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THE ROMANESQUE FACADE OF WINCHESTER CATHEDRAL: PART II*

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WHAT TYPE OF FACADE WAS INTENDED?

As has already been discussed, the normal size of the pier suggested by the masonry now incorporated into the south-west respond and the fact that, at best, it is not centred on the east foundation wall, if it did indeed fall on the foundation at all, are stumbling blocks in the restoration of any towered structure over the foundations. This is especially true for the reconstruction of a west transept with a crossing tower over the foundations, as there would have to have been a massive pier at this point (Fig 4). The same factor also seems to argue against a twin-tower facade based upon the model of a building like Durham Cathedral which would also require enlarged piers for the support of the towers (Fig 10). As there is no indication of the necessary mass of a tower pier – whether for an axial tower or for one of a pair – some other model must be sought.

The comparison for a two-tower facade might be more appropriately made with earlier Saint-Étienne (*c* 1063–1100), in Caen, rather than later Durham (1093–1133), although an even more appropriate and obvious comparison might seem to be the twin-tower facade of Christ Church, Canterbury, possibly the earliest completed in England. However, although the north-west tower – the so-called Lanfranc Tower – of Canterbury's twin-tower Romanesque facade survived until 1832, Gothic arches had been inserted underneath it, so it is not possible to tell how it originally related to the nave and north aisle – if there were solid walls or arches under it.[44] In the later building, Durham (Fig 10), the tower bases project boldly beyond the line of the aisle walls, and large piers were placed under the inner, eastern corners of two towers because wide arches opened into the ground stage of each tower from both nave and aisle.[45] By contrast, at Saint-Étienne, there were no piers under the towers (Fig 15).[46] Rather there was a thick wall defining the facade-block as an entity separate from the nave. Thus there were solid walls at the ends of the aisles.[47] In addition to the space under each tower being completely separate from the aisle, it was discretely subordinate to the nave bay between the towers (the *avant-nef*), because the arches opening into the ground floor spaces under the towers were separated from the nave arcade by a solid wall approximately three meters in length.[48] As a result, the western responds to the nave arcade were immediately adjacent to a half-shaft set against a dosseret (like those of the heavier nave piers), with an angle-shaft to the east, which rose up the elevation between the tower bay and the westernmost nave bay (Figs 16, 17).[49] Respond and wall shafts at ground level read continuously as a pier-like design similar to the other nave piers.

The intention to construct a two-tower facade-block in the manner of Saint-Étienne's, but even more massive, could well explain the shape of the Romanesque material in the Winchester west respond. As described, the section responding to the nave arcade consists of a half-shaft set against a dosseret flanked by half-shafts. Towards the aisle, following the flanking Romanesque half-shaft, there is a vertical joint between it and the following Gothic work in the form of a series of shafts or vertical mouldings that connect the Romanesque fabric of the 'respond' to the Gothic west wall of the aisle. In other words, towards the aisle there are no additional shafts or reentrant angles corresponding to those on the nave (north) side of the respond: the respond is asymmetrical

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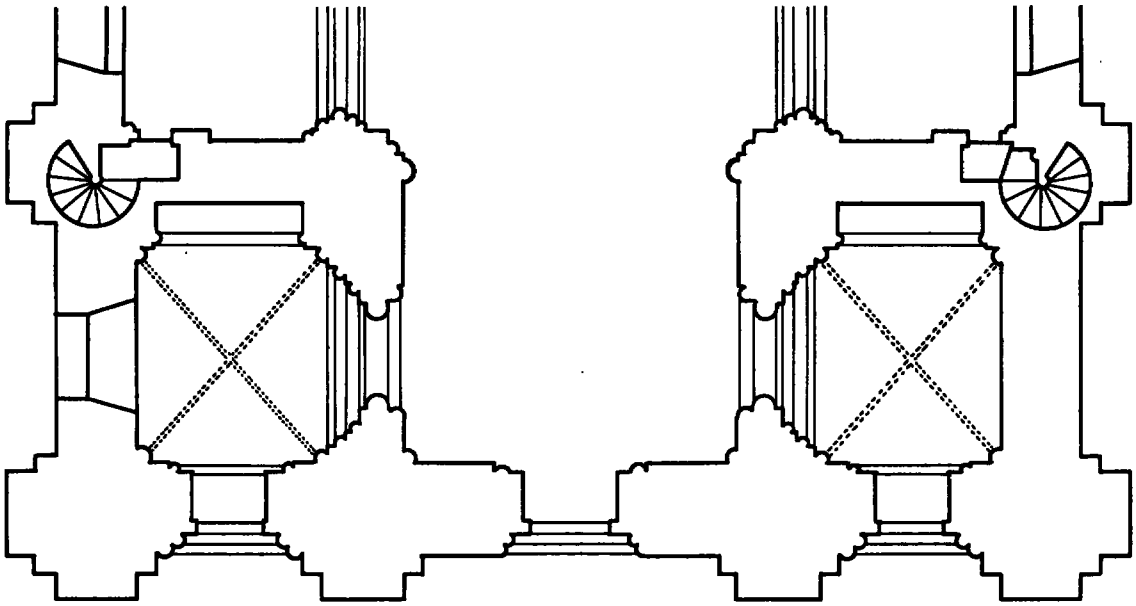

Fig 15. Caen, Saint-Étienne. Plan of ground floor of facade-block as originally built (author's restoration: drawing by K L Clark)

(Figs 5, 18). The absence of Romanesque material towards the aisle could be explained by the junction of the respond with a heavy wall at the end of the aisle separating the space of the aisle from a tower bay, while the asymmetrical element of the respond – the shafts facing the nave – could be explained as having been 'attached' to the east end of a section of wall extending between the last arcade of the nave and an arch further to the west opening into the tower base. Thus, the uncovered foundations would have supported a thick solid wall between the aisle and tower base, and a heavy wall between the western nave arcade and the tower arch. Presumably, the projecting elements of what can now be properly recognized as a Romanesque west respond would have rested on a sleeper wall for the nave arcade – or on a separate projection from the western foundations.

At gallery level, one would then postulate that the projection removed by the later fourteenth-century builders was indeed a cross wall separating the tower bay at this level from the aisle gallery – as at Saint-Étienne, rather than simply a rere-buttress like those between the gallery arcades to the east. If it was originally simply a buttress, it seems unlikely that the fourteenth-century builders would have bothered to remove it. The removal of such a (hypothetical) cross wall has also eliminated any trace of a deep archway which would have connected the nave gallery to the corresponding level of the tower as at Saint-Étienne (Fig 19).

The comparison is not exact, for at Saint-Étienne, the east face of the cross wall between gallery and tower is immediately adjacent to the west responds of the westernmost gallery arch, rather than, as it would seem to have been at Winchester, two to three feet further to the west. However, it is a feature of each level of the towers at Saint-Étienne that the basic oblong bay is extended to the east by a wide oblong niche at least a meter deep, thereby reducing the thickness of the wall below the level of the vault to two meters. At Winchester, with its much thicker walls, the gallery may have been extended further west in place of the effect of niches in the tower rooms. At Saint-Étienne, the stair-turrets were located in the outer eastern angles of the towers, with the entrances to them from the end of the

Fig 16. Caen, Saint-Étienne. South-west respond of nave arcade (arcade level) (photo: author)

Fig 17. Caen, Saint-Étienne. South-west respond of nave arcade (gallery and clerestory level) (photo: author)

Fig 18. Winchester Cathedral. South-west respond viewed from south-east (photo: author)

Fig 19. Caen, Saint-Étienne. North gallery, archway to north tower (photo: author)

aisles, their structures occupying about half the width of the east walls. Consequently, the arch between gallery and tower room was restricted to roughly half the bay width and could not be centered. At Winchester, very likely the stair-turrets were in the western outer angles and so the full width of each eastern wall could have been available for an archway to be centred in it. But one would not expect an exact duplication of plan, and must also take into account the greater size of Winchester.

It can be observed that at Saint-Étienne, where the facade-block was most likely completed before that at Winchester was begun, the twin-towers rose over rectangular bays – of about the same proportions as those evident in the foundations at Winchester – flanking a square central section.[50] So a massive austere block culminating in two towers as at Saint-Étienne is also on this basis a possibility.[51] This solution seems preferable to the idea of a transept-like space with a crossing or axial tower which would require a massive pair of eastern piers for which there is no evidence.[52]

One other alternative remains to be considered: that is, some kind of a galleried westwork, again possibly with a large axial tower in the tradition of Centula/Saint-Riquier (790–799). This solution gains favour since the excavation of the Old Minster at Winchester has provided evidence of a western structure of *c* 974–980 which has been restored on analogy with the westwork of the abbey church of Sankt Vitus at Corvey an der Weser (873–885): a towered central square surrounded on north, south, and west by aisles and galleries, square towers (filled by wooden stairs) in the angles at the west, the entire structure 'focusing' on the site of the tomb of St Swithun.[53]

Such complex structures were no longer being built in the late eleventh century, not even in Germany, so it is not surprising to find the foundations implying a simpler form of three major sections only. A galleried structure in the conventional form of a traditional westwork seems out of the question: that is, one consisting of a low, pillar-filled, vaulted entrance hall supporting a main tower-tribune, with the central space of the raised tribune open to the nave by a large arch (or arches) and reached by projecting stair towers. However, an upper level at Winchester could have been reached by stairs located within the thickness of the walls and hence not expressed, and a gallery could have been supported on three large vault units, in which case the one spanning the central bay would have been thirty-six feet square. This dimension seems rather precocious for a vault structure of the late eleventh century in Great Britain, if planned at the time Winchester was begun, or even for the early twelfth, when it might actually have been built, but is not an absolute impossibility.[54]

An analogy could be made, of course, with the west front of Speyer Cathedral (*c* 1050 and 1080–1106), where three large bays form a vast, partially open porch with a *Kaisersaal* above; the spiral stairs were contained within the immense thickness (6.10 m/20 ft) of the wall between the porch and nave spaces. This simplified and opened-up westwork was covered by a transverse roof interrupted in the middle by a central tower form.[55] However, a parallel type of structure at Winchester, which would place a solid wall pierced only by small portals, across the west end of its nave, does not offer an explanation for the form of its surviving south-west 'respond'.

DATE

Willis's observation that the profile of the chamfered plinth of the small fragment of wall remaining at the north-east corner of the foundation was similar to that of the south transept might at first be taken as evidence that the foundations of the nave – at least of the aisle walls – and the intended west front were put down at an early stage in the construction with, perhaps, even the lowest courses of walling raised on the facade foundations.[56] However, the profile in question is of such a basic design that its appearance at the west end can only be taken to provide evidence for the continuity of design a date in the first years of the twelfth century for the laying of the west front foundations is equally plausible and probable.[57]

Indeed, the west front could not have been undertaken until the Old Minster was torn down,

since the 1960 excavations revealed it partly overlapped the site of the west end of the Old Minster. Since demolition of the Old Minster only began in 1093, on the orders of Bishop Walkelin,[58] after the dedication of the new choir, it seems unlikely that more of the nave than two or three of the east bays were *begun* before that date (and they need not have been completed). With the completion of the east arm and transept, the pace of construction may have slowed down. Although the crossing most probably was complete at the time of the dedication, the tower need not have been. The period 1093 to 1107 may have been devoted to raising the central tower *and* the east bays of the nave, and the preparation of the foundations for the remainder of the work to the west.

One slight design change is evident in what little remains of the original nave elevation. Wall responds in the form of a single half-shaft rose up the full height of the wall in the first three bays; thereafter they occur only in every other bay.[59] This suggests that the nave may have only been carried this far between 1093 when the east end was dedicated. Its continuation, and the beginning of the construction of the west front would have been interrupted by the collapse of the central tower in 1107.[60] Completion followed only after the central tower was rebuilt.

A careful examination of the remaining Romanesque masonry in the nave reveals that the nave was not carried forth in one more-or-less continuous, rapid campaign. In addition to the nave piers of the south arcade, Romanesque masonry is still to be seen on the exterior of the south aisle wall, from the east end up to and including the penultimate bay at the level below the window sills. As already mentioned, all of both gallery arcades can be found under the aisle roofs. And, finally, all the buttresses between the clerestory windows on both north and south still exist. No Romanesque masonry remains visible on the north aisle wall.

The south aisle wall would seem to have been carried out, at least up to a certain height, with the construction of the south arm of the transept. The masonry of the eight eastern bays displays the same rather thick joints as found on the west wall of the transept, especially below the window sills. The masonry of the *two* western bays immediately before the one rebuilt by Edington is, however, somewhat less coarse-jointed. This suggests at least the lower part of the south aisle wall was built for a length nearly equal to the intended cluster but, significantly, was not carried forward initially to include the west end.

At the level of the gallery, a change from a coarse-jointed masonry to a rather fine-jointed one takes place in the second bay from the west on the south side where the contrast is evident between the two halves of the spandrel. On the north side, most of the gallery arcade masonry may be described as at least medium coarse, and there is, in addition, a contrast between the masonry of the buttresses, which is coarse jointed, and the spandrels, which are less coarse. Again, as on the south side, the masonry of the west bay is distinctly fine jointed (with the west half of the spandrel somewhat finer than the east half). From this we may deduce that the south gallery arcade was carried out uniformly up to but not including the western bay and a half; it may have preceded the north side which then followed in a regular fashion, again being left off before the west bay. The south gallery arcade, as might be expected, appears less coarse than the south aisle wall – which may be due to the lack of erosion and repointing. On the other hand, one would perhaps not expect the interior surfaces of walls which would not be seen to betray the very best quality of the work at that stage.

At clerestory level on both sides, the picture is more complicated. Here are found varying forms for the buttresses and a number of shifts in the masonry style which, starting out coarse-jointed at the east end, gradually become finer-jointed as work moved to the west. On the south, the eleven buttresses fall into four groups. The first six rise without setbacks and are of coarse-jointed masonry (Fig 20). The next two buttresses have simple, narrow-chamfered setbacks, the lower part of a deeper projection than the buttresses to the east. Their masonry is coarse jointed below the setback, somewhat less so above. The succeeding two buttresses also have setbacks but at a lower level than the previous two. Their masonry is less coarse (medium-coarse) and that of the wall to either side is even finer. The last

Fig 20. Winchester Cathedral. Two eastern bays of south nave clerestory (photo: author)

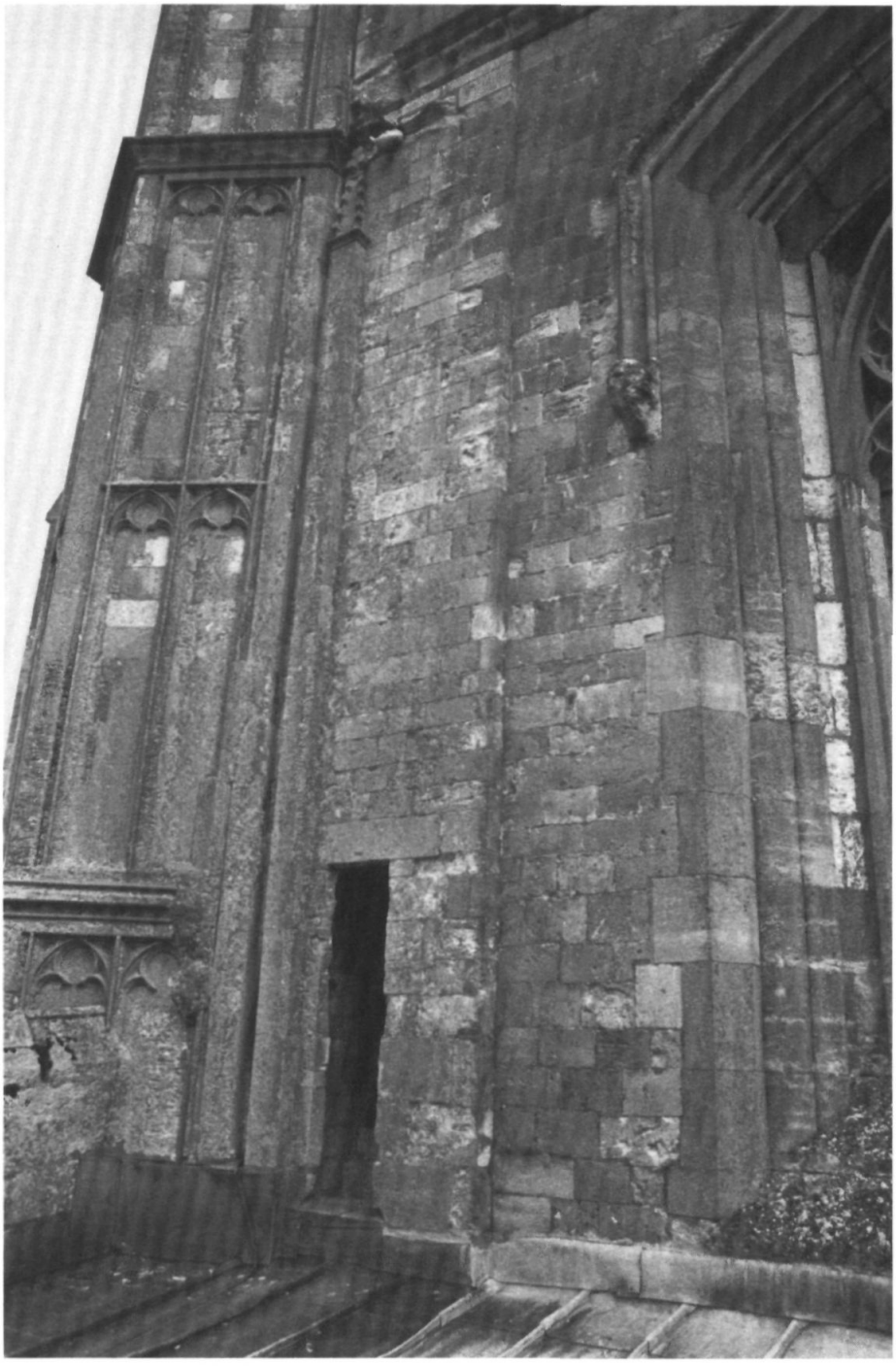

Fig 21. Winchester Cathedral. West end of south nave clerestory (photo: author)

buttress has a setback at a higher level than the preceding pair. Again the masonry below the setback is slightly coarser than the masonry above and on the wall to either side which is fine jointed. The finest masonry is found at the west side of the west window (Fig 21).

The buttresses on the north clerestory are much more variable in form and follow no apparent pattern in the arrangement of their setbacks. On this side, all the buttresses except the two western ones have setbacks which, however, vary considerably, a setback being present on the main face and/or on the sides (sometimes one side) in ever changing combinations. They progress from three narrow chamfered setbacks on the main face, to one wide one, to a broad setback on the main face and sides, to a narrow one front and sides, to a narrow one on the front and one side, to a broad one front and one side, to a narrow one on both sides only (two buttresses), and to one on one side only. Coarse-jointed masonry is characteristic of only the two eastern buttresses; the next three show a change to medium-coarse and finer, with the last six all of rather fine-jointed masonry, with the finest work in the west bay (as on the south).

It thus appears that construction of the two clerestories proceeded at a much less uniform and rapid pace than the two gallery walls. The clerestories were begun before either gallery level was completed. The first six bays of the south clerestory are the earliest, with the north clerestory perhaps being started only as the seventh south bay was begun. Even then, the south side was carried forward in advance of the north of which the six western buttresses may be contemporary with the westernmost one of the south.

The general picture is of a nave being constructed horizontally, with the south side always in advance of the north at both upper levels. Since the finest jointed masonry is found in the west bay at gallery and clerestory levels, it seems the western structure was not being carried up with the western half of the nave. During the construction of the nave, especially in the clerestory level, a transition from coarse to fine jointed masonry occurs, an intensification of the less dramatic changes in the quality of the masonry as construction proceeded from the south aisle wall to the south gallery arcade to the north gallery arcade. The finest masonry in the west bay at the clerestory and gallery levels is comparable to that found in the rebuilt tower piers, dating sometime after 1107.

A number of questions can be formulated. Just where in the course of the construction of the nave did the tower collapse? When the tower collapsed, was it immediately rebuilt and how long did it take, as it involved massive new piers and extended to the adjoining bays of the transept (the bays corresponding to choir and nave aisles)? If the nave was not complete, did they hurriedly carry it forward to the west bay, or work on it sporadically while clearing the old crossing and preparing and building the new? As they built the new tower, did they simultaneously work on the western bay in order to close in the nave? In this respect, one can recall an observation made with regard to the construction of the west end of Saint-Étienne where it seems the east wall of the facade-block was carried up with the western nave bay but the other three sides – north, south and west – remained to be raised at a later date.[61] At Winchester, the fine-jointed work most conspicuous in the west bay at gallery and clerestory level, so comparable to work in the new tower, could reflect a similar closing of the nave while leaving the remainder of the west block as little more than foundations.

Willis suggested that the intended facade structure was never finished;[62] this idea raises two problems: how to explain the existing core of the south wall (Figs 2, 3) and the reference to a tower being completed *c* 1200? An incomplete south wall could, in theory, have been left to serve as a wall to some structure exterior to the west monastic range, or a wall could have been erected on the south foundation to serve the same or similar purpose.[63] But what other position was there for a tower that could have been built in 1200? The fact that it was started and finished within the year does suggest a less major undertaking than the construction of a west crossing tower, especially one Ely-like in height.[64]

At this point, it might also be asked why, if a monumental west front structure had actually

been built, it was torn down by Bishop Edington only to be replaced by a modest type of screen facade?[65] That act would be far easier to understand if what was replaced was an equally modest sectional facade from the early twelfth century, a facade representing a radical change in intention at the time the nave was nearing completion. The plans for the west front could have been changed as a result of the collapse of the crossing tower (1107) and the necessity for its rebuilding, causing an unexpected delay in the completion of the nave and, more importantly, an unanticipated drain on funds.

It seems safe to say the nave and certainly the west front were not completed by 1107. Furthermore, it can be argued that when the central tower collapsed, the west front was little more than foundations, with possibly the (south-west) respond having been raised to complete the south nave arcade. The western-most gallery and clerestory bays had not been built – both gallery arcades having earlier been carried only to the penultimate west bay and ceased there while the clerestories were gradually brought forward. Whether or not the west bays were completed while the central tower was rebuilding or only after it was finished, the result of its collapse would possibly be the same. The west front was never completed, rather the east wall of the projected tower block formed a closing wall. After the aborted attempts to build towers over the end bays of the transept arms – towers which had to be abandoned in the course of their construction due to the threatened collapse of the end bays of the arms – and after the disaster of the central tower, who can blame the builders of Winchester at having drawn the line at attempting a monumental two-towered western block? So it was left incomplete, making Edington's facade easier to understand. He was not replacing a monumental Romanesque structure, only a 'temporary' wall. In this light, his Gothic screen facade must have seemed a vast improvement.

CONCLUSION

Whether or not the Romanesque facade was ever completed in its intended form, it seems clear from the nature of the surviving Romanesque masonry at the west end of the south nave arcade, that the buried foundations were not meant for a west transept but rather for a two-towered facade-block similar to that still standing majestically at Saint-Étienne, Caen. Whether or not this facade-block was intended to have, or actually had, a western gallery cannot now be established by the meager archaeological evidence. If the western structure was not carried up until the second or third decade of the twelfth century (after the repair of the crossing tower), the suggestion of Klukas that it contained a royal loggia, as may have been the case in the Old Minster, in which 'William and his heirs wore their crowns each succeeding Easter until 1108', loses validity.[66] The possibility that the structure was still only foundations about the moment the royal custom it may have been meant to accommodate was declining suggests that, like Saint-Étienne in Caen, the bay between the towers was intended to be – if and when it was built – fully open to the nave.[67] And if the facade was barely under construction as the custom was in decline, there, perhaps, is another possible explanation why it may not have been completed – if that indeed was the case, as seems most likely.

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NOTES – PART II

44 For the drawings of the tower by J C Buckler see F Woodman, *The Architectual History of Canterbury Cathedral* (London, Boston and Henley, 1981), figs 20, 21 (p 36).

45 At Durham, the tower bays are square and the nave bay between them rectangular (plan: *Archaeological Journal*, LXXIX [1922], 106). The same was very likely true for Westminster Abbey (plan: *Archaeologia*, LXXXIII [1933], following p 236). For further on the relationship of Saint-Étienne and Durham, and the development of twin-tower facade structures with large arches under the tower, see J P McAleer, 'Romanesque England and the Development of the *Façade harmonique*', *Gesta*, XXIII/2 (1984), 87–106.

46 For the western block of Saint-Étienne, see G Bouet, 'Analyse architectural de l'Abbaye de Saint-Étienne de Caen', *Bulletin monumental*, XXXI and XXXIII (Caen 1865 and 1867), (1865) 454–459 and E G Carlson, 'The Abbey Church of Saint-Étienne at Caen in the Eleventh and Early Twelfth Centuries' (PhD dissertation, Yale University, 1968), 264–89/93. Following Bouet (1865), 454–456, Carlson, 264–6, accepted the actual construction of the facade-block after the completion of the western bay of the nave which he dated (108, 110) to 1081; he dated (108, 115) its erection between 1096 and 1100, and explained (83–4, 109–10) the long delay in its completion as due to the construction of Saint-Nicolas (1083–1093), and to unfavorable circumstances under Duke Robert before 1096. But as the patron, Duke William, died in 1087, it seems unlikely he would not have pressed on with the building of the facade between 1081 and 1087, leaving the towers only to be completed 1096–1100. Carlson's allotment of only four years for the construction of the block and the towers seems inadequate and improbable.

47 Both walls were later broken through in order to directly connect the aisles to the bays under the towers. Judging from the rib profiles, the aisles and tower bays were revaulted in the fifteenth century (Bouet, 'Analyse' [1865], 451); it was probably at that time that the section of the aisle west wall between the stair-turrets and the nave arcade west responds was opened up from floor to vault, as the space equal to the thickness of the wall is covered by a vault with a rib identical in profile to that of the vaults to either east or west (the vaults were redone in the seventeenth century: Bouet [1865], 451, and [1867], 778–9; Carlson, 'Abbey Church', 200, n 6). In the nineteenth century, V Ruprich-Robert restored the wall on the north side to its original thickness (2 m), but, even today, on the south, there is only a thin walll (30 cm) closing the aisle from the tower bay. For the restoration see Bouet (1867), 781, and Carlson, 152, 159 n 13, 269.

48 Because the masonry of the eighteenth-century organ loft fills the western part of the bay (Carlson, 'Abbey Church', 143, 266–7, 270), overlapping the jambs of the tower arches, it is difficult to get a precise measurement. The unobstructed stretch of Romanesque wall immediately west of the half-shaft measures 1.46 m, the plinth of the paired columns of the organ loft, another 1.59 m. This brings one to the face of the half shaft of the middle order of the tower arch; therefore to the jamb of the outer order to the nave it would have been somewhat less (it is uncertain if there were one or two outer orders: Bouet, 'Analyse' [1865], 454, fig 34, shows tower arches of five orders, but on the inner sides he incorporated a pair of shafts that more likely corresponded to the vault groins than to the archway).

49 At the level of the gallery floor, on each side, an angle shaft joins the half-shaft on the west; each appears to bond with the neighbouring half-shaft, although Carlson, 'Abbey Church', 274, 279, thought they were added when the bay was vaulted. They never extended further down, as the half-shaft and the flat stretch of wall west of it course regularly on each wall.

50 Although the lateral walls of the tower of Saint-Étienne, Caen, do not project beyond the aisle walls, the tower bays measure 4½ m × 6 m, or approximately 14½ ft × 21 ft on the interior, a ratio of 2:3. At Winchester, the internal measurement of the lateral bays of the foundations is 22 or 24 ft × 36 ft, or not quite exactly 2:3.

Later in the twelfth century, twin-tower facades of the type of Durham, with the towers raised over rectangular rather than square bays, were found at Lewes Priory and Barking Abbey, both now reduced to foundations or less.

For a plan see A Pugin and J and H Le Keux, *Specimens of the Architectural Antiquities of Normandy* (London, 1827), pl 7 (I), or P Gouhier, *L'abbaye aux Hommes* (Paris, 1960), 12. The plan which appears in *Congres archeologique*, LXXV (Caen, 1908), I, between 20/21, does not show the arches to the ground stages of the towers correctly, either with respect to width or location.

51 The massive facade of Bayeux Cathedral (*c* 1046–77) may also be relevant here, as the west block was probably a more monumental 'version' of Saint-Étienne. Extending well beyond the romanesque aisles, it had squarish bays under the two towers; the central bay was a rectangle, which, however, was occupied by a gallery. See McAleer, '*Façade harmonique*', fig. 8.

52 The foundations at Winchester bear some resemblance to those uncovered at Old Sarum which belong to a facade structure erected *c* 1135–40, under Bishop Roger (1102–1139), a resemblance also noted in Pevsner and Metcalf, *Southern England*, 330, following Pevsner and Lloyd, *Hampshire and the Isle of Wight*, 668. There, however, the structure did not project boldly beyond the line of the aisle walls, although a square central compartment and oblong flanking ones are indicated. R A Stalley, 'A Twelfth-Century Patron of Architecture: A Study of the Buildings Erected by Roger, Bishop of Salisbury 1102–1139', *Journal of the British Archaeological Association*, 3rd Ser., XXXIV (1971), 74, thought a large central tower was 'more plausible' than twin-towers as an explanation of the Sarum foundations.

53 For the complete plan of the excavations of the Old Minster see Biddle (1970), fig 12 (between 316 and 317). For an interpretation of the plan development, Birthe Kjolbye-Biddle, 'A Cathedral Cemetery: Problems in excavation and interpretation', *World Archaeology*, VII/1 (1975), 93, fig 21.

A model of the final form of the Old Minster is on display in the Winchester Museum; a plan and a drawing of the elevation appear in a leaflet, Martin Biddle, *Old Minster: The Anglo-Saxon Cathedral of Winchester, c 648–1093* (Winchester Cathedral, 1984); the plan is outlined on the ground at the site, and an accompanying placard displays a sectional axonometic of the elevation.

54 The groin vaults erected over the nearly 46 foot (*c* 13.85 m) wide nave of Speyer Cathedral, *c* 1100–1106, imply the vaulting of a 36 foot square bay was not beyond the technology of the time. The ribbed vaults of Durham's choir, erected between 1093 and 1104, were over bays (approximately) 20 × 34 ft. (J Bilson, 'The Beginnings of Gothic Architecture, II. Norman Vaulting in England', *Journal of the Royal Institute of British Architects*, 3rd Ser., VI [1898–99], 316, gave the 'clear width' of the transept as 33 ft 9 in/10.28 m, and of the nave, 32 ft 4 in/9.85 m; for the choir see fig 8.) The appearance of ribs in the repaired and reconstructed bays of Winchester's transept after 1107 suggest that, if this western bay was vaulted, a ribbed vault would have been used.

55 The central bay of the *Vorhalle* of Speyer is now covered by a ribbed vault over a rectangular bay 8.5 m × 11 m.

The *Vorhalle*, along with the entire *Westbau*, was drastically rebuilt between 1854 and 1858 to the designs of Heinrich Hübsch, having been mostly

destroyed in 1689. Thus, only the basic parti is romanesque, clad in a 'fantasy Romanesque' by Hübsch, who also altered gables, roof, central and flanking towers: Walter Haas, *Der Dom zu Speyer* (Königstein im Taunus, 1984), 3. For Speyer see also: Franz Klimm, *Der Kaiserdom zu Speyer* (Speyer, 2nd ed., 1953), 49–51, 29, 27, 25, 20–1; *Der Dom zu Speyer*, eds. Hans Erich Kubach and Walter Haas, 3 vols (*Die Kunstdenkmäler von Rheinland-Pfalz*, V; Berlin and Munich, 1972), I, 121–46.

56 I do not believe there is any building from the period for which there is secure evidence that the foundations of the nave and of the west front were put down at the time the east end (presbytery, choir) or transept were being constructed. It certainly was not true of Bury or Ely, and it was not the case at Durham.

57 The chamfered base if not mentioned by Biddle in his reports, nor does it appear in the published photographs; it is rather implied by the plans. Fernie, 19, n 11, based on Willis, calculated the setbacks as three inches deep each.

A simple chamfered plinth was used in the West Hall of the Norman (Wolvesey) Palace, *c* 1110 (Biddle [1970], 322–3, pl. LIb), and a chamfered base was also present in the later East Hall, dated *c* 1129–35 by Biddle (1967), 273–6 (esp. 275). See also Biddle and Keene in *Winchester in the Early Middle Ages*, 323–8; M Biddle, *Wolvesey Palace: The Old Bishop's Palace, Winchester, Hampshire* (English Heritage Handbook: London, 1986), 5–6 and 29–30, 9–10 (*c* 1135–8) and 32–6.

58 *Annales*, ed Luard, II, 37. See above n 2.

59 The Romanesque wall responds are yet visible, especially on the south side of the nave, above the Perpendicular vaults. They occur in bays (reading from east to west) 1, 2, 3, 5, 7, 9 and 11, and consist of a half-shaft. See Willis, 74–5.

60 Crook, 'East Arm', 29, contended 'that the introduction of a type of high-level double-bay system into the more westerly bays of the nave was inspired by a change of design that was first employed as a compromise solution to a design problem in the transept'. According to Crook, 29–30, the east three bays of the nave were 'presumably completed by 1093', while the remainder of the nave had to 'post-date the completion of the transepts in their final form', i.e., by 1093. See also J Crook and Y Kusaba, 'The Transepts of Winchester Cathedral: Archaeological Evidence, Problems of Design, and Sequence of Construction', *Journal of the Society of Architectural Historians*, L(1991), 293–310, esp. 308. Crook, *Winchester Diver*, 24, dated the completion of the nave and 'West End' to probably *c* 1120; Biddle, *Winchester in the Early Middle Ages*, 308–9, thought the three or four eastern bays of nave complete by 1093, the remainder of nave by 1122/4.

61 See above, n 45.

62 Willis, 66.

63 Interestingly enough, in Pevsner and Metcalf, *Southern England*, 330, a qualifying 'perhaps' is included: '. . . very thick Norman walling, *perhaps* part of the S wall of the mighty W front . . .'.

64 Since the passage regarding the tower is in the margin of the *Annales* (ed Luard, II, 73, n 2), there is room to doubt its accuracy. The original of the *Annales* (British Library, Cotton MS. Domitian A.xiii) is written in a hand of *c* 1300 (Luard, x), with wide margins which might have been frequently used for additions (Luard, xii). J Harvey, 'Had Winchester Cathedral a Central Spire?' *Winchester Cathedral Record*, XXVII (1958), 12, suggested that the entry of 1200 should be interpreted as a reference to the construction of a timber spire for the central tower, rather than the completion of a west tower. This proposal was favoured by Quirk, 'Winchester Cathedral', 54, n 5. Harvey claimed it was 'technically impossible for a stone tower of any size to have been built from start to finish in a single year . . .'.

65 Peers and Brakspear, 51, 58, presumed this rebuilding was undertaken because of 'the ruinous state' of the Romanesque west front. It was completely destroyed, 'a part only of the south-west transept wall being left standing to form a boundary wall of what is now one of the prebendal houses'.

66 'Architectural Implications', 152. Alternatively, if the west structure had been completed before the collapse of the central tower, and contained a western gallery, it would have served its function only for a relatively short time. Biddle and Keene in *Winchester in the Early Middle Ages*, 311, doubted there was any continuity in the liturgical function of the two western structures. They thought it particularly unlikely that the Romanesque front would have contained a 'royal pew' due to its location 'excessively far from the centre of the church'. They did, however, suggest there may have been an 'external gallery' for royal appearance. (The royal palace was located west of the Old Minster.)

67 The facade-block of Saint-Étienne definitely did not contain a west gallery (the organ loft was inserted in the eighteenth century), and therefore is not any form of a westwork in contrast to the

earlier western structure of Jumièges Abbey. Indeed, Saint-Étienne represents the final stage in the transformation of the westwork into the prototype for the subsequent development of the twin-tower type of facade. However, despite the fact there seems to have been no functional requirement for a west gallery in Duke William's church, it appears that the original form of the facade of Matilda's church of La Trinité included a west gallery over an open (tripartitie) porch. Later renovations were so extensive as to make comparison with Winchester difficult, if not impossible, except to note that a west wall containing the portal would have been placed in the line of the east side of the towers, thereby eliminating the probability of any responds in a position analogous to those at Saint-Étienne – or Winchester. For La Trinité see M Baylé, *La Trinité de Caen (Bibliothèque de la Société française d'archéologie*, X; Geneva, 1979), 40–1, 49–51, 68–9.

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