

THE CONTRACTORS OF CHARTRES REVISITED

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Introduction

Some thirty-five years ago, architect and architectural historian John James published an in-depth study of the cathedral at Chartres entitled *The Contractors of Chartres*.¹ Five years later he summarized his conclusions in *The Master Masons of Chartres*, in which he encapsulated his theory about the contractors who built the cathedral at Chartres:

If Chartres had been built in another age, the control over the builders would have been greater, and the many complications that have permitted us to see into the history of its construction would have been lost. As it is, we can divide the major part of the work up to the completion of the vaults into over thirty campaigns, carried out by only nine contractors. They each appeared for a short time, laying on average a mere three courses of masonry in each program. Some returned to the works many times and, when not there, would have found work on the other great cathedrals and abbeys around Paris, sometimes as far away as Auxerre and St. Quentin. They were itinerant men, wanderers like strolling players and freelance soldiers, who moved with their chattels from place to place working where and for as long as they were needed, and packing their bags and moving on when the need had passed, or the funds to pay them had run out.²

It is not difficult to understand why the idea of itinerant contractors has met with considerable resistance from the start, as it tends to fly in the face of our understanding of medieval building practice, and indeed of practicality. Because James' conclusions were met with such fierce resistance, little credence was given to his method of inquiry, after all, how could a sound methodology lead to such an untenable conclusion? In this study, I hope to turn back the clock somewhat and disentangle the evidence James has extracted from the fabric of the building from his ultimate conclusions. This is not an easy task, as James' every argument is framed to support these conclusions. I have always been skeptical of James' "consecutive contracting" theory, and the question for me has been, where did James take a wrong turn? What assumptions did he

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¹ This work was originally published in French in three phases as *Chartres – les constructeurs*, by the Société d'archéologique d'Eure-et-Loire in Chartres in 1977, 1979 and 1981. An English version of the first five chapters was published in a limited edition of 200 in 1978 in Australia. This was reprinted with a second volume in 1981, also in Australia, which will be hereafter referred to as *Contractors I* and *Contractors II*. These volumes were condensed in *Chartres, The Masons Who Built a Legend*, published in 1982, presumably intended for a wider audience.

² John James, *The Master Masons of Chartres* (Sydney 1990) 49.

make that led him inevitably to his conclusions? And finally, is it possible to take James' evidence and explain it some other way?

Identification of Dossiers

In such a short presentation, we cannot possibly address all of the fragments of evidence that James gathered, and which are presented in great detail in his two-volume work, *The Contractors of Chartres*. James himself believed that the place to start was beneath the aisle roofs, and for our purposes this will make sense. Through several visits with James to this area, it has become clear to me that this area shows three horizontal zones of distinctly different character. (Fig. 1)

The lowest zone of masonry is characterized by well-cut and beautifully smoothed stones with narrow joints. (Fig. 2) This work extends above each of the door openings that connect one bay with the next. The corbels that frame these doors are all identical throughout the choir, the east walls of the transepts and along the north side of the nave. Only those of the south side of the nave are different.

The zone of masonry above the first is completely different in character. (Fig. 3) The stones are roughly hewn and the joints often filled with pebbles. The quality of the stone is lower, with frequent holes and fissures. The courses are shorter and the stones are wider. There are also masons' marks on these stones which are absent in both the lower zone and that above. According to James "...when the next crew took over, they not only changed to another part of the quarry, but varied the heights of the coursing to suit different standards."

The final zone of masonry above the first two is more like the lowest, with well-cut stone and reasonably clean joints. (Fig. 4) The ceiling is supported on a corbel of different design from those found at the doors below, both in profile and geometry.



Figure 1



Figure 2



Figure 3



Figure 4

So, according to James: "...it would seem that three crews of stonecutters put up the triforium of the choir."³ James identified these crews as Bronze, Scarlet, and Olive, and assigned their work to the years 1208, 1209, and 1210 respectively.⁴ This stems from his underlying assumption that one contractor had absolute control over the entire site at any given time, so that it would be impossible for such variations to occur unless they were the work of three different contractors working during three different building seasons. This is what I will call the "consecutive contractor theory." This theory is at the root of all of James' conclusions, as indicated when he

³James, *Contractors I* (supra n.1) 23.

⁴James, *Contractors I* (supra n.1) 282-287.

briefly addressed the question of whether Chartres was built from east to west or west to east, a question he felt had not been fully resolved.

It would be extraordinary indeed to find the same crews working in the same order in one period of construction as in another. To have these crews returning, after many years, to repeat the same work in the same sequence with the same methods is, I think, asking too much of coincidence. Therefore the north nave triforium was built with the choir by these three teams.⁵

To summarize James' argument:

- There are 31 layers and 31 years of construction
- Each contractor has absolute control over every detail on the site. These contractors are identified and distinguished by their measurement system (Roman foot, Royal foot, etc...) and their peculiar approach to laying out the geometries of the more complex pieces of their stonework.
- Therefore, each layer must represent a single contractor and single year.
- The same details and geometry occur in several different layers in the building, and the total number of different contractors seems to have been nine. Therefore, contractors came and went like "strolling players".

James provided a chart of the contractors and their dates inside the back covers of the books. James' theory seems untenable for a number of reasons:

- To have contractors coming for a season, and then leaving for a few years before returning seems more than a little impractical, particularly at a site where funding did not seem to be problematic. Numerous critics have raised this point.
- Just because the number of layers is the same as the supposed number of years to completion of the vaults does not necessarily require a direct relationship—it could be coincidence.
- What about those variations in the quality of stone? Why would the second contractor in our example not simply use the same area of the quarry that had produced the proven quality of stone that the first contractor had exploited?
- In examining James' chart of contractors and dates, we notice that Bronze, the purported author of the lowest layer of the triforium, occurs in 1195, 1198, 1201, 1205, and 1208, while Scarlet, author of the next layer appears in 1194, 1200, and 1209, and finally Olive

⁵James, *Contractors I* (supra n.1) 24.

in 1197, and 1210. Bronze and Scarlet are found immediately before or after one another on four separate occasions, which does seem somewhat more than coincidental.⁶

Is there another possible explanation that would result in the same physical evidence, but which conforms more closely to logical building practice? And might this explanation be applicable at other contemporary sites?

The Concurrent Contractor Theory

The idea of a single large crew controlling a site as large as a cathedral site has always bothered me. How might one become a “supercontractor”? How does one man gather under him a sufficient number of masons to work an entire cathedral site? And, if there were indeed a crew large enough to do so, would not their entire careers be dedicated to working that one cathedral site, given the time it typically takes to construct one? Moreover, the cathedral sites are the exceptions, not the rule. Most building sites must have been much smaller, and could easily be handled by smaller crews. Would not the typical crew be of a size designed to handle these smaller sites? And therefore, would it not make more sense for the large sites to recruit several of these crews at the same time? This is where a theory of “concurrent contractors” seems to make sense. Let us examine some of the benefits and pitfalls of such an approach.

First, having multiple small crews would mean that if one crew pulled out at any given time, it would not shut down the entire project.

Second, having multiple crews at the site at the same time would explain the opening of multiple areas of the quarry. Each crew master, working in his own particular idiom, would probably want quarries working to his own specifications. As these would be different for each crew, it would likely be confusing for one group of quarriers to serve the varying needs of multiple contractors.

Third, having multiple crews at the site at the same time would explain differences in geometry that occur from one level to the next. Each crew was responsible for a few courses, and worked their way around the building not in a year, but over the course of several years. This explains why Scarlet appears in layers 1194, 1200, 1209, and Bronze in 1195, 1198, 1201, 1205, and 1210.⁷ As Scarlet is the first contractor identified by James, he would have been responsible for establishing the plan of the entire building. (Fig. 5) This might well have taken six years to accomplish. Meanwhile, other crews were clearing the site, setting foundations, and ultimately, Bronze was following behind Scarlet on the next layer, (Fig. 6) and behind him, Rose, (Fig. 7) and so on. (Figs. 8–10) The result is the same layered building we see today, but it did not require a one-contractor-one-year-one-layer approach.

⁶James, *Contractors I* (supra n.1) inside back cover.

⁷James, *Contractors I* (supra n.1) 180-181.

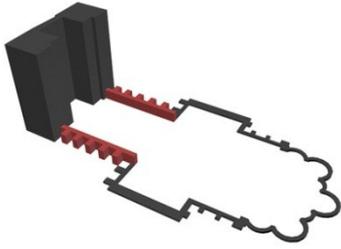


Figure 5

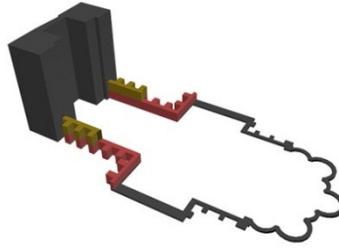


Figure 6

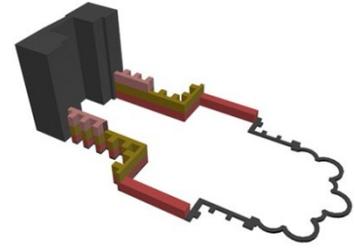


Figure 7

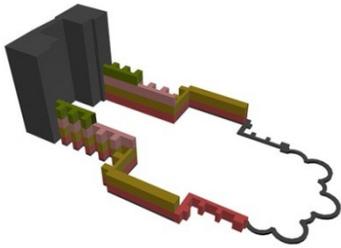


Figure 8

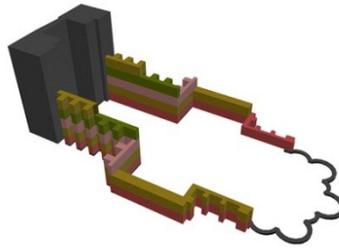


Figure 9

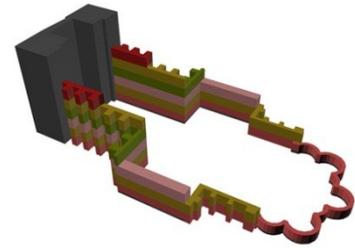


Figure 10

There are a number of important advantages to this approach. Many have noted the apparent unity seen in most of the French cathedrals, including Chartres, but does that necessarily have to spring from a single mind? Let's go back to the first years at Chartres. Scarlet established the plan to which everyone who followed was bound. As long as the same contractor was working on the same layer around the perimeter of the building, there would be consistency. There would have been times when, for whatever reasons, a layer in the nave might not match the same layer in the choir, and this is visible in many places at Chartres. Nonetheless, each of the contractors involved was bound to the plans of the elements such as piers and shafts that had been laid down by their predecessors. You cannot change the diameter of a shaft halfway up. Consistency was assured. And if the crew who put up the bases of the triforium columns was not the same as the one who put up their capitals, how would we know? Yet, since all the bases were set by the same crew, and all the capitals by a different crew, everything appears as though it were the product of a single vision.

This, I think, is the reality of medieval building, and the challenge of the "master of the works." Someone has to coordinate all these crew masters, but I think it is unreasonable to assume that this person had absolute authority over the details. He could not possibly impose his system of measurement or his approach to geometry on the other masons. He must resign himself to a general vision for the building, and then work with the individual crews to establish workable details, each of which was created in the individual crew master's own idiom. It is in his interest, and in the interest of apparent visual unity, to have these crews work in horizontal layers.

Unfortunately, the theory of concurrent contractors obscures the question of who did what when, and of how we date each portion of the cathedral at Chartres. The next step will be to take the detailed, stone-by-stone drawings James produced and which reside still in Chartres, and attempt to model a system of concurrent contracting that is not in conflict with the evidence found in the stones themselves. Ultimately, in the absence of clear textual evidence, it will be impossible to prove for certain that this was indeed standard medieval practice. We can only look for clear evidence that this could not have been the case. Meanwhile, it seems that such a system is more tenable than both the “supercontractor” theory, and that of the “strolling players.”