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Fig. 23 Florence, Santo Stefano al Ponte, facade window. The church was built in the 11th and 12th centuries (unknown architect).

It is the very novelty of Brunelleschi's architecture that is its most striking and, arguably, its most suggestive quality. This novelty is perhaps most apparent in his usage of framing elements for apertures of one kind or another. Those bordering the arched alcoves in the altar chapel of the Old Sacristy (see fig. 14), or the arched side-chapels in San Lorenzo (see fig. 9) and Santo Spirito, which are in the form of continuous mouldings of varying degrees of complexity, have no obvious counterparts, either in the buildings Brunelleschi most admired in Florence, or in the monuments of ancient Rome, where arched openings are usually flanked by pilasters. They are not, however, wholly without parallel. They bear a general resemblance, for instance, to the frames of apertures seen in certain previous buildings in Florence, such as the large arched window on the late medieval facade of the church of Santo Stefano al Ponte (fig. 23),⁸⁹ or the elaborately profiled oculi on the clerestory and drum of Florence Cathedral, or the inner face of the Santa Croce facade. These would

appear, therefore, to have provided Brunelleschi with a basis for establishing a suitable formal repertory for the framing of apertures and recesses of any shape or size, but there is more to the matter than just this. They indicate a new way of thinking about architecture and about describing its formal constituents, which would doubtless have been understood as novel and innovative, and they have close counterparts in the ribs of the Cathedral dome (see fig. 12) and the external framing of his late church of Santa Maria degli Angeli (see fig. 47). They are, moreover, but one element of his much wider usage of bands, borders and ribs, which, like his columns and pilasters, are all usually executed in dark stone so as to constitute a visual assemblage, or network, of quasi-structural members, which then contrasts with the white plaster walls; and this is a general characteristic of his architecture that, in its insistence, is without precedent. Brunelleschi's pioneering approach is not, however, entirely without explanation, and it can perhaps be best regarded as symptomatic of the according to architectural design a new prestige and authority, which gave the architect much greater control over all aspects of a building's expected appearance;⁹⁰ and as being reliant, too, on the increasing use by architects of drawings in pen and ink as creative tools – drawings that, for Brunelleschi, could well have provided precise and visually comparable templates for his compositions of dark elements on white backgrounds, and so could have provided a significant impetus for him to conceive his designs in the way that he did.

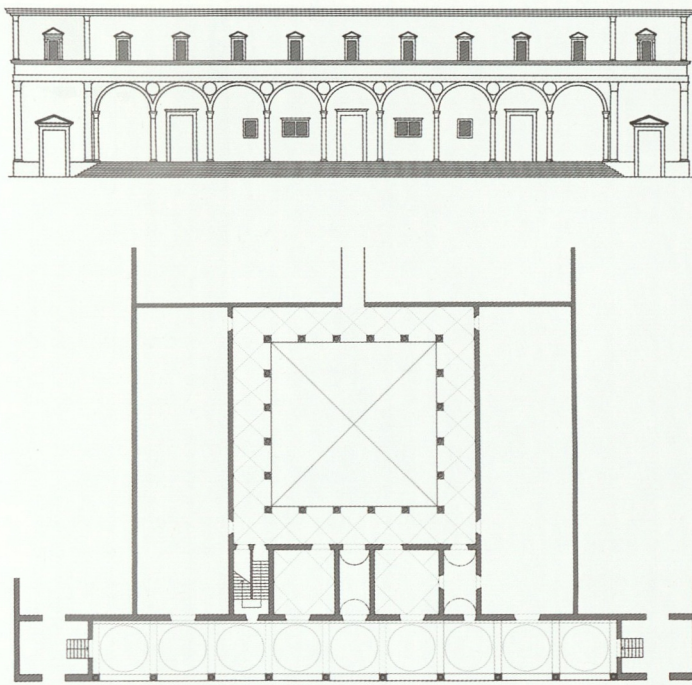


Fig. 24 Florence, Ospedale degli Innocenti: original plan and facade. The building was designed by Brunelleschi and begun in 1419. Brunelleschi's scheme, shown here, was symmetrical in layout and had a facade of eleven bays, although this was later extended to thirteen.

BRUNELLESCHI'S BUILDINGS

By taking all these considerations into account, a fairly clear understanding can now be gained of the architectural strategy that Brunelleschi followed for the designs of his various buildings. For many of them, the strategy remained remarkably constant, even if there may have been some shifts as regards, for example, an ever increasing resolve for design consistency and regularity.⁹¹ These buildings, therefore, will now be discussed as manifestations of the conclusions that have already been reached, and will be accompanied by further observations about the specifics of their designs. Certain of his other works that we shall examine subsequently, however, indicate that his strategy was not always as unvarying as it might at first appear, and that he also established other approaches that were well suited, as we shall see, to architecture of an increasingly *all'antica* orientation. In this way, Brunelleschi soon consolidated an understanding of *all'antica* architecture, as later recognised by Rucellai and Filarete, while also aligning it with the antique-orientated outlooks of Florentine humanists and their gradually increasing interests in Vitruvius.⁹²

Brunelleschi must have already gained a highly developed vision of the kind of architecture he hoped to put into practice by the time he returned to Florence in 1417, and his ideas were soon brought to fruition in a succession of major schemes that commenced with his Ospedale degli Innocenti (begun in 1419).⁹³ This was a civic commission administered by the city's silk workers' guild (of which Brunelleschi was a member),

Fig. 25 Padua, Palazzo della Ragione, end-bays of the facade. The double-storey arcades (unknown architect) were added to the existing civic hall in the early 14th century (and the further arcade at the front was then attached subsequently).



with the aim of providing an orphanage for abandoned children, and Brunelleschi devised a layout that offered, in a very neat, geometrically regular and compact manner, the basic requirements for such an institution. It was in the form of a symmetrical complex (subsequently altered and expanded), with a prominent frontal loggia positioned at the centre of a longer facade, between a pair of longitudinally orientated spaces, one for a church and the other for a dormitory, and in front of a square central courtyard (eventually realised to a modified design), with further accommodation made available on the storey above (fig. 24). These various components were already well-established features of hospital design, and loggias of very similar format provide the frontages of the close-at-hand Ospedale di San Matteo (loggia begun in 1393; fig. 27) and the Ospedale di Sant'Antonio at nearby Lastra a Signa (begun in 1417).⁹⁴ The main tasks for Brunelleschi, therefore, were to arrange the chosen components so as to form a rigorously symmetrical composition, and to devise a suitably arresting architectural treatment for the central loggia and the other parts of the facade. This facade, as Brunelleschi originally designed it, was shorter in length than it is now,⁹⁵ and possibly without



the bent architrave at each end that it was eventually given,⁹⁶ and it most probably had an upper storey adorned with pilasters (never installed), so as to mark out the final bays, as on the storey below.⁹⁷

The facade is strikingly unlike most Florentine buildings from the recent past. It is conceivable that the design was informed, up to a point, by buildings from outside the Florence area, such as the imposing and symmetrically planned thirteenth-century palace in Venice now known as the Fondaco dei Turchi, which has a facade with long, column-supported arcades and matching side-wings. It may even be that the facade was indebted to the external arcades added, in the early fourteenth century, to the main civic building in Padua, the Palazzo della Ragione, which at the lower level has large-scale arches supported on monolithic columns bearing imposts, with roundels in the spandrels of the arches (fig. 25) – both of which features are matched by the Ospedale. Yet it is still the case that the design, in essence, is a reworking of previous hospital loggias in Florence, one that involved retaining the basics of their compositions but adopting the simple and straightforward procedure of removing all their moribund architectural forms and replacing them with new ones that carried more profitable associations. Hence their octagonal pillars were exchanged for columns, the corresponding polygonal supports on their rear walls that carry imposts were substituted by supports fashioned now as shells,⁹⁸ and their rib vaults were superseded by sail vaults (figs 26 and 27). The coupling, at the ends of

Fig. 26 Florence, Ospedale degli Innocenti. The roundels in the spandrels of Brunelleschi's arcade were embellished by Antonio di Nino della Robbia in 1487 with plaques representing swaddled infants.

Fig. 27 Florence, Ospedale di San Matteo. Begun in the late 14th century (unknown architect).



Brunelleschi's facade, of columns carrying imposts with taller Corinthian framing pilasters departs from the arrangement seen previously in hospital loggias (where there are terminal piers), but instead follows the formula used for the San Miniato apse (fig. 28); and, for the upper storey, the general arrangement again follows that of earlier hospitals, which have windows that similarly rise from string courses, although the windows themselves are now given *all'antica* pediments which very much recall those of the eleventh-century facade of the Badia outside nearby Fiesole (fig. 29). The effect of the architecture is then enhanced through the contrast between the dark-stone members and the white-plastered walls, and its *all'antica* tone (although rather compromised by the bent architrave at the facade's two ends) is then further emphasised by the strigilated decoration begun in the frieze (see fig. 7), a form of ornament seen on many an ancient sarcophagus.

The realisation, at around the same time, of his scheme (c.1418) for the so-called 'Old' Sacristy allowed Brunelleschi the opportunity to give free rein to a range of yet other ideas and to offer a variety of further associations.⁹⁹ The structure was commissioned by the already powerful Medici family, and must have been intended, right from the start, to provide a sacristy for the venerable church of San Lorenzo, which was about to be rebuilt at an enlarged scale. Its basic design, a spacious domed area of square plan with a subsidiary domed area beyond to accommodate the altar (fig. 30), was certainly well suited to a sacristy, as was the decision to leave the side walls sufficiently clear for the necessary storage cupboards. In fact, the layout follows very closely that of the fourteenth-century sacristy



Fig. 28 Florence, San Miniato al Monte, apse. The church was begun in the early 11th century (unknown architect).

Fig. 29 Badia di Fiesole, facade. The facade is a remnant of the building erected in the 11th century (unknown architect).

Opposite:
Fig. 30 Florence, Old Sacristy of San Lorenzo: section and plan. The sacristy was designed by Brunelleschi, c.1418, and begun soon after.



of Santa Croce (the exceptionally large Rinuccini Chapel), which is of approximately square plan with a square and vaulted altar space at the end, and which occupies a position, accessible from the transept, that is similar to the Old Sacristy's in relation to the eventual new church. An additional function of the Old Sacristy was to provide a funerary chapel for the family's then patriarch, Giovanni di Bicci de' Medici (c.1360–1429). This, in itself, was not so unusual for a sacristy, since others, including that at Santa Croce, served such a purpose; but in respect to the Old Sacristy it may help explain why it was decided to cover the main space with an elaborate dome, since this would have offered an allusion to the many domed mausolea of antiquity (including those attached to the transept of Old St Peter's in Rome; see fig. 123); and it may also help explain why the dome's lantern was given a covering with a spiralling exterior – this, perhaps, being believed to have been a feature of Christ's supposed sepulchre (the so-called 'Aedicule') in Jerusalem.¹⁰⁰ The rather unusual arrangement of the altar area, with shallow alcoves in its three surrounding walls (the plan of each being a segment of a single circle), is a variant of the trilobate format (a central area bordered by three alcoves), which is seen in certain earlier buildings and may have also carried funerary associations.¹⁰¹

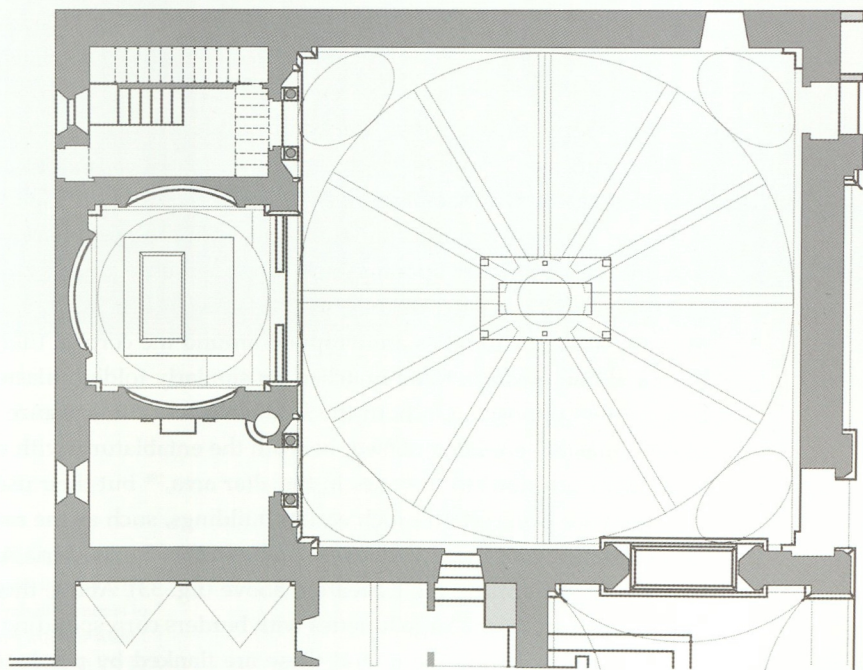
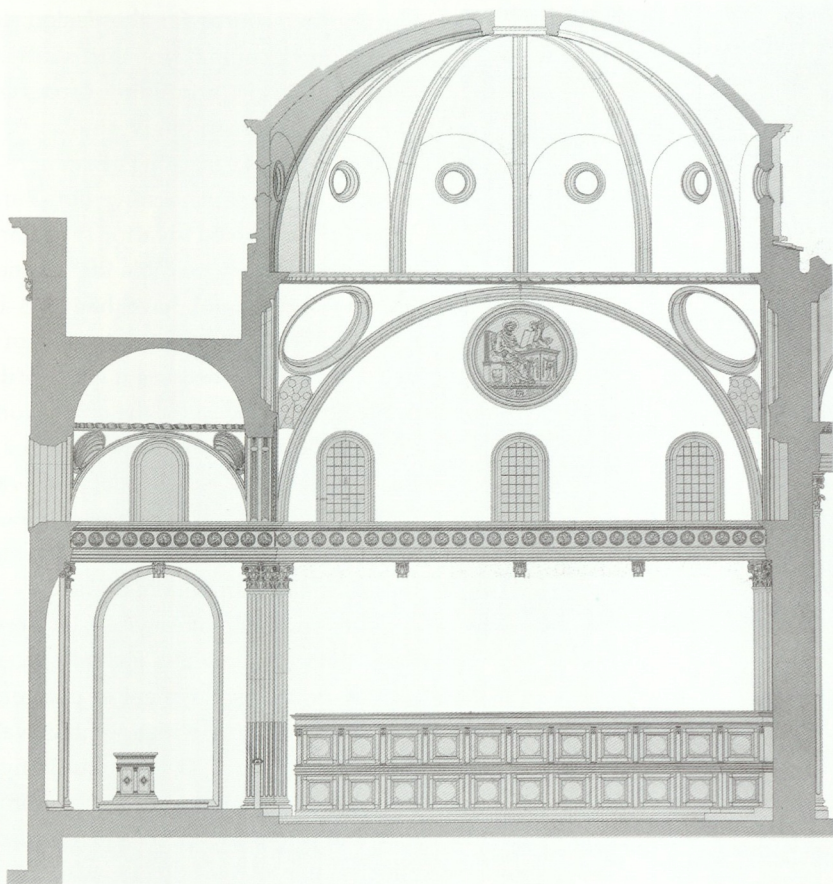




Fig. 31 Padua, Baptistery, interior, with the domed altar area (right). The building, mainly 13th century (unknown architect), was adapted to serve as a mausoleum in the 1370s.

One further source for the design, it has often been argued, could be the thirteenth-century Baptistery in Padua, a building of comparable size that is, indeed, strikingly similar in its general arrangement, in consisting of a square main space, surmounted by a pendentive dome and followed by a further domed area for the altar (fig. 31).¹⁰² It is certainly very possible that Brunelleschi and his sponsors would have had this building in mind while the Old Sacristy design was being decided, not least because it was a principal place of meeting in Padua for the city's Florentine community there. Yet it is perhaps better to think of this building not as a model that was intended to be recognised but as suggesting how an established sacristy format could be adapted through the addition of prominent domes.

The interior, otherwise, is very different from those of previous chapels or ecclesiastical

buildings, and it relies heavily on the deployment of pilasters and other dark-stone members contrasting with the white-painted walls, to elicit connotations of Florence's past and the world of antiquity (fig. 32). In the main space, the pilasters on the altar wall are arranged in three bays, and they support an entablature that is interrupted by a taller central arch in a way that very much recalls the altar arch inside Florence's Baptistery (see fig. 81) and the end-*exedra* of the Pantheon (see fig. 247). The pilasters framing this central arch, which are actually the front faces of square-sectioned pillars (comparable to *antae*),¹⁰³ are complemented by the pilaster slivers in the rear corners of the altar area,¹⁰⁴ and these, in conjunction with the pilasters, frame the arched borders of the three alcoves, which are broken at their summits by corbels, rather like the arched opening of an ancient triumphal arch. The side-bays on the altar wall of the main space are also occupied by arched frames, to complete a triumphal-arch-like composition and frame smaller openings and recesses (subsequently embellished, to Brunelleschi's alleged dismay, by Donatello in the 1430s),¹⁰⁵ while the pilasters at the extremities are wrapped around the corners (like those in the Pantheon *exedrae*), to be matched by similarly folded pilasters in the two corners opposite. On both the side walls and the entrance wall, the folded pilasters are interspersed, beneath the entablature, with corbels in equivalent positions to the ones in the altar area,¹⁰⁶ but their use here follows that seen on certain much earlier buildings, such as the exteriors of Pisa Cathedral and the church (now Cathedral) of Santa Maria Assunta at Volterra, in supporting the trabeation above (fig. 33). Above this level, in both domed areas, are large lunettes with borders corresponding in width to the supports below them, and these are flanked by pendentives and



Fig. 32 Florence, Old Sacristy of San Lorenzo, interior. The sculptural embellishments to Brunelleschi's interior were added by Donatello in the 1430s.



Above, left to right:

Fig. 33 Volterra, Santa Maria Assunta (now the Cathedral), facade detail. The church was built in the early 12th century (unknown architect).

Fig. 34 Ravenna, Mausoleum of Theodoric (6th century), lower-storey vault with shell decorations beneath.

surmounted by the domes themselves. The pendentives in the altar area are ornamented by shells (perhaps suggestive of rebirth), which could, just possibly, imply knowledge of the sixth-century Mausoleum of Theodoric in Ravenna, where there are shells beneath the lower-storey vault (fig. 34). In the main area, the pendentives are decorated with roundels, and the dome is of the much more elaborate 'umbrella' variety – a ring of curved ribs with concave surfaces between them to allow space for small-scale lunettes and extra windows. This dome is of a kind with no precise precedents, although it could have been likened to those of certain ancient buildings of ribbed construction (such as the subsequently named 'Temple of Minerva Medica'; see fig. 49);¹⁰⁷ and it invites comparison with the vault above the altar chapel of Santa Croce, which has arches between ribs accommodating additional windows (see fig. 15). A much closer precedent, however, would be the highly elaborate vault over the altar area of Padua's Sant'Antonio (fig. 35), which, like the Old Sacristy dome, has many convergent ribs with numerous high-level windows positioned between them, and it is conceivable that Brunelleschi was also aware (as his patron may have been too) of domes such as those in Venice's St Mark's (and elsewhere) that have decorations in the form of fictive ribs coupled with rings of peripheral windows.¹⁰⁸

When coming to design the contiguous church of San Lorenzo (begun at around the same time as the sacristy), Brunelleschi adhered closely (whether reluctantly or otherwise) to the expectations for such a monastic foundation, at least as far as its planning was concerned (fig. 36).¹⁰⁹ The new building was financed, initially, by a consortium of local families (before the commission was largely taken over by the Medici in 1434),

and these, in return, were granted rights over chapels inside. Far larger than its predecessor, it catered for this requirement by conforming to the planning conventions established in previous monastic churches, such as Santa Maria Novella and, in particular, Santa Trinità, which must have been regarded as providing a suitable layout for the accommodation that was needed (fig. 37). Like these earlier buildings, San Lorenzo has, at its western end (the liturgically eastern part of the church, which is relatively faithful to Brunelleschi's design), a large high-altar chapel flanked by smaller chapels, which, together with yet others grouped nearby, are all accessible from the transepts; and this part of the building is then joined, to the east, to a spacious nave (constructed well after Brunelleschi's death, and the subject of various modifications), bordered by aisles that open, as at Santa Trinità, into side-chapels. In fact, the only major departures from the chosen prototypes is that San Lorenzo has a domed crossing, like certain other prestigious buildings from earlier times, and has a layout that is much more regular. Unlike the plan of any previous church in Florence, this is made up of regular units (with only minor discrepancies): large squares for the high-altar chapel and the crossing and transepts, halves of the large squares for the bays of the nave, squares with sides half the size of the large ones for the transept chapels and the bays of the aisles, and halves of these smaller squares for the side-chapels of the aisles.¹¹⁰

Otherwise, the interior of San Lorenzo (fig. 38) could hardly have been more different from the insides of recent Florentine churches, such as Santa Maria Novella (fig. 39). This new look depended on Brunelleschi's momentous decision to replace Gothic features – especially pointed arches and ribbed vaults – with suitable alternatives, all advantageously displayed against white-painted and contrasting walls, and, in particular, to make widespread use, in place of the pier, of the enormous and evocative monolithic column. The design's basic components are arranged, moreover, in a clear hierarchy. The dome rests on pendentives rising from the four tall arches that mark out the crossing, and these correspond in height with the high-altar chapel, and with the transepts and the nave, which are covered by flat, coffered ceilings. The transepts and nave, for their part, have two main levels – the lower-storey arches that lead into the transept chapels or belong to the nave arcades, and a clerestory above, with arched windows – although at the end of each transept the system is varied in that the lower level has a central arch flanked by



Fig. 35 Padua, Sant'Antonio, presbytery. The church was built in the 13th and early 14th centuries (unknown architect).

Fig. 36 Florence, San Lorenzo: plan of the building in its current state. The Old Sacristy is reached from the end of the left (west) transept. The plan also shows Michelangelo's later New Sacristy at the end of the right (east) transept, his Laurentian Library reached from the cloister (left), and the 17th-century Cappella dei Principi (top).

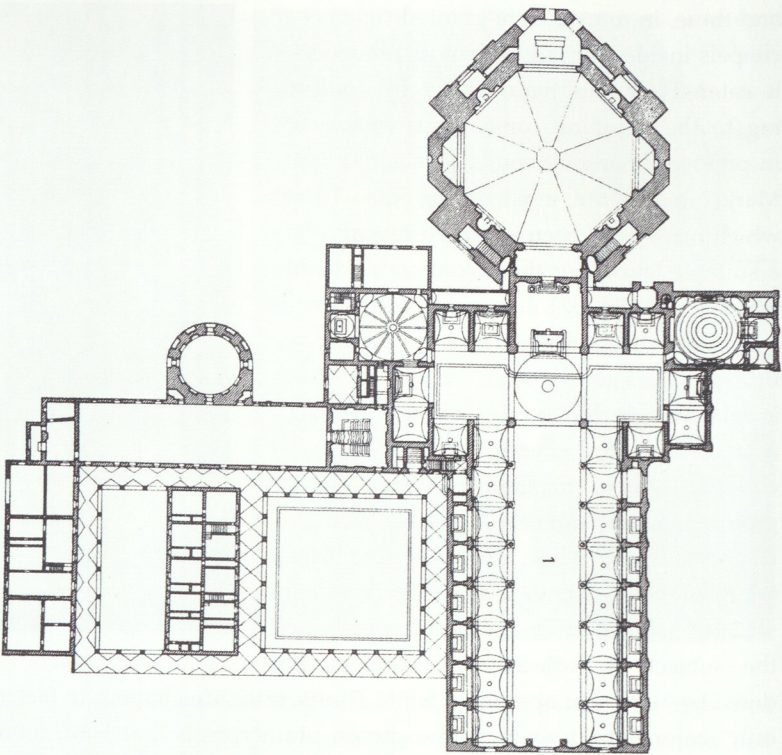
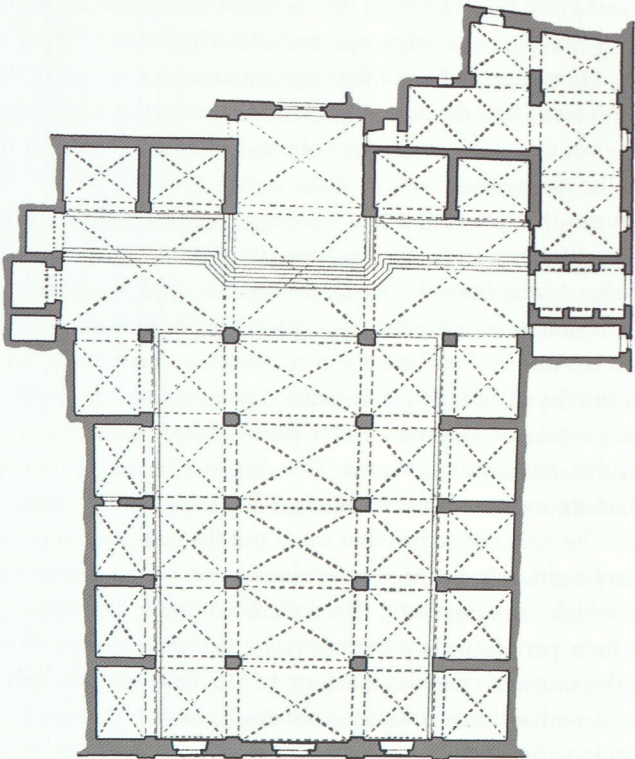


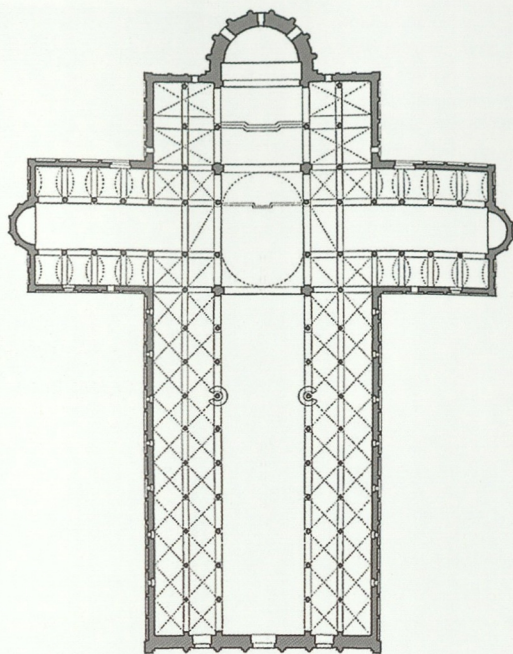
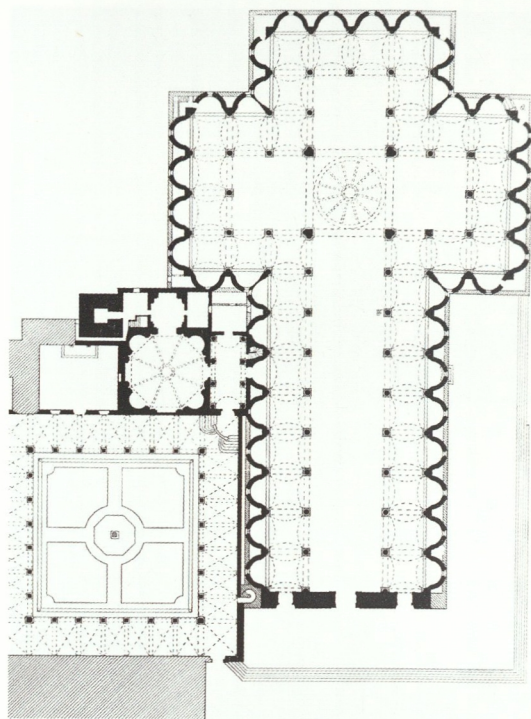
Fig. 37 Florence, Santa Trinità: plan. The building was constructed in the 13th and 14th centuries (unknown architect). The rectangular sacristy (added by Lorenzo Ghiberti in the early 15th century) is reached from the end of the right (north) transept.



narrower bays, an arrangement that, like a triumphal arch, accommodates smaller openings (one forming the entrance into the Old Sacristy). The side walls of the aisles, which have sail vaults, are likewise of two levels: arched openings into the side-chapels and small circular windows above them. A similar logic then applies to the main structural members. The four crossing piers have tall pilasters attached to them (not unlike those inside Santa Trinità), carrying the four large arches for the dome above, and these pilasters are then coupled with smaller supports, which, in the transepts, include the square-sectioned pillars framing the smaller chapels, and, in the nave, are pilasters supporting the initial arches of the colonnades. The nave columns, in their turn, correspond with pilasters on the side walls of the aisles (except that these rise from a slightly higher level); and the aisle pilasters border the openings of the side-chapels, and the continuous entablature above them (which corresponds with the entablature blocks on top of the columns) carries the frames of lunettes beneath the sail vaults.

Brunelleschi's later scheme for the rebuilding of the monastic church of Santo Spirito is, in some respects, very similar to the San Lorenzo design, with its domed and colonnaded interior, but in others it is profoundly different (fig. 40).¹¹¹ The commission, which was again for the replacement of a previous church, was assigned to Brunelleschi perhaps around 1428, although building work commenced only at some point by the early 1440s;¹¹² and it was again financed by a consortium of local families, as is likewise reflected in the provision of a multitude of family chapels. The work presumably began in the area of the domed crossing, the new church (according to Manetti) being initially planned to extend northwards so as to be plainly visible from across the River Arno at the head of a new piazza;¹¹³ but this proposal was rejected and the church was instead developed southwards in the manner in which it was finally completed. To have begun the building at the crossing also fixed the design's most remarkable feature, which is its extraordinary and unprecedented regularity, and this cannot have been, as has been often concluded, merely a response on Brunelleschi's part to certain perceived shortcomings of the San Lorenzo plan (such as having chapels of various different sizes), for it depended on a key decision – previously given little attention – which would no doubt have been accompanied by the most compelling of arguments. It was decided that the building would dispense with a high-altar chapel located at its far end, and would instead be focused on an isolated high altar situated directly beneath the dome and positioned within some kind of enclosure (subsequently replaced by today's much more elaborate housing).¹¹⁴ Such a layout meant that the dome was now both architecturally and liturgically at the church's heart, and that the four subsidiary arms formed parts of a much more regular Latin-cross layout, which, in turn, could allow ready associations such as with the shape of the Cross itself or with the figure





of a man.¹¹⁵ The layout may well have been suggested – and was possibly justified – by Pisa’s eleventh-century Cathedral, which is of a similarly domed and Latin-cross format, and, again like Santo Spirito, has aisles in all four arms and an interior decked out with vast numbers of columns (fig. 41). As regards the high altar, however, the one in Pisa Cathedral is positioned in the eastern arm rather than under the dome, and so, in this respect, the Santo Spirito layout follows the precedent set by Florence Cathedral, which had likewise broken sharply with tradition by having the high altar beneath the dome (see figs 2 and 18).¹¹⁶ Yet there could well have been a further reason for this radical departure from established planning, and this (it is proposed here) was connected with the church’s dedication. The official dedication is not simply to the Holy Spirit (*Santo Spirito*) but to the Blessed Virgin Mary, all the saints and the Holy Spirit,¹¹⁷ indicating an association with Pentecost, or the descent of the Holy Spirit, which is the subject of the stained glass in the facade’s enormous oculus (fig. 42).¹¹⁸ Brunelleschi’s design provided a neat and striking analogy between the dedication of the church, represented in the stained glass window (and innumerable other images of the subject), and its layout: for St Mary, positioned beneath an iridescent Holy Spirit descending from above, and surrounded by the assembled apostles, is the dedicatee of the high altar, which is illuminated by light emanating from the dome, and accompanied in the peripheral chapels by a great number of further altars.

Opposite, above and below:
Fig. 38 Florence, San Lorenzo, interior. Designed by Brunelleschi, c.1418, and begun soon after.

Fig. 39 Florence, Santa Maria Novella, interior. Built in the 13th and early 14th centuries, to designs perhaps by members of the Dominican confraternity.

Above, left to right:
Fig. 40 Florence, Santo Spirito: plan. The church was designed by Brunelleschi, c.1428, and begun by the early 1440s. The curving exteriors of the chapels were concealed during the latter part of the 15th century behind an enclosing perimeter wall. Giuliano da Sangallo’s later sacristy, begun in 1489, adjoins the cloister (left).

Fig. 41 Pisa Cathedral: plan. The church was built in the 11th century (unknown architect).

Fig. 42 Florence, Santo Spirito, internal view of the facade oculus. The oculus accommodates Pietro Perugino's *Descent of the Holy Spirit*, c.1500.



Conceiving the church in this new way allowed Brunelleschi to give his design an unprecedented degree of unity and uniformity. Thus the layout is based, like San Lorenzo's, on square bays, but these now conform to a rigorous grid, with the crossing and the arms precisely twice the width of the aisles, and with pairs of chapels consequently at the ends of the three shorter arms (fig. 40).¹¹⁹ In accordance with a clear spatial – and now liturgical – hierarchy, the dome rises above the four adjoining arms, which again have flat ceilings, and these are bordered by the (lower) aisles which now run, continuously, almost around the building's entire perimeter (fig. 43). The arcaded aisles all have sail vaults and all are accompanied by continuous rows of side-chapels of uniform size, which are, this time, accessible through arches that are now almost the same height as the internal arcades, and which are in the form of semicircular alcoves that could, originally, be seen as such from outside. This simple system is then matched by a corresponding simplicity in the deployment of the main structural members, which give the interior not only an enhanced coherence but also a powerful visual effect. The crossing piers are now treated simply as square-sectioned pillars and are coupled with half-columns at the starts of the arcades; and the columns of the arcades then correspond with half-columns (rather than pilasters) on the side walls, and these carry entablature blocks rather than continuous entablatures, so as to match with the entablature blocks of the arcades, and to



Fig. 43 Florence, Santo Spirito, interior. Designed by Brunelleschi, c.1428, and begun by the early 1440s.

allow for the additional height of the elaborately profiled borders of the chapels. As for the chapels themselves, these have been compared to the semi-circular side-chapels of Orvieto's fourteenth-century Cathedral,¹²⁰ and, internally, to the row of similar alcoves inside the atrium of St Mark's in Venice,¹²¹ and it is very possible that Brunelleschi took note of such formal precedents; but it is likely, too, that he thought of his semi-circular chapels as being suggestive of the alcoves of certain ancient Roman buildings, including the so-called Temple of Minerva Medica (see fig. 49) and even the Pantheon. Thus Brunelleschi's chapels form part of a scheme that could well have been viewed, by both himself and his compatriots, in various new ways. As a building of unprecedented regularity and orderliness, Santo Spirito would unquestionably have been regarded as perfectly suited to its role as a church. At the same time, it would also have been perceived as being eloquently expressive of a new age, by being cleansed so thoroughly of the unpalatable 'German' features of many earlier Florentine churches, and by being cast in an architectural idiom evocative of a new and better world.

For the Pazzi Chapel belonging to the church of Santa Croce, Brunelleschi returned to ideas first developed for the Old Sacristy, although now with certain variations.¹²² The building was commissioned by Andrea Pazzi (1372–1445), a wealthy ally of the Medici family, who publicly committed to building a chapter house in 1429,¹²³ even though it was

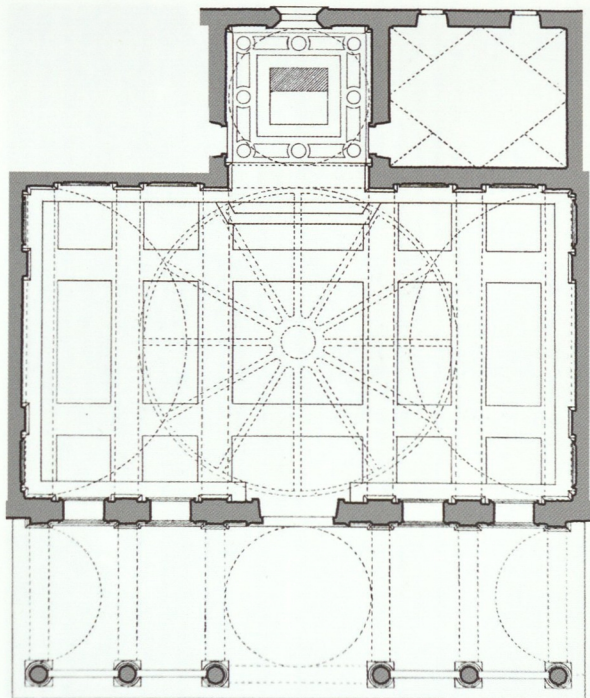


Fig. 44 Florence, Santa Croce, Pazzi Chapel: plan. The building was designed by Brunelleschi, c.1430, and begun in the 1440s.

Opposite:

Fig. 45 Florence, Santa Croce, Pazzi Chapel, interior.

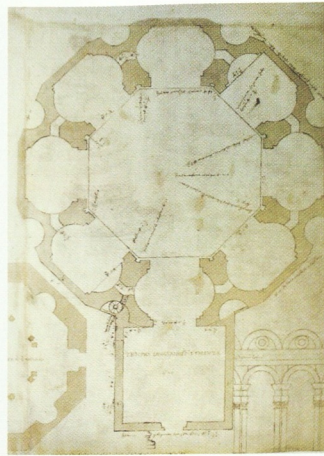
to be realised only considerably later.¹²⁴ The building was intended not only as a family chapel but also as a chapter house for the Santa Croce community, and it caters for this requirement by having a porch overlooking the principal courtyard and an interior consisting of a large unimpeded space, wider than it is deep, which is connected to an altar area at the rear (fig. 44).¹²⁵ As such, it follows the notable precedent of the mid-fourteenth-century chapter house (the Spanish Chapel) of Santa Maria Novella, which is reached from the arcade of the main cloister and is likewise arranged as a large rectangular space with an altar area to the rear, but this format was then adapted, internally, in line with that of the Old Sacristy. As in the Old Sacristy, the larger space is given pilasters and a large umbrella dome, while the altar area is allocated pilaster slivers

for its rear corners and provided with a simpler pendentive dome (fig. 45). In fact, the main difference is just that the larger space is accompanied by additional wings that carry barrel vaults. Conceiving of this adaptation could possibly imply knowledge of earlier domed buildings with barrel-vaulted arms, such as, say, the late antique oratory attached to the church of Santa Giustina in Padua, and it probably also involved an intentional allusion to antiquity, seeing that the vaults are decorated with coffers; but the vaults themselves are also a necessary and inevitable outcome of the combination of the dome with a rectangular space rather than a square one. Further departures also appear in the interior articulation, which, compared with the Old Sacristy, is much more systematic. The framed alcoves are here removed from the altar area, and, in the main space, the sequence of pilasters is extended into the arms, where the pilasters are folded asymmetrically at the corners, and then across the side walls and along the entrance wall as well. The pilasters are arranged, moreover, so that the composition of the wider bay with an arch above, used to frame the altar area, is then repeated on both the entrance wall and the side walls, while the narrower flanking bays on all four sides contain framed arches, which on the entrance wall function as windows, and which are all surmounted by roundels. A certain crudeness in the execution of some of the details has contributed to doubts over the chapel's attribution to Brunelleschi,¹²⁶ but the design, presumably in the form of a model,¹²⁷ must have been prepared before Andrea Pazzi's death (1445), which occurred before Brunelleschi's (1446), even though much of the building work





Fig. 46 Florence, Santa Croce, Pazzi Chapel, porch. Built to a modified design (unknown architect) in the 1450s.



Left to right:

Fig. 47 Florence, Santa Maria degli Angeli. The lower part of the church was built to Brunelleschi's design during his lifetime (1434–6), but the remainder was constructed only in the 20th century.

Fig. 48 Florence, Santa Maria degli Angeli: plan and (bottom right) partial elevation. Recorded in a late 15th-century drawing by Giuliano da Sangallo (Biblioteca Apostolica Vaticana, Codex Barberini, fol. 15v, detail).

was actually carried out subsequently.¹²⁸ It is very clear that significant changes were made to the design when the time came to construct the chapel's porch, which is probably an adaptation of Brunelleschi's original proposal.¹²⁹ The existing porch (fig. 46) is set out with Corinthian columns that carry a central arch and an upper storey and, internally, a central dome and a pair of barrel vaults, but its later date is confirmed, firstly, by the fact that the dome requires a roof which covers over a facade roundel previously installed at this upper level, and, secondly, by the significant differences between the detailing – such as the capitals of the columns and richly decorated internal coffering – and that seen in Brunelleschi's authentic works.¹³⁰

The works by Brunelleschi that prompt associations with antiquity in rather different ways are also from the later phases of his career and include his uncompleted project for Santa Maria degli Angeli. The design, devised in 1434 for the Camaldolese branch of the Benedictine order, is known from the lower parts of the building which were executed before construction was abandoned in 1436 (fig. 47) and from various later drawings (fig. 48).¹³¹ It is one of a centralised plan – the first of its kind from the Renaissance period – which comprises an octagonal central space with a dome, surrounded by eight barrel-vaulted chapels linked to one another by short passageways. The building would have had several features that were directly comparable with Brunelleschi's previous works. For example, the chapel entrances are framed by pilasters akin to *antae*, and these are matched, as in the Old Sacristy and other schemes, by pilaster slivers in the corners behind, while the upper-level arches beneath the ribbed dome (recorded in early drawings) are comparable to the lunettes seen, again, in the Old Sacristy and elsewhere. As regards the overall composition, however, the design recalls – as has been correctly noted – the octagonal interior of the Baptistery (see fig. 81), which likewise has paired pilasters at the corners, and especially the apsidal arms of Florence Cathedral and their encircling chapels (see fig. 2).¹³²

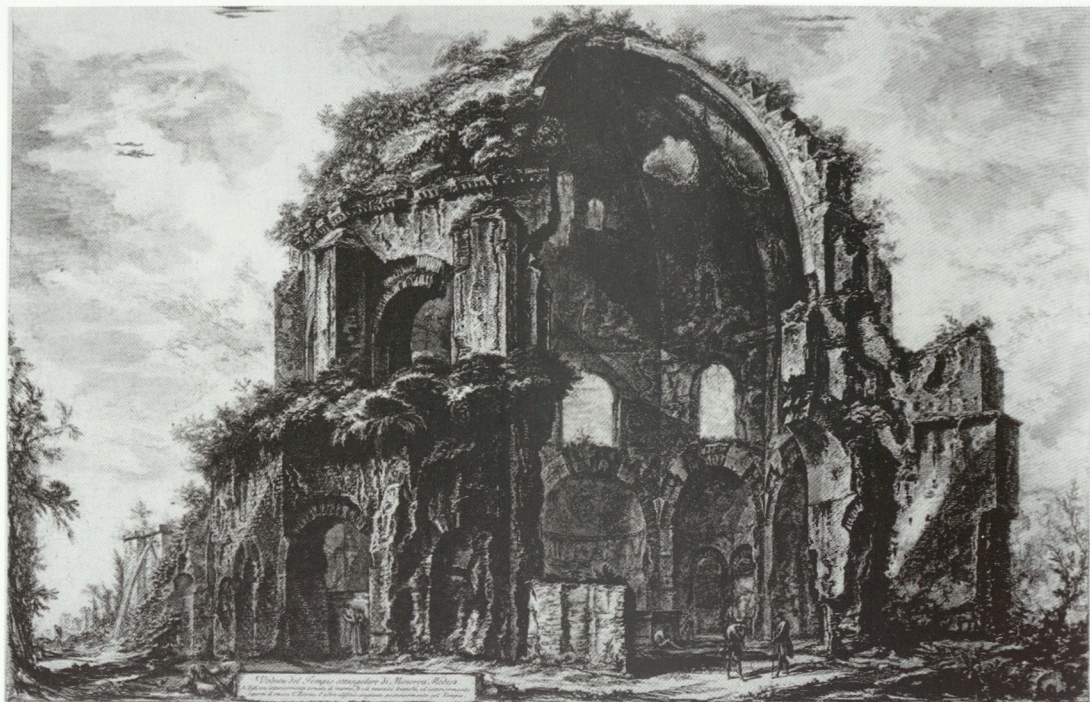
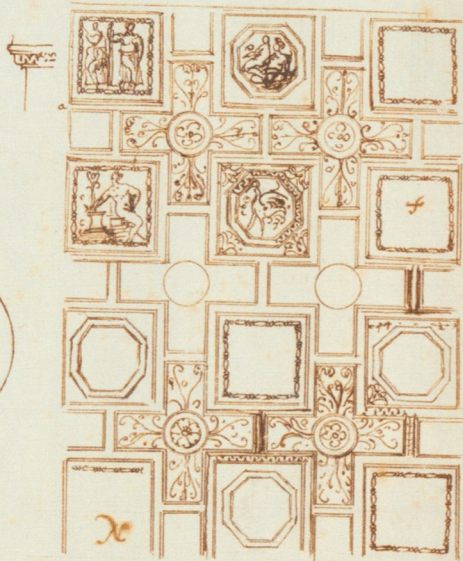
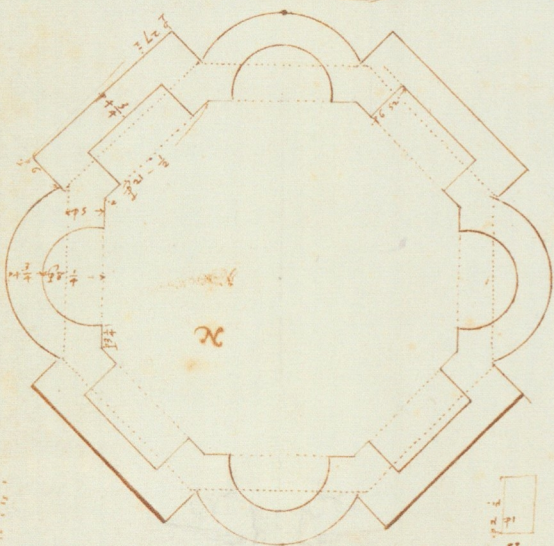
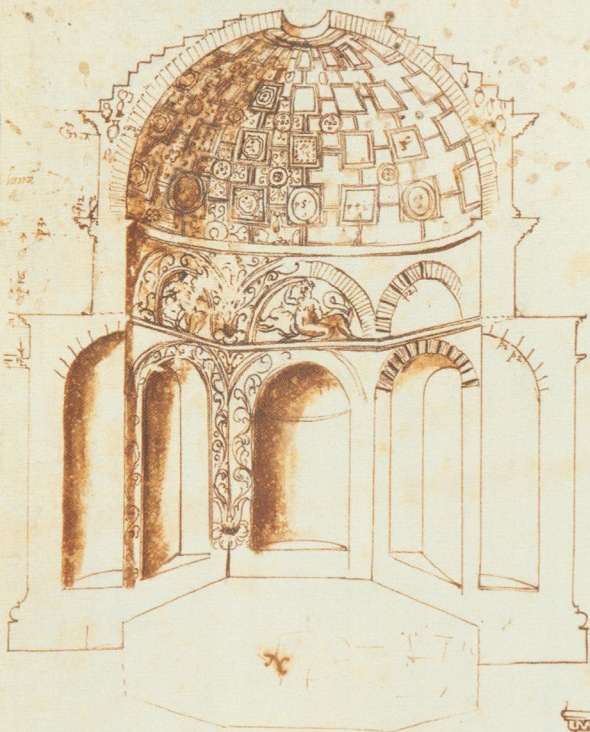


Fig. 49 Rome, Temple of Minerva Medica. Depicted in an 18th-century etching by Giovanni Battista Piranesi.

Opposite:

Fig. 50 Rome, octagonal pavilion (now heavily ruined), forming part of the Villa of the Gordians. Recorded in a 16th-century sheet of drawings (Windsor Castle, Royal Library, RL 10354).

What is not given sufficient emphasis, however, is that the building as a whole, rather than just certain features of it, would have engendered inevitable associations with the antique. In being such a very unusual and distinctive scheme, the church would doubtless have been regarded by Brunelleschi – and any of his contemporaries inclined to view it in such a way – as being at least comparable to ancient buildings that have domes and are surrounded by rings of subsidiary spaces, such as the Temple of Minerva Medica (fig. 49) and many other similar structures.¹³³ Other features may also have implied links with the antique, such as the external arched recesses, which are broadly analogous to the arched exterior apertures of the Temple of Minerva Medica,¹³⁴ as well as the faceted dome, which is comparable to that of the same building,¹³⁵ and the upper-level arches of the interior, which rather resemble the restraining arches seen, say, inside the domed octagonal pavilion that had once formed part of the Villa of the Gordians on the outskirts of Rome (fig. 50).¹³⁶ It is, therefore, perhaps not so very surprising that, only a few years after the work on Santa Maria degli Angeli was halted, a scheme was begun that was modelled even more literally on the Temple of Minerva Medica. This was the domed rotunda (begun in 1444) designed by Brunelleschi's younger contemporary Michelozzo di Bartolomeo (1396–1472) and attached to the altar end of Santissima Annunziata (fig. 51). In its final form, the rotunda also resembles the Temple of Minerva Medica, to the extent of having a ten-sided layout, although it differs from Brunelleschi's building in one important respect:¹³⁷ the design was met



*Questo tempio sta ancora, apresso
aquestabro e de ficio e de romavota
a dornato tuto destuguo*





with immediate complaints – from Brunelleschi, among others – over its impracticality as part of a Christian church.¹³⁸ Brunelleschi's scheme, by contrast, was unproblematic in this regard, in good part because it was far from being such a slavish imitation. The same is true of another project from around the same period – the rebuilding of the Badia at Fiesole near Florence (begun in 1461)¹³⁹ – which has similarities to ancient buildings that are again no more than generic. This work, ascribed later on (perhaps with some good reason) to Brunelleschi himself,¹⁴⁰ has a crossing covered by a sail vault attached to an aisleless and vaulted nave flanked by vaulted side-chapels, and the interior (fig. 52) is articulated in grey *pietra serena* in a manner that is similar, even despite its sparseness, to that seen in Brunelleschi's earlier works. It is the arrangement of the nave and chapels that could have been regarded as eliciting associations with the antique, since it is broadly comparable to that, say, of the Basilica of Maxentius or the *frigidarium* of the Baths of Diocletian (see fig. 289), although such a correspondence – which may, indeed, have been intended – is still not especially close, since the nave has a barrel vault rather than a groin vault, and is flanked by four chapels rather than just three.¹⁴¹

Brunelleschi may have been instrumental, too, in the initial moves towards a far greater recourse to antique-inspired detailing, this being a

Opposite:

Fig. 51 Florence, Santissima Annunziata, interior. Designed by Michelozzo di Bartolomeo. The enormous domed rotunda at the end (begun in 1444) has two storeys and ten sides, seemingly on the model of the Temple of Minerva Medica.

Above:

Fig. 52 Badia di Fiesole, interior. Designed by a follower of Brunelleschi, begun in 1461.



Above, left to right:

Fig. 53 Florence Cathedral, lantern. Designed in its final form by Brunelleschi in 1436.

Fig. 54 Donatello's St Louis, 1421/5, detail showing the bishop's crozier (Florence, Santa Croce).

feature, in particular, of his scheme for the Cathedral lantern (fig. 53).¹⁴² The lantern had been designed in outline in 1420, and in a form that may well have had much in common with the crozier of Donatello's statue of *St Louis* (1421/5), which is comparable to the lantern that was built, both in its overall composition and in several of its details, such as the buttresses with their channelled decoration and the fluted pilasters they abut (fig. 54). Also similar are the apertures surmounted by shells, although on the crozier these are niches – being among the very first shell niches of the Renaissance – whereas, on the eventual lantern, they are open and in different positions.¹⁴³ Brunelleschi's initial design was then modified from 1432 before being set down in a model of 1436, which was then required to be adjusted so as to be 'perfect in all its parts',¹⁴⁴ and this (as Manetti makes very clear) was followed fairly faithfully in the version that was subsequently realised.¹⁴⁵ For this final design, the composition was elaborated so as to take the form of a central octagon with tall arched windows supporting a decorative superstructure and a conical roof, which is surrounded by eight elaborately conceived buttresses. What is noteworthy in this context is that the design is in many ways comparable to Gothic-style lanterns,¹⁴⁶ such as the one seen in the surviving wooden model for Bologna's San Petronio, or, presumably, the one intended for Milan Cathedral, on which Brunelleschi himself gave advice in c.1428/30,¹⁴⁷ and, as also occasionally noted, it is similar, as well, to much smaller pieces, made of costly metalwork, used as monstres and reliquaries, which are in the form of small Gothic buildings (fig. 55).¹⁴⁸ These precious objects, which were manufactured widely across Europe, would have been especially familiar to Brunelleschi through his training as a goldsmith, and some examples are very close, in shape and overall composition, to his lantern design, despite their profusions of pointed arches, tracery, crockets and pinnacles.¹⁴⁹ Such objects, therefore, were probably

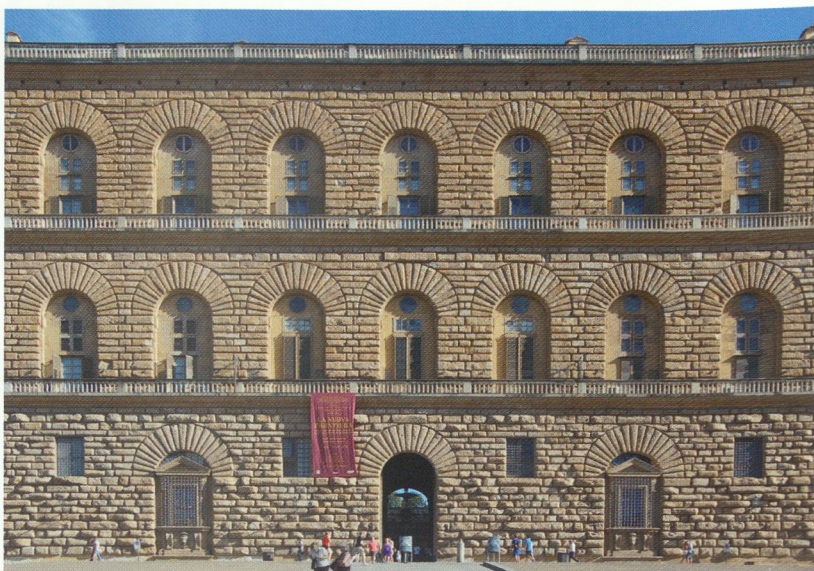
becoming associated with the worst excesses of Gothic architecture, in very much the way that Filarete implied subsequently when he remarked that German and French architects working 'in the modern mode' often designed their buildings to be like metal 'tabernacles' (*tabernacoli*) and 'censers' (*turibili*) rather than proper works of architecture.¹⁵⁰ Nevertheless, what is so very instructive about all this is that Brunelleschi clearly intended to retain the kind of format used for these comparable works, but he took care to remove all their obviously Gothic features, especially their pointed arches, tracery and pinnacles, and simply replaced them with stylistically different – and decidedly *all'antica* – alternatives.

Brunelleschi's design method, therefore, involved a straightforward substitution of one set of architectural forms for another, which, this time, appear to have been stimulated in particular by ancient traditions of ornamental stonework. What would have been flying buttresses are transformed into compositions made up from grooved and folded posts, perhaps inspired by the marble legs of ancient furnishings (such as tripods), which are united, behind, with round framing arches that are partly filled in with shells (rather like shell niches), and these are then surmounted by enormous swirling volutes that are the gigantic equivalents of ancient consoles with scrolling decorations.¹⁵¹ The supports to the rear of the arches are in the form of folded pilasters, and these are accompanied by engaged columns that flank round-arched windows and have capitals of distinctly antique flavour, even if these were actually based on a prototype probably known from Florence's previous Cathedral.¹⁵² Above the upper cornice, and in place of gables and pointed pinnacles, there are further round arches that alternate with plinths carrying fanciful stacks of simple geometric shapes, referred to as 'candlesticks' (*chandelieri*) in a later document and distinctly reminiscent of antique candelabra,¹⁵³ which together surround the conical roof that supports a simple sphere and a cross. It was this creative adaptation of a range of *all'antica* motifs that was new to Brunelleschi's work, and it was a new direction that corresponds, at precisely this same moment, with a re-energised recourse to similarly *all'antica* features seen in some of Donatello's works from 1433 onwards (such as his Cantoria for the Cathedral, and his Cavalcanti *Annunciation*; see fig. 237),¹⁵⁴ and which led, ultimately, to a more concerted and wide-ranging employment of *all'antica* features of the kind then seen (as discussed below) in architectural works by Michelozzo and other later architects.



Fig. 55 Monstrance, in the form of a Gothic building, first half of the 15th century (Cologne, Museum Schnütgen).

Fig. 56 Florence, Palazzo Pitti, central bays of the facade. The palace was built by a follower of Brunelleschi and begun in the 1450s. These seven bays form the palace's 15th-century nucleus.



Adopting a restrictive view of Brunelleschi's creative range, therefore, may not always be justified, and it may have given rise to misconceptions over his recorded but unexecuted palace scheme for the Medici family.¹⁵⁵ The scheme, according to an early source and then Vasari,¹⁵⁶ was commissioned by Cosimo de' Medici, and was intended for a site on the piazza in front of San Lorenzo, so that it would have faced the church directly, and would have had a side elevation overlooking a new piazza to the north, while also being 'entirely isolated' (*intorno intorno isolato*), so that it would also have overlooked the parallel street to the rear (today's Via dei Martelli); but this scheme was abandoned and was superseded by the one devised and begun by Michelozzo (c.1444; fig. 61) that was realised on the site to the north with a principal facade fronting a continuation of the same parallel street. Brunelleschi's scheme was rejected, so Vasari relates, because it was judged to be 'too sumptuous and large a building' (*troppo sontuosa e gran fabbrica*), but there is no reason to assume that its exterior was conceived in a fundamentally different manner from the project that was executed, and every reason to suppose that it was designed in the same idiom, with rusticated walls and round-arched openings – and hence in line with long-established Florentine traditions for illustrious secular buildings, which themselves probably carried associations with antiquity. In fact, it could well be that Brunelleschi's scheme was not at all unlike Michelozzo's, except that it would have exploited the potential of its enviable site by having a facade of symmetrical composition and an even greater majesty. Michelozzo's project would then have been dependent on Brunelleschi's scheme, but adapted for its rather less conspicuous site.

This has an obvious bearing on the origins and remarkable character of another Florentine palace – Palazzo Pitti (fig. 56) – which is said by Vasari to have been designed by Brunelleschi himself, even if this assertion is

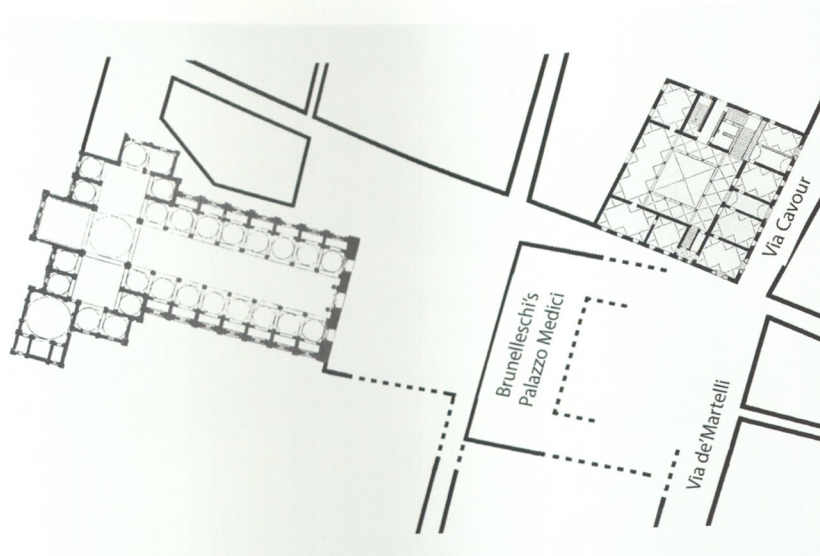


Fig. 57 Florence, the vicinity of Palazzo Medici: plan, showing the palace as executed (top right), the church of San Lorenzo (left), and the possible site of Brunelleschi's Palazzo Medici scheme. In this reconstruction, the front of Brunelleschi's scheme is of exactly the same width as the seven central bays of Palazzo Pitti.

now widely dismissed.¹⁵⁷ Begun in the 1450s (and so well after his death), the building is arguably the most spectacular and extraordinary of Florence's palaces from this entire period. It is sited at the rear of a large open area (cleared for the purpose) and originally took the form (unusually) of a single rectangular wing (subsequently extended), probably because the scheme was left uncompleted; and its enormous three-storey facade, 'more magnificent' than anything yet seen in the 'Tuscan manner' (*opera Toscana*),¹⁵⁸ was originally of seven bays. Sheathed in rustication, these are centred on sequences of large arches, which, for the bottom storey, alternate with smaller openings and, for the two above, are in continuous rows, and were intended to be subdivided by central colonnettes.¹⁵⁹ Apart from its vastness and its domineering position, what is especially striking about the design is its regularity, in that the arches on all three levels are the same size, have common alignments and are equally spaced to form a regular and symmetrical composition. Also remarkable is the vastness of the arches and the sheer size of the blocks of stone forming the rustication, which are redolent of the masonry of ancient walls and aqueducts, and which create an effect of massiveness that must have been extremely costly to achieve. In all these respects, moreover, the facade differs from that of Palazzo Medici, which is less tall and is not precisely symmetrical, and which has its three ground-level arches out of alignment with the smaller window arches above. It rather follows from all this that the Palazzo Pitti scheme probably had more than a little in common with the imposing and symmetrical design that Brunelleschi had previously devised for a Medici palace, and that its subsequent connection with Brunelleschi could have some actual basis in fact. This would be either that the Palazzo Pitti scheme was broadly based on the frontal portion of the Brunelleschi project (fig. 57), or even, quite conceivably, that it was a close and deliberate re-creation of it.¹⁶⁰