at a little more than 60 man/days, and about half that for a wall pier. The real time may have been a few days more or less than these, for we do not know whether they were fast workers or slow,



By the time that the Damien gang had finished there was little other work for them to do

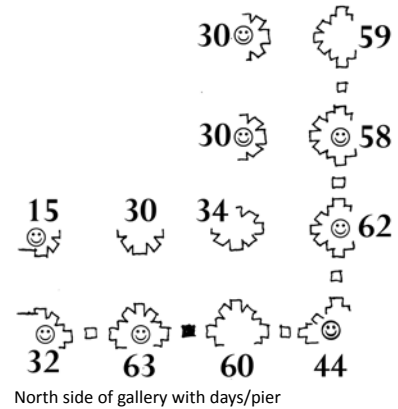


Bar chart of numbers of man/days being worked

whether they had a cold or had cut a finger, or any of the other things that might alter a man's working day. The diagram notes the times for the piers on the north side of the gallery [r2].

The 17 who worked for only 15 days or so are perplexing. Were they engaged on other tasks from which they could not be quickly released, were they late-comers, did they move into other gangs to help those who had fallen behind, or were they taken off the capitals to work on the complex stones of the gallery vaults?

And what of the four carvers who worked for 45 days? And Abelard who was present the entire time? I had thought they may have consisted of a man with a skilled assistant, which would have meant that the assistant was working at only half the speed of his master. Or were both of them there for half the time, or were these capitals by only one master who worked 15 days longer than the others?

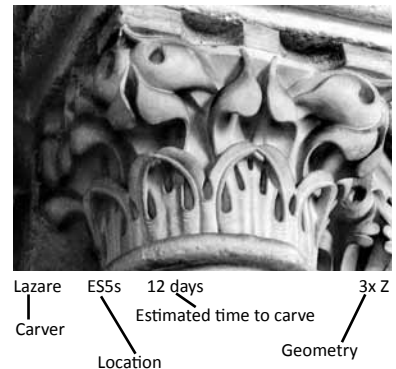


Notations and geometry

To save space in a study needing many photos, the illustrations are small, so please refer to the larger photographs in volume 4 of *The Ark of God*. In Part 2 each caption will give the master's code, the location, the estimated time to carve and the geometry in the template [r3].

This latter has been defined and discussed in detail in chapter 8, where the geometry behind most capitals lies most readily exposed in the broadleaf designs where there is only minimal decoration.

To summarise, two dimensional means that all the plates are in the one conoidal plane, as in [b1]. Three dimensional means that some plates lie behind others and that they weave through each other as they grow out of a common base just as plants do [b2].



Central plate on same plane as flanking



Central plate passes behind flanking

A second distinction is whether the central or flanking plate is dominant, marked with 'c' or 'f'. In addition, the 'x' refers to rinceau and similar designs, and the '+' refers to those where the major plates frame a smaller leaf, either in the centre or under the corners. As these examples show, not all designs have that extra leaf.

Central plates are not always easy to distinguish when foliated, and where the carving is complex with flanking plates or slashed into ribbons. Nevertheless, the initial broadleaf setout can usually be distinguished under the details [b]. This list gives the notation for each variety, their numbers in the gallery and the proportions of each.

2-D with central or flanking plates dominant	2c or 2f	11, 20	= 16%
2-D ditto with plates framing a leaf [r1]	2c+ or 2f+	49, 41	= 42%
2-D with ribbons [b2]	2x	11	= 6%
3-D with central or flanking dominant [r2]	3c or 3f	21, 22	= 20%
3-D interlaced ribbons and tendrils [r3]	3x	38	= 17%

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Tendrils instead of plates

South to north tilt

In the first volume of *The Ark* I had written “the southern side of the cathedral was a little ahead of the north. This suits the lay of the land, which falls towards the edge of the cliffs on the northern side, requiring higher foundations than on the south” [v.1:151]. The tilt from south to north apparent in the ground floor would probably have continued throughout the whole construction period, to great advantage.

The difference may have been a matter of only a few weeks, but enough to be useful during construction. If all the capitals, or all the vaults, had to be erected together there would have been too much work for the carpenters, too many ribs required all at once, and too much roofing all to be done at the one time. There was a profound organisational advantage in rolling the work from one side of the building to the other as work on each section could be staggered.

The vaults could be erected in the same progressive manner. It meant that as the northern carvers vacated their part of the site there was space for the vaulting gangs to come behind them and enclose the work. Formwork could be reused, scaffolding and cranes could be moved from bay to bay and voussoirs could be cut and as they were needed.

Abelard’s work lies on the first row of the Timeline chart. He carved the first capitals in the SE4 pier, the work of 25 days, and then the wall caps on the opposite corner over the next 10 days. This was followed by the adjoining shaft cap, taking a further 15 days. By then the work on the other side of the choir had advanced further and they needed one carved for the NE1+ shaft. This gives some idea of how far behind the north was from the south. From the commencement of the first southern capitals to the completion of the first bay on the north was approximately 65 days. At this rate we could possibly accept the allocation schedule on the chart as being close to the number of days needed to carve the entire gallery. I would like to examine how this pans out in isometric drawings that would show progress in regular steps from plinths to arches and ribs and vaults. In the meantime, this first approximation tells us the men were told where to carve in an anti-clockwise sequence starting on the south.

By concentrating the first carvers on the most southerly bay two things were achieved: The form for all the capitals was established and the vaulting over it completed before the last capital had been carved in the north. In this way the master mason could trial his templates and the skills of his workmen. As each stage proceeded northwards the prior completion of that stage on the test bay would have made it easier to build the rest of the gallery.

The first carver Abelard had earlier been working on capitals in the aisles underneath. Among the early recruits to the gallery four others had



Laon cathedral, south gallery facing north

also worked on the aisles. The reverse was also true: that four of the last carvers in the north stayed on to work in the triforium. The logic from noting that the south contains work by men who had worked on the level below, and the north by men who later worked on the level above, affirms that the south was more advanced than the north.

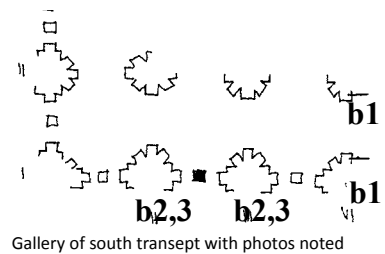
The tilt in the gallery implies a similar tilt in the aisles. The difference was possibly enough that they vaults in the north transept of the aisle were being laid up as the piers on the south transept of the clerestory were being started. Only part of the flooring to the gallery would have been in place as the first carvers moved in their trestles. This would explain the hiring process that seemed to move around the gallery in step with the completion of the decking on which they worked.

I will provide the details in the second part of this study.

Examples that confirm the tilt

The work of a number of sculptors bears out the above argument. What follows concentrates on the carving and erection program, not on the individuals. That is the role of part 2.

Abelard carved most of the capitals on both sides of the southern entrance into gallery [b1], as marked on the plan [r]. At the same time Adrien and Aubert were working on the SE2 and 3 piers [b2,3]. Capitals by Abelard and Aubert consist of close-packed fronds placed in two layers around the basket. Those by Adrien have a lower plate in the centre and fronds above in two plumes that leave a space between them, effectively undermining the foliate support for the corner.



Abelard in the SE4 pier and Se4 wall pier

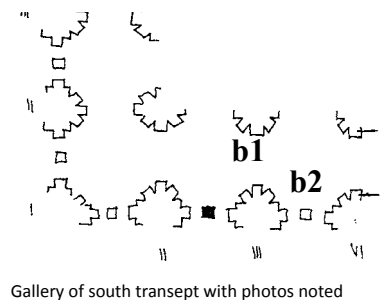


Adrien in the SE2 and SE3 piers



Aubert in the SE3 pier

Benoît was next on the opposite wall pier Se3 and is somewhat similar to Adrien [b1]. The location is noted on the plan [r3]. As these men were finishing, Abelard was beginning his third project SE3+, which was the first of the shaft capitals [b2]. There is a similarity in the foliage and the arrangements of these men that suggests a common training or background.



Benoît in the Se3 wall pier



Abelard in the SE3+ shaft capital

In a second example from Nazaire the south-north tilt becomes clearer. He began on EN3, which was the first on the north side of the choir. When he had completed 31 days on the five internal capitals he was whisked over to the north side to carve the last pier in the gallery, the most northerly wall

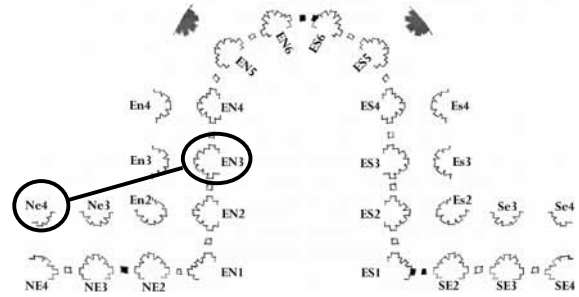
pier Ne4 [b1]. The timing fitted neatly into the work currently being carved in the north. The NE4 arcade pier was almost finished and the vaulting gangs were waiting on Thibault to finish the rinceau shaft capital NE3+. The arcade arches could not be erected until both Nazaire's and Thibault's work was done. Completing the wall provided the stability this bay needed. The timing was perfect. I show the relationship in the miniature Timeline [r3], which is given to help you find the relevant part on the large colour illustration on page 8.



Nazaire in the EN3n pier



Nazaire carving the last three capitals in the Ne4 corner



Nazaire transferred from EN3 pier to Ne4 wall

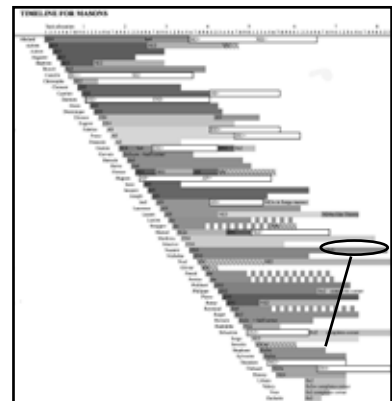
Fifteen working days after Nazaire completed the choir pier the master mason was ready for someone to set arches over the last northern bay. We now have a chronology. Assuming that the entire gallery was completed at the time Nazaire had finished the northern wall pier, the fifteen days for that piece of work marks the time required to allocate men for the seven piers in between. Roughly, two days between each pier.

With a little approximation this confirms the earlier statement that each column on the Timeline chart represents one working day. With a total of eighty working days probably signified sixteen weeks when we allow for feasts and other interruptions. The carving of the capitals seems to have lasted for four months, or most of a summer.

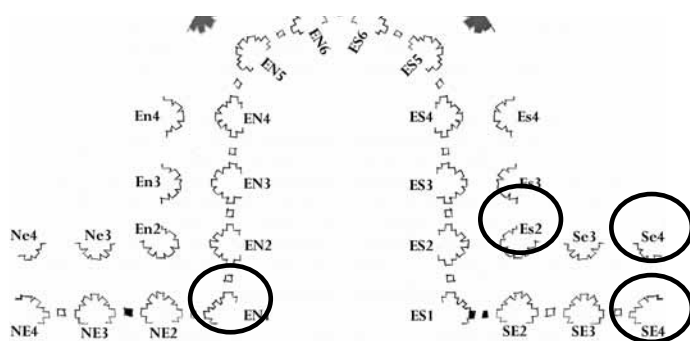
In a third example two men each worked on four different piers, breaking the usual pattern. The reasons tell us a great deal, for they were completing work on piers that had lagged behind or needed a shove for some reason.

Gaston worked on four piers. In the two southern entry piers the last capitals were required by day 35 if the south was to be the first ready for the vaults. They are small and each was easily carved in four days [r4].

He also provided similar capitals to the outer pier on the south outer corner Es2, and to EN1 on the other side [circles, b1]. The order of work from all the carvers shows these were not required until after day 40. Each pair of capitals took less than nine days to carve. The time in between would have been taken up with the carving of the EN1+ shaft cap. When these conditions were applied to the chart Gaston would have had to arrive on the job on day 19 and left on day 52.



Nazaire carved the Ne3 pier after finishing EN3.



Four identical capitals by Gaston



Gaston EN1nne 4.4 days

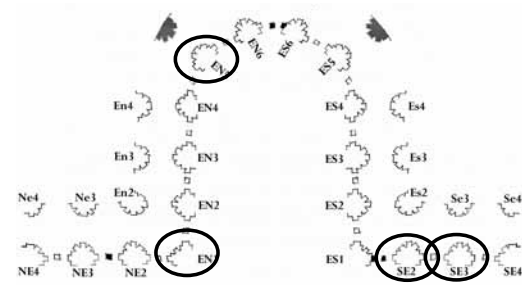
A third example is from the carver Horace, working on four piers [b]. His first would have been two minor capitals on SE2 and one to finish SE3, and his last were three on ES1 [r1]. In between he helped to finish AN1. The only way to place him in the program where he would fit in with the other carvers was to see him arrive on day 23 and remain on site until day 56 [r2].

He worked for much the same time as Gaston, 33 days, and both took on the role of completing wherever needed. The Timeline chart [r1] shows that the completion of each stone suited the progress of each pier and were timed to finish when required for the imposts and arches.

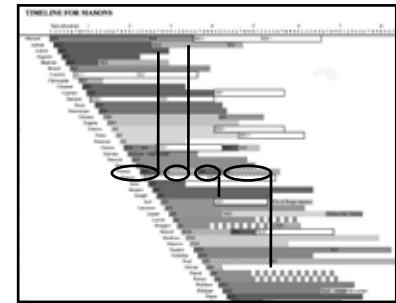
Both these men loved detailed foliate decoration and fine finishes on edges and herringbone decoration, and may have been chosen for troubleshooting roles because their skills were adaptable to any situation.



Horace ES1e



Five capitals on four piers by Horace



Four groups by Horace fit into intended places

Short-term carvers

A number of masters left only one capital, occasionally two [b]. None shared design qualities with any of the others. Five came for only a week or so, and then went on their way. Since their work is so distinctive they could not have come as pupils to a master who had given them the opportunity to try their hand on one of their own. We have in earlier studies met carvers who left only one capital in a building, such as Félix and Rameau. It seemed like they were passing through on their way somewhere else, and stopped to pick up a little cash, much needed when travelling great distances. I surmise that as all were excellent craftsmen they were picking up a little work to help their travels.

Only Strapper, bottom right, may have done more. He was given a front position to carve, not little stones like the others, and may have carved the whole of one of the ambulatory wall piers. Also, the last capitals to be carved in the corners were also solo works (see next page).



Baptiste SE2se



Christophe SE2se



Isaïe ES6ene



Olivier ES1nen



Séverin ES1ne



Strapper Es10n

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The wall piers

The capitals for the wall piers were on the whole completed after those in the arcade piers. Common to most buildings, the walls took longer to erect than the piers because they contained more stonework. As in the piers the work progressed from south to north, and nearly every pier was the work of one man or, in a couple of cases, of one gang.

Though some are quite exquisite, few are to the standard of those on the arcade piers [b]. Most are broadleaf, and may have been by masons who were normally engaged on walling or erection.

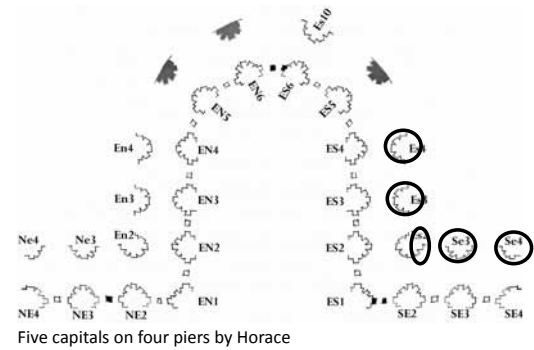
They fall into four groups that may reflect phases of construction. The first with the most skilled workmanship are marked on the plan [r1]. The designs are more intricate and the detailing more delicate than the others. They are professionally at a much higher standard than those on the north of the choir. The geometric setout is more complex and the detailing required more attention. Those in Phase 1 would have been working with the other quality teams who were concentrating on the arcade pier capitals.

I have mentioned that in the reconstruction of the ambulatory piers two sets of capitals from the walls were incorporated on the inside of ES6 and EN6. They are recognisable as having been on the walls because the sides of the dossarets are set acutely to one another, rather than being square like those in the arcade piers. If each were representative of one pier we now have some idea of what the other capitals in two of the wall piers may have been, marked 'a' and 'b' [r2].

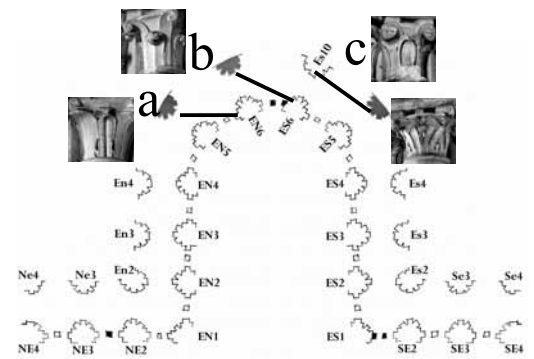
Similarly, if each pier had been assigned to one gang, the doubleau capital in Es10n may have been the sole representative another of the ambulatory wall piers, marked 'c' on the plan.

After the men of Phase 1 left the site, less skilled carvers, possibly from the masonry or erection gangs, were given an opportunity. The change of teams in the other two phases are noted on the captions [b], the third group being the most plainly carved.

I would place the very last, being those in the corner piers, into its own Phase 4. These will be discussed next.



Five capitals on four piers by Horace



Possible original locations for the remaining capitals on the four ambulatory wall piers.



Se3 by Benoît in Phase 1



Se2 south side by Gervais in Phase 1



Es3 by Hercule in Phase 1



Es4 by Hervé in Phase 1



Es10n ex As1(?) by Strapper Phase 2



Es10 ex As2(?) Lucien in Phase 2



ES6se ex An2(?) by Patrice in Phase 2



EN6ne ex An1(?) by Pascal in Phase 3



En4 by Reynaud in Phase 3



En3 by Roger in Phase 3



En2 east side by Romain in Phase 3



Ne3w by Stephane in Phase 3

Providing access through the corners

The two corner wall piers and the southern crossing pier were assembled from a mixture of capitals, and appear somewhat chaotic. In Es2 there is toichological evidence that the courses do not line up on each side of the west-facing doubleau shaft, indicating the erection process was uneven [arrows r1]. The three capitals on the south side by Gervase are as elegant and delicate as any in the arcades [b].

The other corner capitals are different. They are shown in order from left to right [b], They are more like those in Phase 3 except for one capital on the left by the window [b1]. It is one of a number carved by Gaston (see page 15) and would not have been carved around day 50, by which time most of the southern capitals would have been completed. On the chart [r3] the line rising from Gaston's work (circled) lies after the pier capitals on the south side of the choir (inclined ellipse). His was about the last to be carved on this side.

Together, the capitals and the construction break suggest the possibility that the east half of the Es2 pier was completed long after the southern half, with the joint being behind the west-facing doubleau shaft. Over half the pier was left unfinished, which I presume left an entry port for materials. During the many weeks the capitals were being carved masonry on piers and walls still had to erected, arches and vaults raised and the roof set up. So the presence of gangways through this gap would be sufficient explanation. Cranes would have been located nearby.

Pushing the south half of the pier ahead would have supported the doubleau and enabled them to build the vaults in the second bay while still delivering materials [x on b4] This would have been after most of the carvers had moved their trestles to further parts of the gallery.

In addition, I would imagine that the more difficult scaffolding at the corners and the more complex organisation of their vaulting arches may also have delayed these areas a little, enough to upset the regularity so evident elsewhere.

There is a similar argument for the En2 corner pier, and to some extent for the ES crossing pier as well, all with an inconsistent collection of capitals. For this stage of the work it would be appropriate that each of the last carvers completed only one stone: Urbain, Valéry, Yves and Zacharie.

The building of the vaults determined which part of the corner piers would be left unbuilt. As the south transept would be first part vaulted the gap was left on the opposite ambulatory side of the Es2 pier. In reverse, because the choir vaults were progressing past the ambulatory it was the opposite northern half of the En2 pier that was delayed.

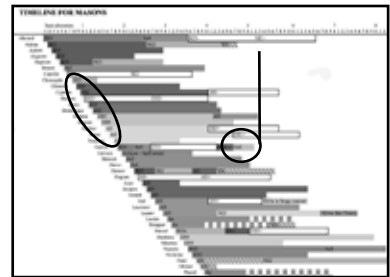
With few specifics from other levels, I would say it is likely there were cranes outside the building on each corner and others on the inside by the crossing piers that were supplying carved stones from two work sheds outside the walls and one at the crossing.



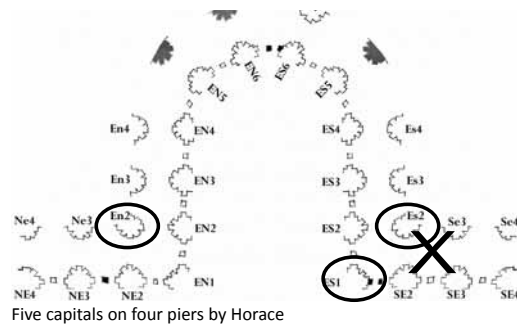
Broken coursing behind the Es2w doubleau shaft.



ESe2 south side by Gervais in Phase 1



Gaston capital by Es2 window after all south piers



Five capitals on four piers by Horace

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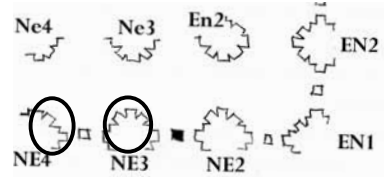


Capitals on east side of Se2n from left to rib capital on the right, by Gaston, and in Phase 4 by Yves, Valéry and Zacharie in Phase 4

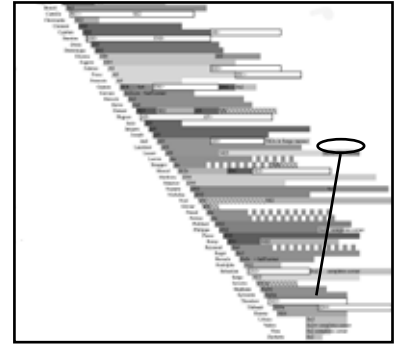
Supporting each other, mimicry

In the NE4 pier by Thierry [v.4:716] there is one capital that is unlike the others. Compare a typical Thierry with the rib capital that has the same design, but with plain tendrils and very different terminals [b1,2]. The terminals are very like Lazare's work in the adjoining pier [b3]. It suggests that Lazareo had finished his work under the adjoining lean-to and offered to help. The plain undecorated faces of the terminals and its joined petals are just as we would expect from Lazare. He would naturally have carved simple masses and unadorned stems. It is possible that Thierry was getting short of time, as he may have been pushed to complete the last capital in the gallery while the men laying up the arches were wanting access to this last pier at the end of the gallery.

Yet the template was Thierry's. Was this template shared between teams or had Thierry set out the stone and blocked it in and only needed somebody to finish off the details? Or was Lazare prepared to forego his preferences and carve the whole stone as Thierry wanted him to?



Lazare on NE3 helps Thierry on NE4



Lazare finished the NE4se capital for Thierry



Thierry capital on NE4 pier



Lazare finishes Thierry template of NE4se



Lazare on adjoining pier NE3

The next example is not as convincing. In the EN2 pier Philibert placed little balls under the terminal fronds. They support the lobes resting on them that could be made almost impossibly light and delicate [b1].

The detailing on the eastern capital differs slightly from this [b2]. It does not have the three uppermost leaves in line as do the others by Philibert, but they slope downwards towards the middle leaf in the centre. The long bent lobes with extremely pointed tips on the Philibert leaves are not repeated, and the terminal lobes are less bent. One has to look very carefully to see the differences, but they are there.

These small items suggest that someone helped out, possibly Aubert from the way he handled his not dissimilar fronds in the SE3e capital on the other side of the building [r]. If he had carved any part of the lobes onto a layout by Philibert, Aubert may well have produced the EN2e capital.

This suggestion is really unsatisfactory, as we could also be looking at an apprentice of Philibert, or a change in the master's own way of working, either of which would make for a simpler explanation.



Aubert's own details in SE3e



Philibert triple-leaf arrangement on the EN2w pier



EN2e in the same style of cutting but with different leaves, probably Aubert

Did carvers come individually or in gangs?

Where more than one carver worked to a common instruction, how should we interpret the evidence? Was there a leading carver who was able to instruct those underneath him, or so revered that his pupils remained with his style for years? Had they all been trained in one template and continued to practice with it into their maturity? Was it coercion or respect, persuasion or training?

I believe there were gangs in which one carver was the leader, and others with similar levels of skill agreed to work in the same manner. I have already discussed this matter in a piece in the *Master Carvers Series* on Grégoire and two assistants in the Chartres colonnettes and on him and Héron leading different gangs in the Bourges jambs [#11 and #17]. The practice appears to have been more common than one might suspect. Over thirty percent of the men came in gangs in which every carver used similar geometric layouts and terminals. In the Laon gallery these are the piers in which every member shared similar templates [r]:

Abelard, Adrien and Baptiste in the south

Cyprian and Lazare on ES2,

Damien, Dominique and Denis on ES3,

Fabrice, Franck and Lazare on EN6 (just discussed),

Hercule, Lucien, Sylvestre and Stéphane on the walls (not marked),

Matthieu and Maurice on EN4,

Nicholaus and Nazaire on EN3,

Philibert and Philippe on EN2 and

Thibault, Thierry and Théodore on NE4.

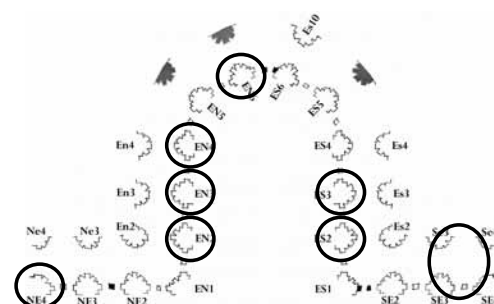
The major differences lay in the detailing and the amount of decoration. It will be interesting to determine whether these ‘underlings’ continued to use the same template on other jobs, or did they move on to their own. The latter is evident on pages 2-3 of the SS Master, and the other in work these men accomplished on the Laon triforium (see part 2). The others carvers, almost forty of them, came individually, wielded their own templates, and showed no sign they had been influenced by others.

The next stage - Part 2

In Part 2 I will examine the work of each of the major carvers. I will list which shafts they each worked on, whether any had worked elsewhere on the cathedral, and some of the more obvious places where they may have worked on other churches.

It has been suggested in correspondence that the approach I have taken at Laon in which all the carvers for a particular campaign can be set out and compared, would be more readily understood than the investigation of individuals that I have pursued hitherto.

This analysis may help to determine the best approach, though I must say that concentrating on recognisable individuals has offered an immense learning, and I doubt if I would have been able to attempt Laon without the research that has gone before.



Laon cathedral, piers circled where every carver shared similar templates