



Battista Naldini (?)  
View of the crossing of  
St. Peter's from the west side  
of the nave  
Hamburg, Kunstballe, 21311  
Cat. no. 400

### The precedents

During the Middle Ages the Basilica of St. Peter had come to represent the heart of the western world.<sup>1</sup> Originally built as the funerary church of the Prince of the Apostles, and as the burial ground of the local Roman parish, St. Peter's became the place of pilgrimage *par excellence* for Europeans and, from the thirteenth century, the most important setting for all the great papal ceremonies. The nave of the old Constantinian basilica, with its unusual breadth of more than 231 meters and its thin walls, began to show signs of being unable to support the weight of the great wooden roof (cat. no. 277). With an ever-growing court, the 18-meter-wide apse containing the throne of the pope and where the papal Masses were celebrated, became an ever-tighter fit, and the high altar was also partially hidden by a kind of rood screen. The Chapter of St. Peter's had grown to 92 members during the course of the fifteenth century, and up until 1478 the chapter house occupied the last part of the nave, creating another barrier between the celebrants and the ceremonies held in the presbytery.<sup>2</sup> The aisles were occupied by chapels and oratories, while parts of the nave arcades were filled with altars, therefore it became increasingly difficult for the popes and other dignitaries to find satisfactory space for their mausoleums. The funerary Masses read by the canons regular before the altars were one of their greatest sources of income. The canons also had dozens of other tasks to fulfill daily—from Masses for the innumerable saints, to baptisms, funerals and confessions. The basilica, overlaid with chapels, with only one entrance wall and a relatively narrow transept, could barely cope with the crowds of pilgrims surging forward to touch the altar over the tomb of St. Peter. The Benediction Loggia built in front of the atrium from where the pope blessed the faithful on feast days, remained a wooden structure until 1460.<sup>3</sup>

These were the reasons why Pope Nicholas V, the first pope to reign permanently in Rome after the period of exile in Avignon, began to contemplate the large-scale renovation of the old basilica.<sup>4</sup> In order to transform Rome into a modern seat of the papacy, alterations had to be made not only to the basilica and its atrium, but also to the neighboring papal palace, and the staircase connecting the palace and the church; while for the city, a new defensive system and road network was necessary. On his deathbed, Nicholas reconfirmed the concept that the authority of the Holy Roman Church could only be manifested to the faithful through the grandeur of its buildings.<sup>5</sup> His biographer, Manetti, acclaimed him as the true architect of the Church, the new Solomon, who would have surpassed not only the ancient Wonders of the World but also the works of the Old Testament. Nicholas planned to keep the old longitudinal body and to reinforce only the outer aisles by inserting chapels, and to destroy the greater part of the ancient constructions attached to it, together with all the funerary monuments from the sacred area. On the other side of the crossing, a 46-meter-long tribune would have continued the longitudinal body and housed the choir stalls serving not only the Chapter but the cardinals and papal court (fig. 1). The pope's throne was to be raised in order to be visible from afar and sited in the semicircular apse, while the high altar was to lie underneath the triumphal arch at the beginning of the tribune, as shown in the "Tribuna S. Petri" medal of 1470<sup>6</sup> and in the reconstruction by Grimaldi and Ferrabosco.<sup>7</sup> With its well-illuminated lantern, the primary function of the dome—perhaps without a drum—would have been to mark St. Peter's burial ground.<sup>8</sup> This would have been just slightly to the west of the center of the dome as it is today,<sup>9</sup> and it would have been identified by a pavement slab with a *fenestrella*, similar to the one in Cosimo de' Medici's tomb in S. Lorenzo.<sup>10</sup>

In every respect, this grandiose project was heavily influenced by Brunelleschi's Florentine churches. All the same, here the choir arm rather than the area under the dome would have assumed the functions of the old apse, serving as a *capella magna* for the papal Masses. Cross vaults would have improved the building both statically and esthetically and the large transept would have eased the flow of pilgrims. The transept would have been even better illuminated than the tribune and would have represented the two arms of an anthropomorphic organism. A vestibule with two campaniles was to be placed in front of the atrium, while the Benediction Loggia, in the project, should have been sited near or even on Nicholas V's tower, at a certain distance from the atrium. In 1452, when the walls of the choir arm were already 1.75 meters high and 7 meters thick, Nicholas V suddenly brought building work to a halt.<sup>11</sup> Evidently Alberti had convinced him that Rossellino's sober and somewhat archaic project did not correspond to the extraordinary task required of it. Perhaps equally influenced by Alberti, Pius II (1458–64) revealed a similar opinion when

<sup>1</sup> R. Krautheimer, S. Corbett, A. K. Frazer, *Corpus Basilicarum christianarum Romae*, Vatican 1980: 176ff.

<sup>2</sup> Tiberius Alpharantus, *De basilicae vaticanae antiquissima et nova structura*, ed. D. M. Cerrati, Rome 1914: 59ff., n. 39.

<sup>3</sup> C. L. Frommel, "Francesco del Borgo: Arkitekt Pius' II. und Pauls III., 1. Der Petersplatz und weitere römische Bauten Pius' II," in *Römisches Jahrbuch für Kunstgeschichte* 21 (1984): 144ff.

<sup>4</sup> L. von Pastor, *Geschichte der Päpste seit des Ausgang des Mittelalters*, vol. 1, Freiburg 1924–25: 514ff.; T. Magnuson, "Studies in Roman Quattrocento architecture," in *Figura* 9 (1958): 55ff.; G. Urban, "Zum Neubau von St. Peter unter Papst Nikolaus V.," in *Festschrift für Harald Keller*, Darmstadt 1963: 131–173; M. Tafuri, *Ricerca del Rinascimento*, Turin 1992: 33ff.

<sup>5</sup> Tafuri 1992: 38.

<sup>6</sup> F. G. Hill, *The medals of Paul II*, London 1910: 8ff.

<sup>7</sup> Urban 1963: 146, 148, no. 66, fig. 6.

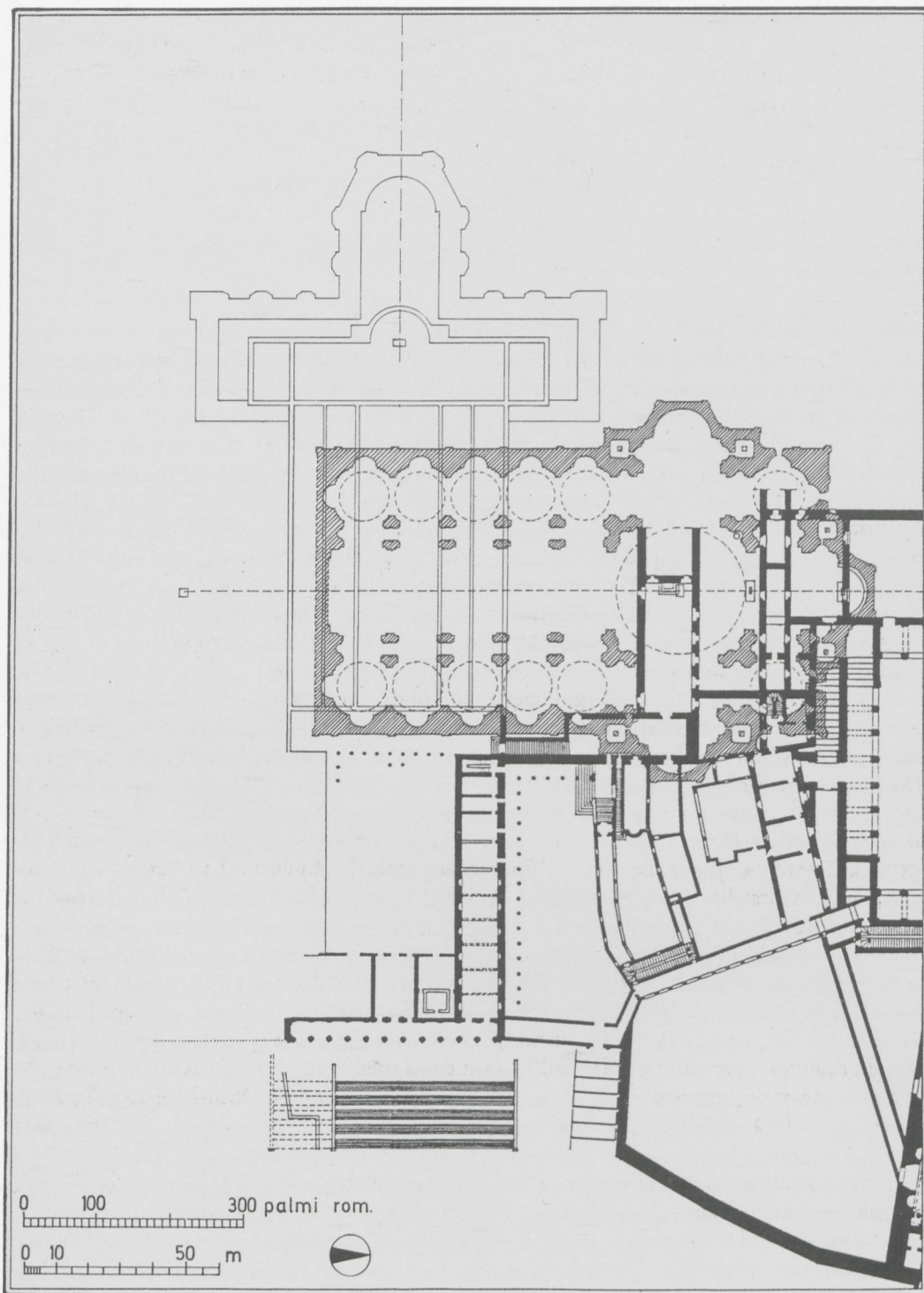
<sup>8</sup> Urban 1963: 142; see the reconstruction of the section, to be revised in the details, in H. Saalman 1989, fig. 120.

<sup>9</sup> G. Poggi, *Il duomo di Firenze*, Berlin 1990, vol. 1: cxx and ff., 234ff.

<sup>10</sup> Brunelleschi's proposal to place the choir in the area of the dome and to move the altar from the center toward the apse, was approved in 1435.

<sup>11</sup> L. Lavin, *Past-Present Essays on Historicism, in Art from Donatello to Picasso*, Berkeley-Los Angeles-Oxford: 6ff.

<sup>11</sup> Pastor 1924–25, I: 523ff.



1. Hypothetical reconstruction of the project described by Egidio da Viterbo showing Nicholas V's choir and the Vatican buildings (drawing P. Foellbach)

he began building the Benediction Loggia to a style strongly reminiscent of antiquity.<sup>12</sup> One of the few popes in those years who escaped the Albertian sway was Paul II (1464-71), who planned to complete Rossellino's tribune in time for the Holy Year in 1475, and to bring the piazza back to new splendor, which involved transferring the Obelisk to its center. These two objectives had also been a part of Nicholas V's project, but Paul II died before he was able to achieve them.<sup>13</sup> If his successor, Sixtus IV della Rovere (1471-84) decided to hold up the work again, with only three years separating him from the Holy Year, it was possibly due to the interference of his nephew Giuliano. Sixtus instead united the Chapter choir with his own funerary chapel, dedicated to the Immaculate Conception and attached to the outer aisle, thereby resolving one of the more serious functional defects in a totally egocentric way:<sup>14</sup> the intercession of the Mother of God, the prayers of the members of the chapter house, and the chanting of chorus formed during his papacy were supposed to accompany his soul to the life hereafter. No other project was suggested for the basilica during his lifetime—even though he was one of the most active patrons of the Quattrocento, and in Rome alone built four new churches dedicated to the Virgin Mary. After his death an explanation for this curious behavior was given by a General of the Augustinians, Father Egidio da Viterbo (1469-1523), a confidential friend of Sixtus IV's nephew, the future Julius II. A divine voice had convinced Sixtus that the new temple would be built by one of his nephews,

<sup>12</sup> Frommel 1984: 118ff.

<sup>13</sup> Pastor 1924-25, II: 351.

<sup>14</sup> Frommel 1977: 3ff.

and that was why Sixtus had raised three of his nephews to the purple.<sup>15</sup> Giuliano and his nephew Raffaele Riario believed fervently in this mysterious prophesy and each tried in every possible way to get himself elected pope. Independently of Egidio's explanation, Julius II himself confessed in a bull in February 1507 concerning the construction of New St. Peter's, that ever since he had become a cardinal he had thought about renovating and enlarging the basilica<sup>16</sup>—a project whose footing depended in any case on his election to the papacy.

### *The Project During the Reign of Julius II*

When Giuliano della Rovere finally crowned his ambition on 1 November 1503, he had been settled in Rome for only a few months. Ever since his flight in 1494, he had maintained close ties with the French royal family, and had aimed at the downfall of Alexander VI.<sup>17</sup> He traveled throughout France and must have admired its castles and cathedrals. At that time his architect was Giuliano da Sangallo (ca. 1445–1516), who had begun to build his palace at Savona in 1494, and subsequently followed him to France for two years.<sup>18</sup> The Cardinal may have visited with him the ancient monuments in southern France and discussed possible projects on the chance he might be elected.

The future papal architect, however, was to be Donato Bramante, whom Cardinal Giuliano perhaps met only in the late summer of 1503 in Rome. The buildings that Bramante had already built by then in Rome included, first and foremost, the cloister of S. Maria della Pace, the Tempietto, and the Palazzo Caprini. An unusual convergence of their architectural ideas must have brought the newly elected pope's choice to fall on Bramante. In fact Giuliano da Sangallo did not arrive until spring of 1504, when Bramante had already started work on the first of Pope Julius II's great projects for the Vatican, the Belvedere Court.<sup>19</sup>

This was an ambitious attempt to merge imperial Roman tradition with new trends from the courts in Europe, and to make the Vatican the most magnificent residence in Christendom. It is unlikely that in the early months of his papacy Julius and his architect were only planning to create new gardens and courtyards, but rather that they had also in mind the renovation of the medieval papal palace, the basilica and the whole Vatican complex—exactly as Nicholas V had done. If, in fact, the longitudinal axis of the Belvedere Court is extended south, it arrives, intentionally, directly before the atrium of the Old Basilica (fig. 1). When Vasari wrote that Bramante had drawn up a project “to restore and straighten the pope's palace” he probably meant that he wanted to regularize the medieval palace.<sup>20</sup>

That the very papal palace was not inviolable is also evident from an examination of the projects for new St. Peter's. Egidio da Viterbo wrote of a previous project that had perhaps been the subject of debate during the winter of 1503/04, before Bramante started on the Belvedere Court, but unlikely after the winter of 1504/05, when the project for St. Peter's had reached a more concrete stage. In this project, according to Egidio, Bramante had tried to convince the pope to transfer the main entrance of the new basilica from east to south, to the side of the Obelisk, placing the tomb of St. Peter along this new longitudinal axis.<sup>21</sup> The pope, however, refused to disturb this holy ground (fig. 1).

Bramante's buildings were characterized right from the start by their extraordinary spaciousness, their hierarchical development, their masterly illumination and, from the time Bramante was in Rome, by a new and quite unique cohesion with antiquity. The commission for the new “Temple of Solomon” (and Julius II felt he was his legitimate successor) must have fulfilled Bramante's boldest dreams. The recent awakening to the extent of his power gave Julius II the strength to unite the essence of the Christian religion with the monumentality of the imperial age.

Julius, however, was also parsimonious and—as the nephew of Sixtus IV and a longstanding cardinal—an expert on the institutions, ceremonies and multiple functions of the Church. Evidently he insisted in the first place that the fragmentary walls of Rossellino's choir should be included in the new building. Moreover the project was to be based on the same Latin cross, to maintain the dimensions of Constantine's original basilica and to keep in mind the numerous functions and traditions not only of the basilica but of the atrium, the benediction loggia and the passages connecting it to the neighboring papal palace. Julius must have also planned right from the beginning to move the funeral chapel of his uncle Sixtus IV into the new choir arm, where he would place his own mausoleum.

Julius had begun his ecclesiastical career as a Franciscan monk, and even when he was cardinal he continued to maintain close contacts with the Franciscan communities living at S. Pietro in Vincoli and at the SS. Apostoli.<sup>22</sup> He had widened the choir area in both these churches to create more space for the monks and to provide a more solemn liturgy.<sup>23</sup> His source of inspiration, as for all popes from Nicholas V onward, was Florence Cathedral, for which reason he also opened the presbytery toward the longitudinal body, so the faithful could follow Mass. S. Maria del Fiore in Florence must have seemed to him to represent the prototype of magnificence and functionality. Such a wide crossing under the dome provided an ideal setting for the spectacular papal ceremonies. Be-

<sup>15</sup> loc. cit.

<sup>16</sup> loc. cit.

<sup>17</sup> Pastor 1924–25, II: 564; III: 384ff.; for Giuliano della Rovere's travels in the years 1496–1503, see M. Sanudo, *Diarii*, Venice 1886–1903, vols. 1–3.

<sup>18</sup> For Giuliano's itineraries see, C. von Fabriczy, “Giuliano da Sangallo,” in *Jahrbuch der königlichen preussischen Kunstsammlungen* 23 (1902), supplement, p. 7.

<sup>19</sup> For the date of the Belvedere Court, see also, C. L. Frommel, in *Raffaello in Vaticano*, exhibition catalog, Vatican 1984: 122ff.

<sup>20</sup> Vasari, ed. Milanesi 1878–85, IV: 160.

<sup>21</sup> Wolff Metternich and Thoens 1987: 45ff., fig. 48. Since the project in Uff.

3A (cat. no. 280), elaborated after the project described by Egidio but before the one of Uff. 1A, is noticeably smaller

than the project on the medal and evidently concerns a longitudinal body, it is perhaps nearer these first ideas. Panvinio

too, in about 1560 (Frommel 1976: 90ff.), emphasized Bramante's influence

over the pope. His eloquence succeeded

in convincing the pope about the feasibility of his project, in spite of the opposition of a majority and effectively of

most of the cardinals, and he built a wooden model of it. There are also refer-

ences to Panvinio and his very detailed account in F. M. Mignanti, *Istoria della*

*sacrosanta patriarcale basilica vaticana*, Rome–Turin, 1987, I: 21; II: 11ff.

<sup>22</sup> Pastor 1924–25, II: 481ff. It is significant that in the palaces next to S.

Pietro in Vincoli and next to SS. Apostoli, where he lived as a cardinal from

1471–94, there was no distinct separation between the cardinal's reception

rooms and the dormitories of the monks (Magnuson 1958: 312ff.).

<sup>23</sup> G. Urban, “Die Kirchenbauskunst des Quattrocento in Rom,” in *Römische*

*Jahrbuch für Kunstgeschichte* 9/10 (1961–62): 269.

sides, thanks to its dome the cathedral dominated the city skyline more than any other church had done before it. It is quite possible that at first Julius considered simply modifying Nicholas V's project, enlarging the area of the dome and maintaining the old longitudinal body, as the writings of both Condivi and Vasari suggest.<sup>24</sup>

Bramante had already faced a similar project in the choir arm of S. Maria delle Grazie in Milan, and therefore must have appeared to be the most competent architect for this case. Here too Bramante was anxious to better even Brunelleschi's highly praised prototypes, and to create a round dome, full of light, using the language of antiquity and an articulated network connecting the various component parts.<sup>25</sup>

A first idea of this early phase of the project can be gleaned from the drawing in Uff. 3A, a hitherto little known workshop sketch (cat. no. 280, figs. 2, 23). There Bramante clearly started from Nicholas V's project. Therefore he utilized Florentine *braccia* (0.586 m) for measurements and gave the three arms of the cross a width of 40 *braccia*. He also moved the high altar from Peter's tomb and placed it under the triumphal arch so that the papal ceremonies could occupy the whole area under the dome. Being free to use the area between the three arms of the cross, he opened Rossellino's uniform walls to create four secondary areas, necessary for both functional and iconographic reasons. He transformed the quincuncial plan, that is, an axially symmetric block forming an inscribed Greek cross. This highly symbolic and multifarious model descended from the vaulted architectures of the Roman and Byzantine empire. It was a direct emanation of Bramante's vision of space, which he had avouched in his early architectural "manifesto," the Prevedari engraving of 1481 (cat. no. 121).<sup>26</sup>

In order to give the area of the dome dimensions similar to Florence Cathedral, Bramante cut diagonal faces into Rossellino's squared piers; and to achieve a round dome like that of the Pantheon he made these diagonal faces develop upward into pendentives. He thus combined the ample octagonal base of the Florentine dome with Nicholas V's dome and its system of pendentives, creating a perfect "chorum seu ciborium," as Paris de Grassis defined the area of the dome as early as April 1506.<sup>27</sup> Quite naturally this distribution of the area about the altar providing the utmost space and excellent lighting was soon copied by everyone. While in Florence Cathedral the longitudinal body and the area of the dome stood next to each other quite independently, in Bramante's St. Peter's the one grew out of the other, both vertically and horizontally. He drew on his experiences in Pavia, buttressing the piers by means of secondary domes and reducing the quantity of piers and pier arches compared to Florence Cathedral. This statically hazardous reduction of the piers of the dome made it possible for Bramante to create a harmonious passage between the area of the dome, the arms of the cross and the secondary domes, creating a sense of spatial hierarchy. Bramante amalgamated this highly ramified arrangement of space with homogeneous illumination and a monumental order. The barrel vaults would have intersected to form cross vaults with lunettes probably designed with Serlian windows, like those in the choir in S. Maria del Popolo (fig. 3).<sup>28</sup>

This last example can provide an idea of the elevation of the choir arm drawn in Uff. 3A. There too the high altar is under the choir arch, followed originally by a bay with a cross vault and in front of the narrower apse there was a shorter bay with a barrel vault. The choir of S. Maria del Popolo had been designed in the summer of 1505 by Julius II and Bramante also as the choir of a mausoleum. Thus it is significant that in his first projects for the tomb of Julius II in March 1505, Michelangelo was also working on a wall tomb scheme, to be sited inside the arch in front of the apse in the drawing in Uff. 3A; this would hardly have been possible in Bramante's successive projects (fig. 2). Michelangelo's subsequent project for a freestanding mausoleum, decided in April 1505, required a change in the choir arm too (cat. nos. 278, 279, Paris and New York projects, figs. 4-7).

The functions of the Capella Papalis were probably similar to those of the church of the papal palace, the Cappella Sistina renovated by Julius' uncle, Sixtus IV.<sup>29</sup> During Mass the pope used to sit either behind the altar, as in Old St. Peter's or, if there was no apse, to the left of the high altar, as portrayed in the Cappella Sistina and in numerous representations of the sixteenth century. The pope's throne would have been to the left in front of the high altar, probably in front of the diagonal face of the southwest pier of the dome, investing it with special importance. The stalls for the cardinals and for the large papal retinue would have been placed either side of the pontiff. The Chapter would have been able to use the apse with the altar dedicated to the Virgin Mary. Perhaps a grid as before in the floor of the area of the dome would have given a view of the tomb of St. Peter. The sketches on the verso of Uff. 3A, perhaps in Bramante's own hand, show the area of the dome leading into a longitudinal body whose five arcades probably reached as far as the old pronaos. In these sketches Bramante did not limit himself simply to extending the arms of the cross, but attempted to widen the nave, referring directly to the plan of the ancient Basilica of Maxentius. If the saying that, for St. Peter's, Bramante intended to "pile the Pantheon on top of the Basilica of Maxentius" was of his own invention, then no other drawing of his projects can bear greater confirmation of it than this one in Uff. 3A.<sup>30</sup>

In April 1505 Julius II approved Michelangelo's project for a freestanding mausoleum, probably

<sup>24</sup> Frommel 1976: 88.

<sup>25</sup> R. Schofield, "Bramante and Amadeo at Santa Maria delle Grazie in Milan," in *Arte Lombarda* 78 (1986), 3: 41ff.

<sup>26</sup> C. Thoenes, "S. Lorenzo a Milano, S. Pietro a Roma: ipotesi sul 'piano di pergamena,'" in *Arte Lombarda* 86/87 (1988): 94ff.

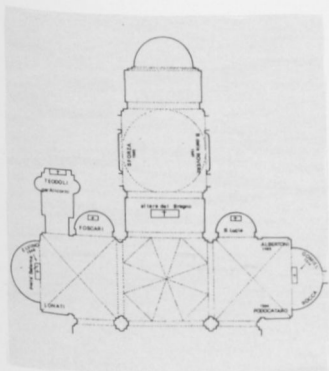
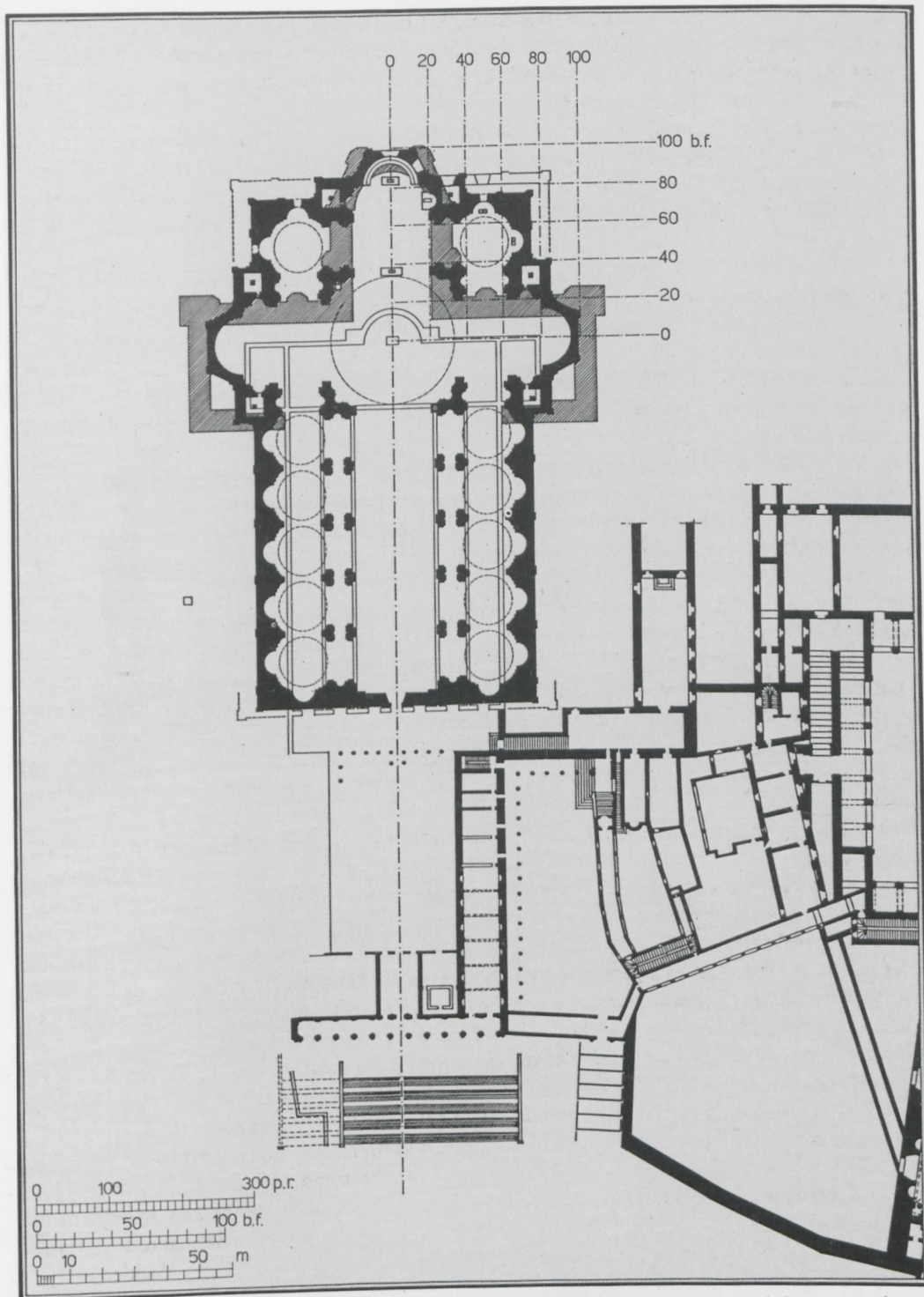
<sup>27</sup> Frommel 1976: 94.

<sup>28</sup> Frommel 1977b: 49ff.; E. Benvivoglio, S. Valtieri, *Santa Maria del Popolo*, Rome 1976: 35ff.

<sup>29</sup> For the order of seating during Mass see, Frommel 1977b: 45.

<sup>30</sup> Wolff Metternich and Thoenes 1987: 85, n. 135.

2. Hypothetical reconstruction of the Uff. 3A project with a grid showing the Vatican buildings and Julius II's wall tomb (drawing P. Foellbach)



3. Rome, S. Maria del Popolo reconstruction of the choir with mausoleums and apse

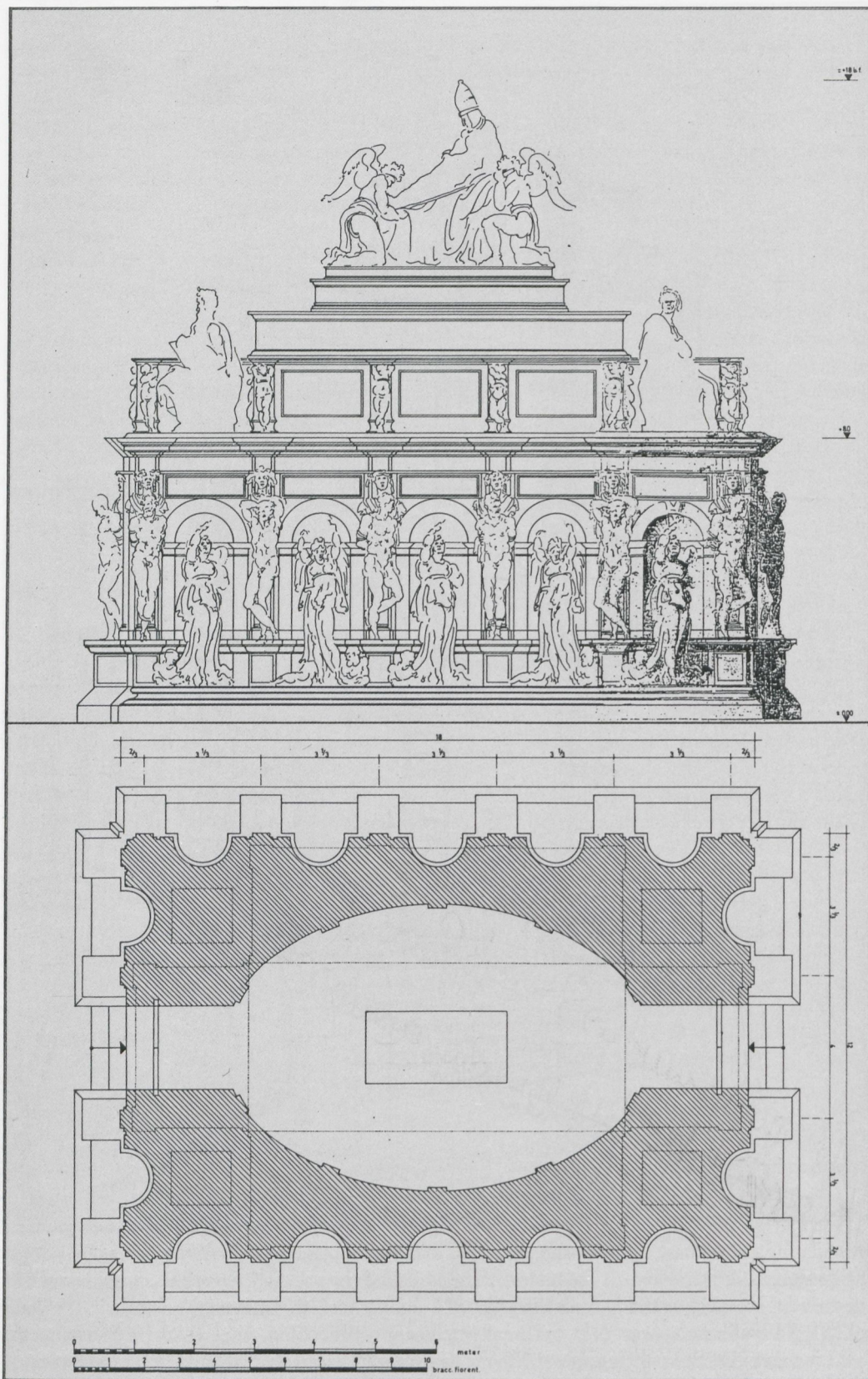
stimulating a new phase in the design process as a result.<sup>31</sup> Bramante too followed the pope's desire for greater monumentality. At the same time he exploited the pope's receptiveness to convince him of the advantages of a strictly centrally planned building, such as not even the sketch on the verso of Uff. 3A had yet elaborated. In the great parchment plan (cat. no. 282) which he developed the next few months, St. Peter's tomb and the high altar were probably placed together once again to the west of the center of the dome, and the crossing is still concentric compared to Rossellino's scheme (figs. 6-8, 23). With its diameter of ca. 185 *palmi* the dome was so similar to Brunelleschi's dome for Florence Cathedral (diam. 187.6 *palmi*) that it could hardly be considered a coincidence. Michelangelo's freestanding mausoleum could now have a whole bay to itself, with chapels to the side; furthermore, not only the area of the secondary domes, but also the corner towers and sacristies, as well as the vestibules could be sited in a much more satisfactory way in the areas between the longer arms than on the alternative project illustrated in Uff. 3A (cat. no. 280). The complete plan of the centralized building would have already extended over a greater area than Nicholas V's project. The addition of a longitudinal body has to be ruled out because of the difficulties in connecting the secondary areas with the aisles. The junction between the eastern arm of the cross and a fragment of the old basilica was equally problematic.<sup>32</sup> In Nicholas V's project<sup>33</sup> and in the final project of 1506,<sup>34</sup> unity was reached by the repetition of the ratio of 1 : 2 on an increasingly larger scale from the arcades to the transverse section of

<sup>31</sup> Unlike the previous proposal (Frommel 1977) the present reconstruction starts from an oval plan, and from measurements regarding the height of the shafts and not the height of the base (see also Eichinger and Maurach).

<sup>32</sup> *op. cit.*: 21ff., fig. 11.

<sup>33</sup> Urban 1963: 137ff.

<sup>34</sup> Wolff Metternich and Thoenes 1987: 108ff.



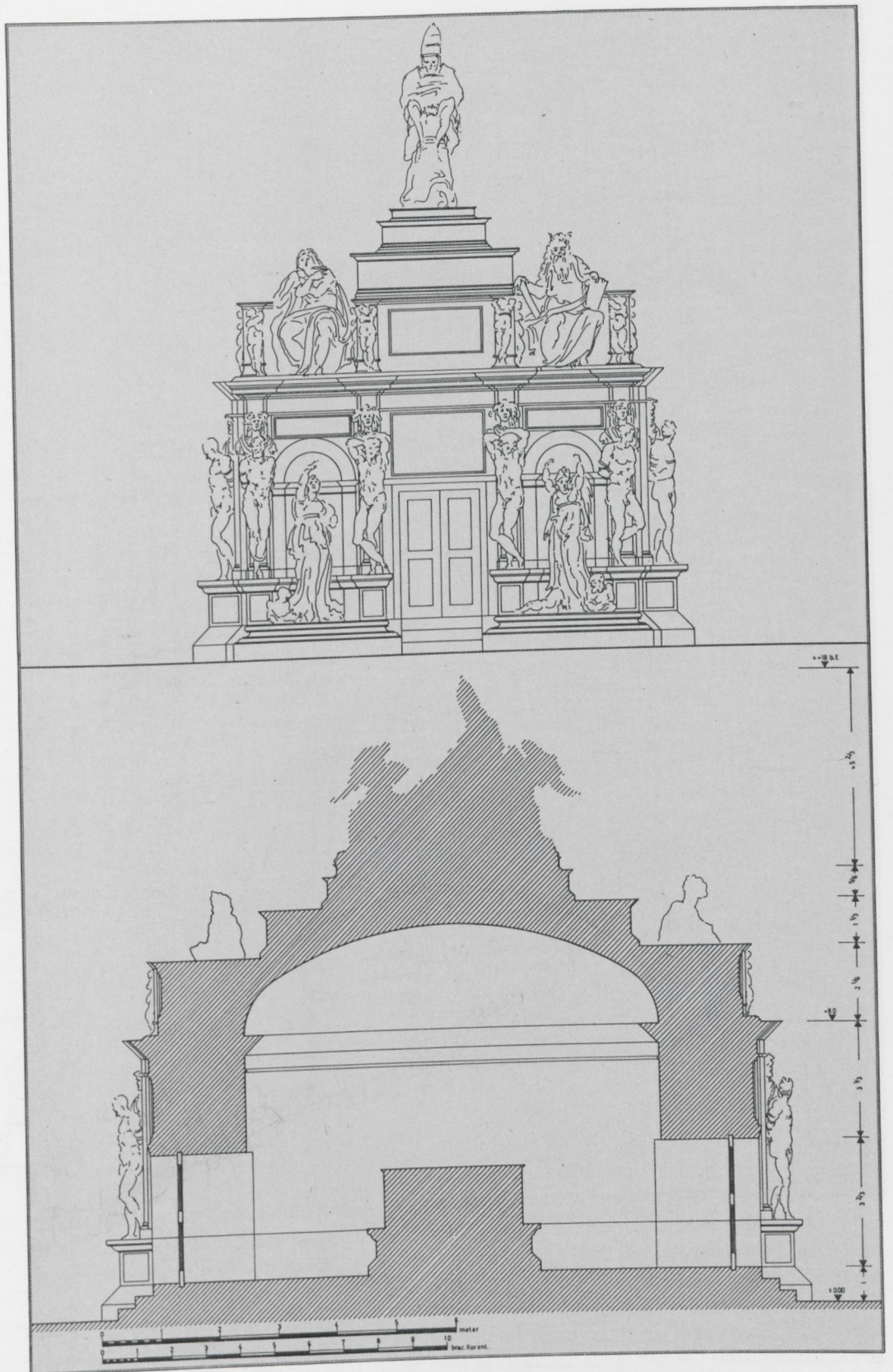
4. Reconstruction of Michelangelo's project of 1505 for the mausoleum of Julius II plan and elevation (drawing P. Foellbach)

the arms of the cross and the area of the dome. The same ratio of 1:2 is likely for the reconstruction of the projects in Uff. 3A and Uff. 1A. The pilaster shafts were in Uff. 1A still more or less the same width as those in Uff. 3A, but now they were doubled so that the four pier arches measured 22.5 *palmi* (almost the size of those in Florence Cathedral) but they were still not sturdy enough to bear the thrust of the drum and dome. Bramante also took up again the question of widening the arms of the cross, as in Uff. 3A verso, and their consequent detachment from the Capella Papalis. The enlarging of the drum and the lantern and the supposed doubling of the lunettes in the arms of the cross would have increased the amount of light considerably, creating an ingenious contrast with the shadows in the chapels, exedrae and niches.

If the altar of St. Peter and the pontiff's throne—which may once again have been placed in the niche of the dome's southwest pier—were to be the focal points of the area of the dome, the western arm was a possible site for the choir and the Capella Iulia.<sup>35</sup> As in Uff. 3A, the altar dedicated to

<sup>35</sup> Frommel 1977b: 43ff.

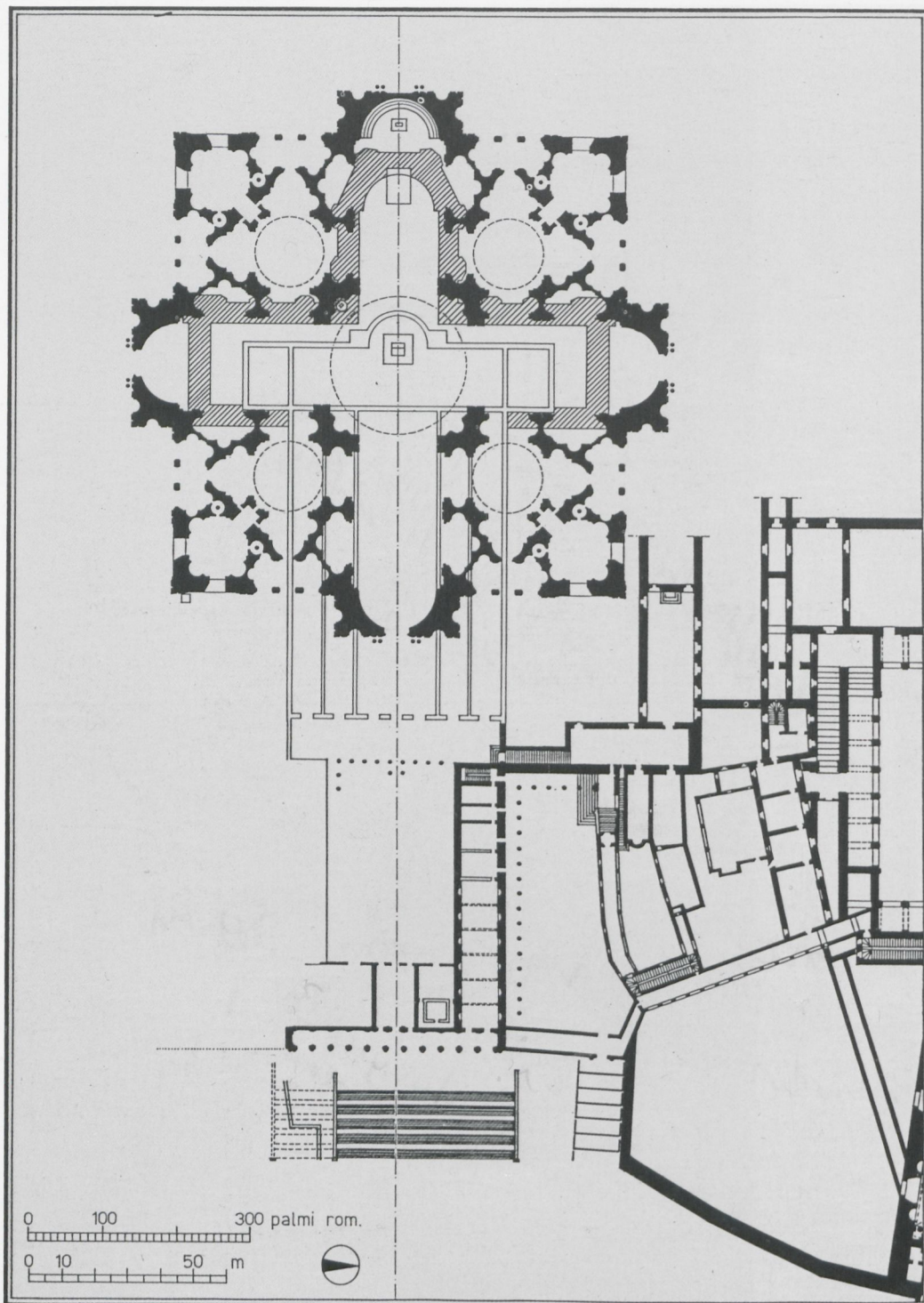
5. Reconstruction of Michelangelo's project of 1505 for the mausoleum of Julius II longitudinal section and elevation (drawing P. Foellbach)



the Virgin Mary was most likely to be in the center of the apse with the choir stalls hugging the walls, while the new bay in front of it could have been calculated for Michelangelo's freestanding tomb. Both the lunettes, the oculus on top of the semidome and at least three windows in the wall of the apse, would have illuminated Michelangelo's sculptures. The pope's choristers would have occupied one of the two chapels to the sides of the bay.

This hierarchy, which develops from the secondary spaces toward the dome, would have been highlighted even more on the exterior of the new building. The image on the medal (cat. no. 284) fixed a more mature stage of the project that had been prepared on detail in Uff. 7945A recto (cat. no. 283, figs. 9, 23). On that drawing Bramante reinforced the pier arches, enlarged the secondary domes and placed the towers beyond the main body of the building. First of all, however, he was concerned about laying an even more conspicuous accent on the Capella Magna. He sketched in fact the papal throne in the niche of the southwest pier and framed all the





6. Reconstruction of the Uff. 1A project with the Vatican buildings (drawing P. Foellbach)

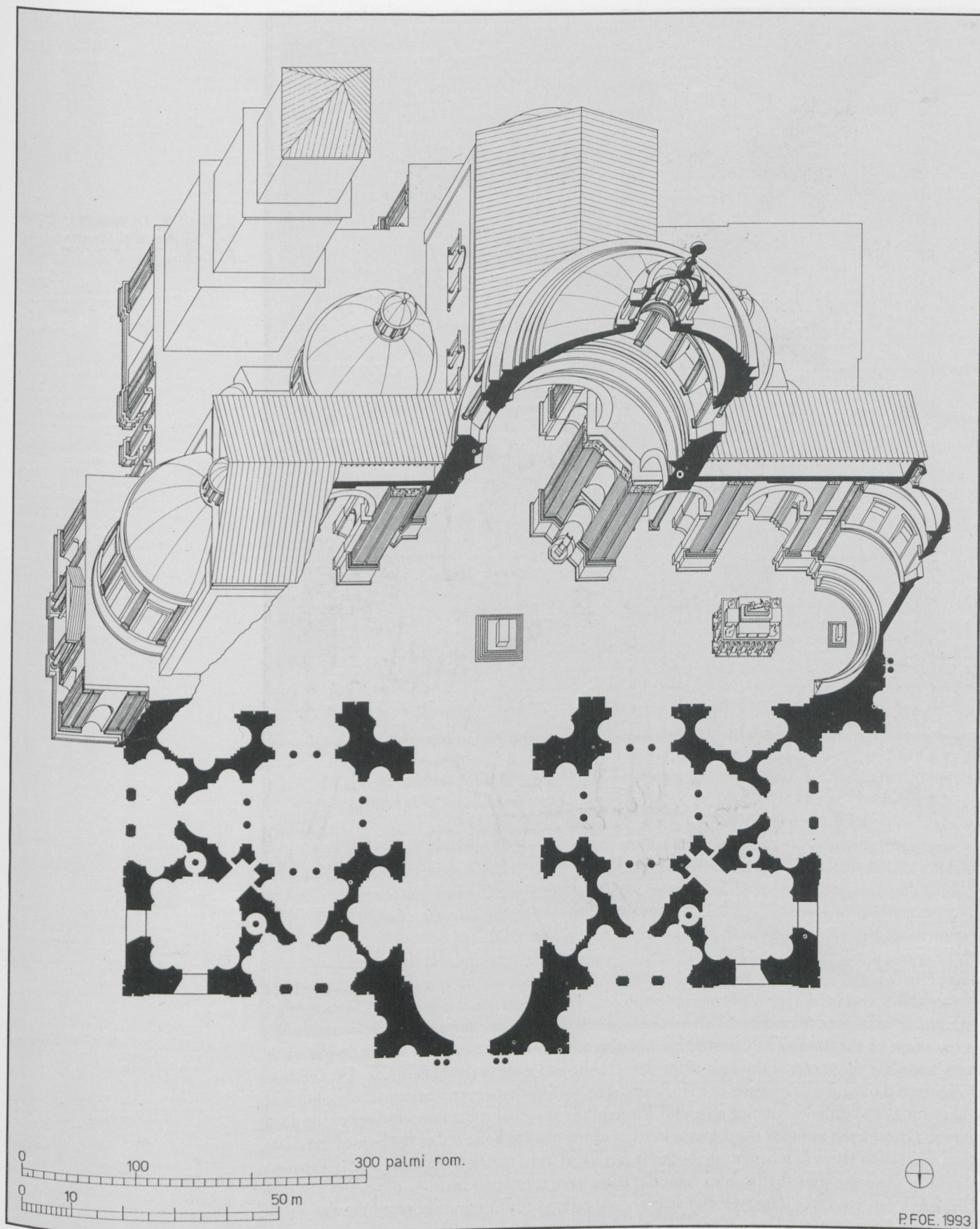
niches of the four piers with an order of giant columns. Later on he considered the possibility of extending these giant columns and forming a circle, isolating the Capella Papalis from the rest of the church, almost as it had been in Old St. Peter's.

Perhaps it was already his intention in the drawing in Uff. 1A to make the exterior design of the apses of the four arms of the cross similar to the main dome with its drum, dome and lantern. This served to emphasize the analogous functions of the Capella Iulia and the Capella Petri, Julius II's mausoleum and that of the first Vicar of Christ, without effacing their hierarchical disparities.

The flow of pilgrims was improved not only by portals in three of the four arms, but also by the eight *all'antica* vestibules. These would have led into the arms of the secondary areas, where two columns would have separated them from the real area of the secondary domes in the style of the ancient *thermae*. The altars which were perhaps even placed in the center, could have been destined for the veneration of the four Evangelists or for the more sacred relics such as the Volto Santo of St. Veronica, the head of St. Andrew, the holy spear and the Nail of the Cross.<sup>36</sup> The corner octagons were connected to these areas and were probably designed for sacristies or for the baptistery, as indicated in Uff. 8A recto (cat. no. 287). A staircase could have connected the northeastern octagon with the papal palace.

Visitors to the basilica would have been drawn immediately toward the center of this hierarchical universe bathed in light, and from there, they would have felt the radiating force of the monumen-

<sup>36</sup> Alphanus, ed. Cerrati 1914: 177ff.

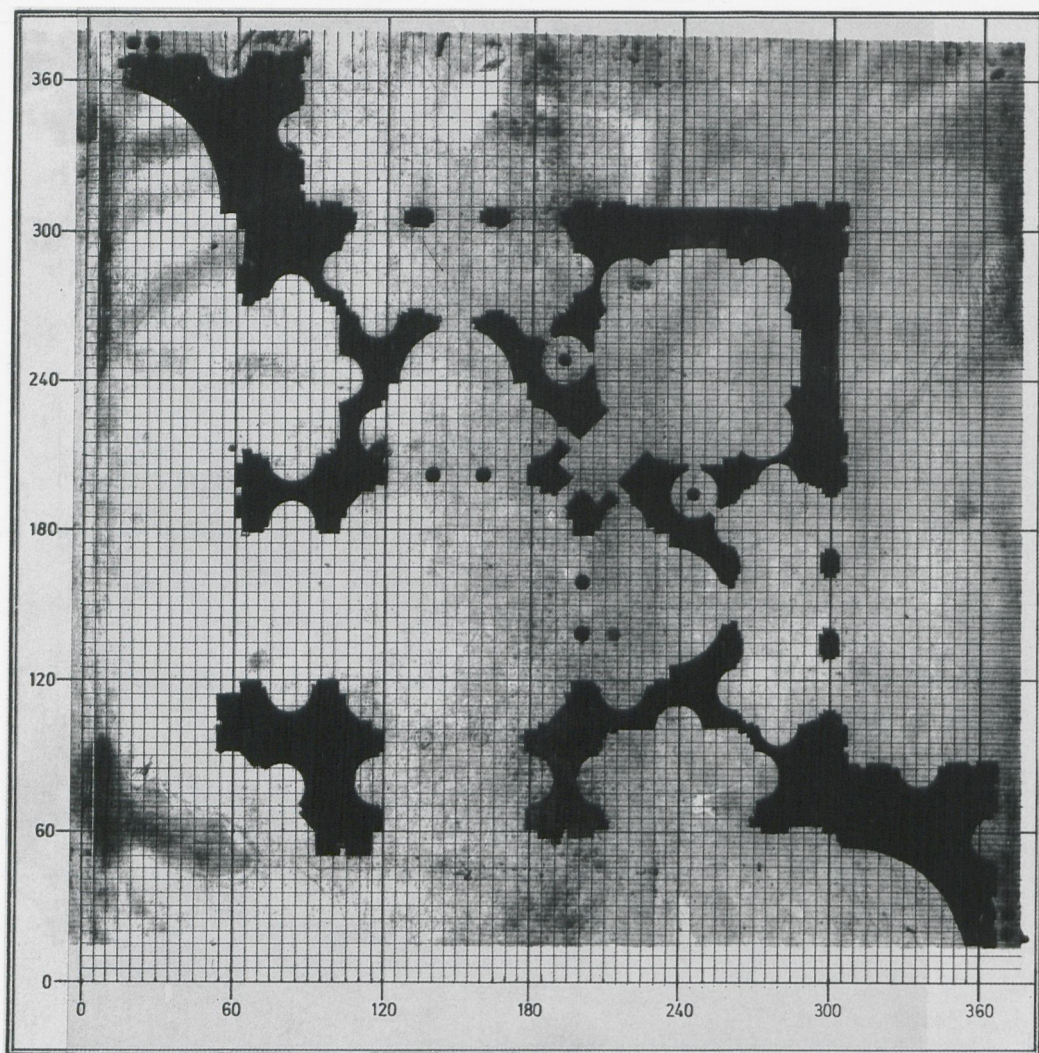


7. Hypothetical reconstruction of the Uff. 1A project axonometric projection (drawing P. Foellbach)

tal area of the dome, and passing between the vestibules, they would have admired the gradual crescendo of light inside the highly articulated organism. Although Bramante had gone way beyond Nicholas V's plans and had abandoned the highly respectable tradition of a basilica with a nave and four aisles, he must have succeeded in persuading the pope to accept his project. Otherwise Julius would never have had several foundation medals coined of such an unconventional centrally planned building, presenting it to the Christian world.

After having decided up until then not to build any kind of construction in the area of the basilica, Julius now must have had such clear ideas about the future shape of the palace and the basilica that

P.FOE. 1993



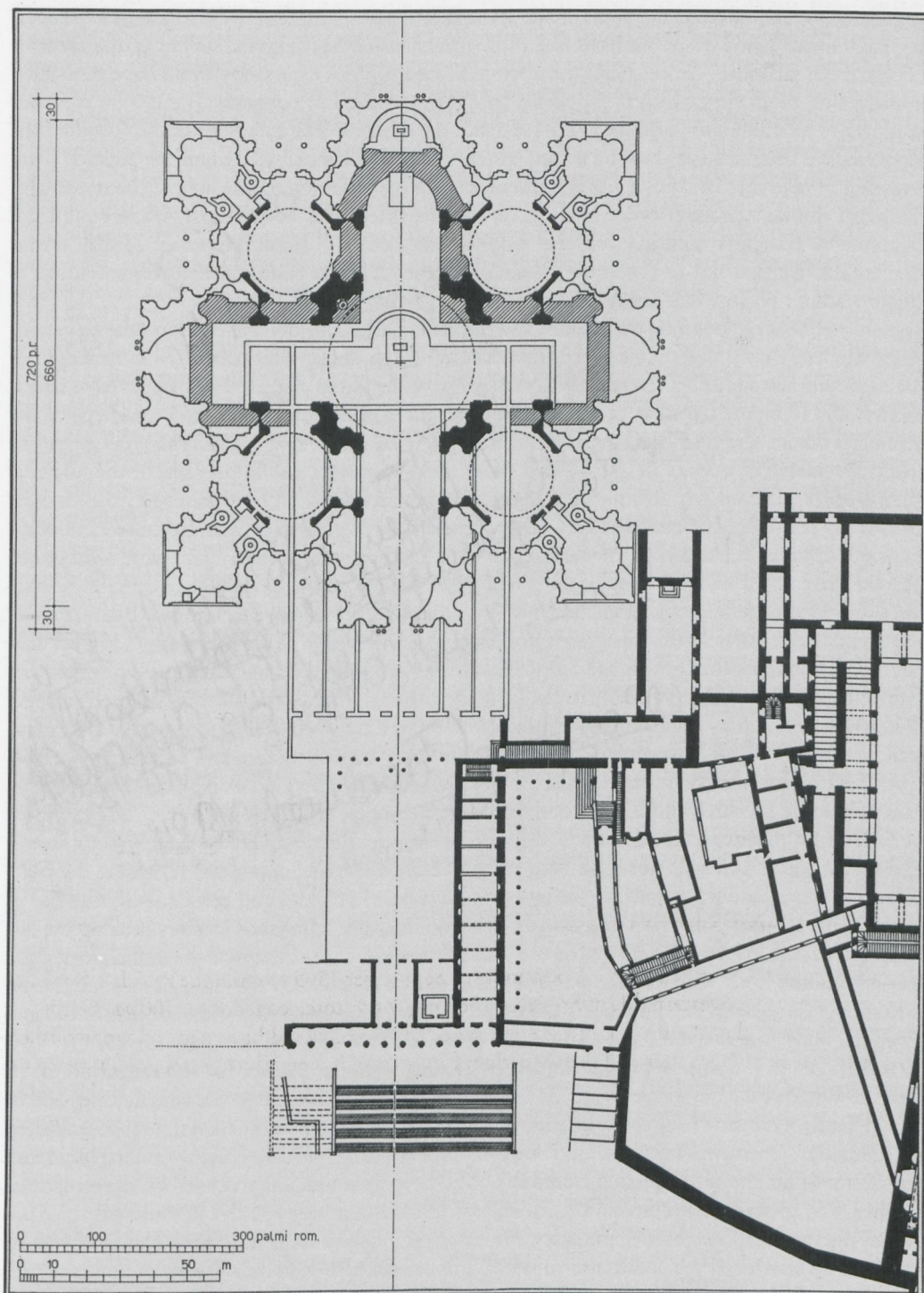
8. *The Uff. 1A project inserted in a 5-palmi grid (drawing P. Foellbach)*

he could commission Bramante at the beginning of September 1505 to continue Pius II's Benediction Loggia along the western side of St. Peter's Square, with a total length of ca. 700 *palmi* (156.38 meters).<sup>37</sup> The southern half of the palace with the Sala Regia would have had to be demolished for a new, considerably larger and deeper atrium from where it would have been possible to get a full view of the whole facade and its two towers (figs. 7, 23). The completely centralized building itself could only have been appreciated from the surrounding hills. Julius was therefore planning a partial renewal of the papal palace, but without introducing the classicizing radicalism, which characterizes Bramante's sketch in Uff. 104A verso (cat. no. 281).

At the latest, in the autumn of 1505, when the pope was raising the funds for the imminent project, second thoughts of a religious, functional and perhaps economic nature as well must have induced him to introduce a fundamental change in the project. The pope's quick mind and radical approach can already be seen on the verso of Uff. 7945A (cat. no. 283), in which Bramante referred not only to the shape of the Basilica of Constantine but also to its material elements. He again placed St. Peter's tomb at the center of the area of the dome, as he had done in the plan in Uff. 3A, and tried to conserve the ancient colonnades in a longitudinal project, perhaps even without arcades, but with ambulatories and galleries running all round. He kept the crown of columns in the area of the dome and even considered bringing the columns in front of the piers to a site under the base of the drum, while increasing them to a height of about 50 meters so as to create a colossal *Capella Papalis*. Almost at the same time Giuliano da Sangallo must have submitted his rival project to the pope (Uff. 8Ar., cat. no. 287). The type and spatial elaboration of his project reflected the one shown on the foundation medal. However he emphasized not so much the articulation of the various areas and their hierarchical development as the massive structure of the piers and the solidity of the four arches supporting the dome. This aspect brought his project much closer in concept to Florence Cathedral compared to Bramante's. Giuliano's evocation of the most successful construction of a dome so far, and perhaps the skepticism of the other experts, must have convinced the pope of the fragility of Bramante's constructive system. In truth, during an audience with his patron Bramante must have sensed that his project was at risk, and hastily sketched another proposal on the back of Giuliano's drawing. Here he returned to the Latin cross and colonnades of the project in Uff. 7945A verso, but he connected them both to Giuliano's more solid pier system with its series of niches and to the spacious quincunx system of his own foundation medal project. This ingenious

<sup>37</sup> Frommel 1984: 224.

9. Hypothetical reconstruction of the Uff. 7945A recto project plan (drawing P. Foellbach)



step forward was inspired by certain Milanese prototypes, such as the cathedral and S. Lorenzo, whose plans he illustrated on the same sheet, the Milanese projects of Leonardo (fig. 10),<sup>38</sup> and perhaps also by the *Opinione* that Fra Giocondo had presented to the pope in the same period that autumn (cat. no. 286, figs. 11, 23). The enormous vessel of this latter project—measuring nearly 350 meters in length and equipped with seven domes, side towers, a narthex (undoubtedly designed to incorporate a benediction loggia), a choir ambulatory along the lines of French cathedrals, a set of galleries—had been so carefully studied from the static and functional point of view, that it must have increased the pope's doubts about the corresponding features of the medal project.

All these ideas and afterthoughts merged into the project in Uff. 20A (cat. no. 288), the most instructive of Bramante's surviving drawings. Similar plans, drafted on a precise grid, with the plan of the ancient basilica and Nicholas V's choir must have led the way to the projects in Uff. 3A and Uff. 1A (figs. 2, 8). In the plan sketched on the bottom right of the sheet Bramante returned once again directly to the drawing in Uff. 7945A verso, while keeping in mind the measurements of Nicholas V's project. But before arriving at a further reworking of this version, he must have come to an agreement with the pope over the innovations introduced in Uff. 8A verso, which he developed in more detail in the remaining part of the plan.

In this scheme he sacrificed the additional bays inserted in Uff. 1A in front of the apses to the

<sup>38</sup> Wolff Metternich 1975: 85, fig. 24, in which there is also an altar of the choir under the dome and a second altar in the apse.

ambulatories, and reduced the areas of the secondary domes considerably. Michelangelo's funerary monument would therefore have had to be placed either between the arches of the choir or in one of the secondary centers, and the altar dedicated to the Virgin Mary could have been sited in the center of an apse which is supported by a series of piers or columns. There is no evidence as to where he wanted to place the choir stalls and the *cantoria*. The functions of the Capella Iulia seem to have been neglected to the wings, which was reason enough to irritate the pope. It is interesting to note that Bramante was again centering all his attention on the area of the dome with the papal throne, the giant order of columns and the three arms of the cross, while he did not elaborate a complete solution for the longitudinal body in either static or formal terms. Bramante's decision not to touch the Obelisk and the Cappella Sistina reveals his intention to create a sound project that really could be built (figs. 12, 23).

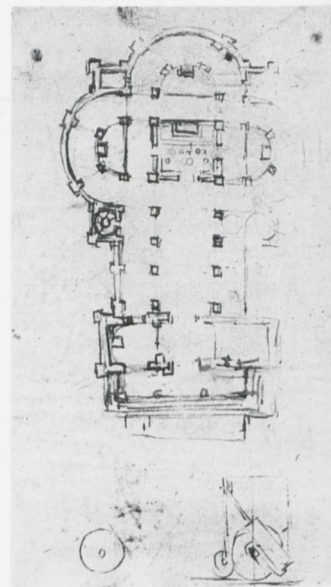
The enlargement of the piers, the arcades and the order had a considerable effect on the elevation. Since Bramante only slightly increased the diameter of the dome, maintained the same length of the nave, and certainly kept the same system of proportions, these modifications would have affected first and foremost the walls of the central nave, the penetration of light and the shape of the drum and dome. The final decision to adopt an order with a shaft width of 12 *palmi* (as he had already considered in a detail in Uff. 7945A recto) became feasible also in the light of the 60-*palmi* wide arcades, and made it possible to give the pilasters proportions that were nearer the classical canons. By placing niches between the pilasters on the sides of piers of the dome Bramante doubled to nearly 45 *palmi* the depth of the pier arches, creating the premises for a much more solid dome. The sketch in Uff. 20A verso shows a drum with eight windows without the ring of columns belonging to his final project for the dome (cat. no. 288), and can be explained in terms of Bramante still paying more attention here to questions of construction rather than to the final design. Light would have penetrated indirectly through the ambulatories and directly only from on high—another aspect inspired by antiquity, hardly to the benefit of Michelangelo's mausoleum. Lastly, thanks to the challenge raised by Giuliano's solid project, Bramante acquired greater knowledge of massive wall structures, whose construction techniques had been forgotten since late antiquity. Whereas spatial expansion had dominated the parchment plan and the reduction of the already fragile wall masses brought the structural aspect to a dangerous minimum, now solid piers embraced the space of their ample niches and created a new reciprocal harmony. Even though the pope was not totally against Bramante's new proposals at first, he must have expressed objections regarding the functional problems, and doubts about the repeated increase of volumes and consequently the rise in costs. In his counter-proposal in the *Codex Coner* (cat. no. 289) Giuliano certainly took up the last variation drawn in Uff. 20A as regards the shape of the piers, the design of the ambulatories and the longitudinal body with its nave and four aisles, and even extended the latter far beyond the old atrium; but he gave up the quincunx system for the time being and reduced the arcades of the longitudinal body, the diameter and piers of the dome, and the side chapels (figs. 13, 23).

It is difficult to imagine Bramante himself producing a similar project for the reduction of St. Peter's. Without the quincunx system he would probably never have kept the ambulatories and he would hardly have gone back to a longitudinal body with such narrow aisles and the supposed galleries. Giuliano's unconvincing plan could however have contributed in any case to making him move the center of gravity of his project from the quincunx system to a longitudinal, axially structured basilica, and to accept the elimination not only of the ambulatories and the secondary domes, but also of the vestibules and corner sacristies. He hinted at a similar reduction in the plan in Uff. 20A, in which he shortened the south arm to the length of Nicholas V's choir arm and eliminated not only the quincunx system but the ambulatory as well, while hastily filling the arcade going toward the adjoining area of the secondary dome with a triconch-like solution.<sup>39</sup>

These reflections probably matured toward the end of 1505 and therefore the disappointing reactions to his November missives could have prompted Julius to make a more precise calculation of the costs. It is clear that at this point the pope must have insisted even more blatantly than a few weeks earlier on the significance and traditions of Old St. Peter's, forcing Bramante moreover to return to one of his first ideas, which placed the Capella Iulia in a completely isolated choir raised on the foundations of Rossellino's choir project, as Michelangelo had originally suggested. At this time Michelangelo had just returned to Rome from Carrara and was in fact beginning to work on the great project for the freestanding mausoleum; this brought him again in close contact with the pope (cf. Michelangelo's letters of 1523 and 1546-47) and thus he may have had a direct influence on the project during this period.

#### *Bramante's Final Project for Julius II*

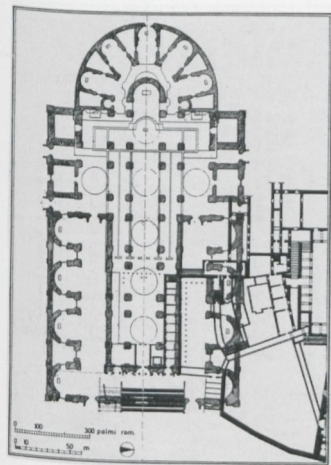
Bramante prepared the final project no later than the beginning of 1506, and the foundation stone was laid by the pope on 18 April 1506.<sup>40</sup> Bramante reduced the piers of the dome compared to the later versions drawn in Uff. 20A, and returned to a dome with a diameter of 185 *palmi* while aban-



10. Leonardo da Vinci  
Project for S. Sepulcro, Milan  
ca. 1487-90 (?)  
Paris, Bibliothèque Nationale  
MS. B, fol. 35r.

<sup>39</sup> Clodt has made similar observations of his own (1992).

<sup>40</sup> Frommel 1976: 94ff. A little known description of the ceremony can be found in the writings of the Florentine Bonsignori: "In Rome [Julius II] began to build great walls. He had St. Peter's demolished and started to build it again. I was present when his Holiness laid the foundation stone which was a great cross. It was immediately covered by foundations, under which, the abovementioned Pope placed many gold, silver and bronze medals. This was the first foundation of the column or pier behind the altar of St. Peter's toward the cemetery beyond the chapel dedicated to S. Petronilla to the glory of God. All the most reverend cardinals and other prelates took part in a solemn procession in the ceremony of placing the said cross." See E. Borsook, "Michelozzo and Bonsignori in the Levant," in *Journal of the Warburg and Courtauld Institutes* 36 (1978): 176ff.



11. Hypothetical position of Fra Giocondo's project in relation to the Vatican buildings (drawing P. Foellbach)

doing the diagonal faces in the area of the aisles. The total isolation of the choir arm (figs. 14–16, 23) made it possible to create intense light inside it, which would have been to the advantage of the rite and of Michelangelo's funerary monument, but the scheme also modified the spatial effect of the entire interior. The thickness of Rossellino's walls enabled Bramante to open colossal windows measuring nearly 6.70 meters in the side walls, a width that he had designated also for the three windows in the apse of the wooden model (cat. nos. 293, 292). Two pairs of rows of columns coming from the aisles of Old St. Peter's would have been repositioned in the arches of these windows. So that Bramante transformed the ambulatories drawn in Uff. 8A verso and Uff. 20A into a kind of monumental openwork typical of Gothic cathedrals. He then added the great basket-arch windows in the barrel vaults, through whose diagonal shafts the light poured into the area of the funerary monument (cat. no. 301). Static problems were perhaps the reason why he reduced the three windows in the apse by 10 *palmi* before he was building them. The windows drawn in Uff. 3A and Uff. 1A were much smaller, so it is possible that Bramante calculated this intense illumination not only in consideration of Julius II's funerary monument but also with regard to the decidedly longitudinal development of the new project, to create an ever-increasing brilliance from the entrance through to the apse which, not without reason, he marked with double pilasters in the version actually built. For the same reason, it is also highly unlikely that he already wanted to eliminate direct illumination from the transept arms by means of costly and hardly justifiable ambulatories; these would have completely upset the equilibrium of both the inner and outer constructions.<sup>41</sup> The longitudinal principle forced Bramante to replace the cross vaults (which in the previous projects would have visualized the interpenetration of the main and secondary arms of the quincunx system) with barrel vaults whose classicizing coffering in the version actually built produced an even greater axial accent than the model (cat. nos. 293, 292). The continuity of the longitudinal axis was emphasized even more by setting the piers of the nave in line with the dome piers, and by increasing their similarity by adopting pilasters separated by niches. Bramante calculated this design so that three bays covered almost exactly the distance to the old entrance wall (figs. 14, 23). In this move he must also have been inspired by Alberti's S. Andrea in Mantua, an analogy that is lacking in all the earlier projects, and which therefore cannot be dissociated from the longitudinal emphasis of the entire basilica. The connection with the papal palace was in itself a good reason for not exceeding the old longitudinal body (fig. 14). The three triumphal arches along the longitudinal body transformed it into an authentic *via triumphalis*, the ceremonial route the popes followed since late antiquity to reach the presbytery.

The narrow disk-like piers of the longitudinal body were arranged as in the majority of the earlier longitudinal projects, so that the former division into a nave and four aisles of Old St. Peter's could still be maintained. In about 1509, when the western piers of the longitudinal body were already rising up, Raphael in his *Disputa* reproduced with astonishing precision the southern pier as the symbol of Julius II's renovation of the Christian Church (fig. 17).<sup>42</sup> All the same, Raphael inserted pedestals, which would have hardly been compatible with the niches starting at floor level (cat. no. 341). Each of these ca. 10-*palmi* wide niches could have held an altar, and that is why Sangallo raised the problem in his *Memoriale* of 1520–21 (cat. no. 320) whether the pilasters of the inner order should have pedestals, “per li inconvenienti che fanno nelle chapelle.” The pilasters of the giant order would have had therefore a ratio of 1:10.6, thereby accentuating the verticality of the inner space. Since Bramante in no way had preferred a reduced vertical upthrust in all of his Roman works, he may have returned here to the Gothic cathedral as his model for Christian devotion. For the rest, the disk-shaped piers were still under discussion in Giuliano's projects of 1514 (cat. no. 307) and in Peruzzi's and Sangallo's projects of the years 1531–35 (cat. nos. 326, 339).

If Maerten van Heemskerck drew plastered perimetral arches on the north and east faces of the eastern pier of the dome, and right-angled corners on the piers toward the aisles confirming the plan conserved in the *Codex Coner* of 1515 (cat. no. 310), then Bramante must have planned groined or coved vaults for the inner and outer aisles. It is likely that given the giant external order, there would have been ulterior spaces for the clergy above the four aisles. The outer aisles would have been illuminated in all probability by natural light from the arched 30-*palmi* wide windows, like the choir arm and the chapels in the transept. Since these windows were sited at a height of 45–50 *palmi*, the area of 10 × 60 *palmi* underneath could be used for side chapels with aedicular altars. These windows would have been reduced internally to a width of 20 *palmi* in the apses of the transept as in the choir arm. With a total of nineteen windows of this size, perhaps fitted with stained glass, and twelve windows in the vaults, the interior would have achieved an astonishing luminosity for the Renaissance, and would have again continued the tradition of Gothic cathedrals.

The well-documented choir arm (cat. nos. 298, 337) offers important points of reference for the reconstruction of the exterior of the building.<sup>43</sup> The external articulation of Bramante's choir arm opened up completely new roads in architecture, by developing the strictly paratactic rhythm of Rossellino's choir and perhaps of his own wooden model of 1506 into unprecedented heights of dynamism and plasticity. In the bay with the large arched windows bearing a minor load he was satisfied with a 5.36 meter thick wall and simple corner pilasters. In the passage toward the real apse

<sup>41</sup> Cf. the reconstruction of Bramante's 1506 project in Wolff Metternich and Thoenes 1987: 105ff.

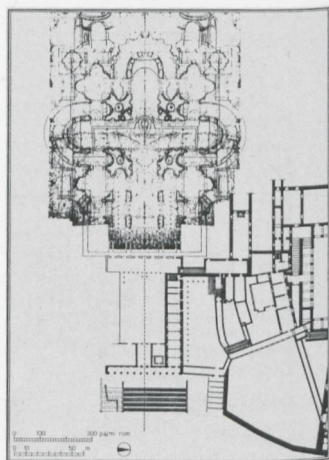
<sup>42</sup> I would like to thank Wolfgang Jung for the correct representation of this pier (fig. 17).

<sup>43</sup> For the reconstruction of Bramante's choir, see also Wolff Metternich and Thoenes 1987: 112ff.; A. Bruschi 1987b, fig. 22, 23.

he intensified the plasticity of the order much more energetically than on the inside, placing the pilasters one after another, uniting them in groups and making them protrude beyond the intermediate elements. This dynamism culminates and is extinguished in both piers at the head of the apse where the pilasters are separated by niches. It is difficult to establish whether Bramante gave the four piers of the apse the entire 10.30-meter thickness of Rossellino's wall for static reasons, when in his early projects he had often reduced the load-bearing wall to a minimum, whether, that is, he was elaborating the bracing of the apse, or simply complying with the pope's desires to maintain the exact dimensions of Nicholas V's choir, or lastly, decisions of a formal character had the upper hand. The five niches between the pilasters of the head were also an example of Bramante's dynamic conception as they become smaller toward the top. Below they descend considerably beyond the window sills so that proper pedestals on the pilasters would have been out of the question. The pilasters would have therefore really had the ratio of more than twelve widths of the shaft that Sangallo criticized in his *Memoriale* of 1520 (cat. no. 320) and they would have stimulated the sense of sweeping verticality. This dynamism would have been intensified by the emphatic jutting and it would only have terminated in the highly protruding cornice. The angled corner pilaster proves that Bramante wanted to continue the giant order along the rest of the outer construction. He may have tried doing for the rest of the building what he had achieved in the choir, creating an ample correspondence between the inner and outer orders. The walls of the longitudinal body consequently follow a sequence similar to that of the head of the apse, i.e., alternating pilasters and niches with broad arched windows (figs. 14, 15). For formal reasons the arms of the transept could have been designed like the choir arm even though, unlike the latter, there was no need to build them on pre-existing foundations. Their external articulation would certainly have been a continuation of the choir and the walls of the longitudinal body. It is not clear however what shape Bramante planned to give the western walls of both arms of the transept. Sangallo's plan of before 1513 hints at a more simple design than that of the adjacent choir.<sup>44</sup> In order to guarantee the uniformity of the exterior Bramante would have had to flood the chapels of the transept with light using 30-*palmi* arched windows as well, and push the walls of the windows further out to create a salience. In the 1506 project, the sacristies could therefore have been placed only on top of the chapels in the transept and access to them would have been up the great staircases inside the piers of the dome.

A clue to the facade of the definitive project, while not being totally reliable, is given in the sketch in Uff. 5A recto (cat. no. 292). In spite of all the distortions, this view could not correspond to any other project except the model of 1506. The slender proportions of the order—without any pedestals—and the dynamic intensification toward the center block in the facade at that time were already plainly nearer the version of the choir arm actually built. In fact, the simple Doric order of the tower develops into the Corinthian aedicules with groups of pilasters and freestanding columns projecting in front of the broken pediment, creating a sense of contemporary momentum and conclusion in the extensive center block. Bramante succeeded here in integrating characteristics of the imperial *thermae* into a highly complex system in a much more convincing way than Giuliano had managed with his recently submitted alternative (cat. no. 289). The idea of setting towers on the sides, however, had already been superseded in May 1506 when the Scala Regia was built. The towers would have also been incompatible with a planned road that was to open up the view from St. Peter's Square to the Obelisk. This prospect had been decided on by Julius II in March 1507<sup>45</sup> but, like several other solutions, it was never realized. The project for this road utterly contradicts all the hypotheses for the reconstruction of a basilica over 550 *palmi* in length (123 meters) in Julius II's final project. Moreover the fact that the pope still wanted to complete Pius II's Benediction Loggia in May 1507 and that Bramante instead wanted to demolish even the parts already built "according to the new design for the church of St. Peter's,"<sup>46</sup> demonstrates once more how the ideas of the architect and his patron were not always coordinated. Whatever the case, Bramante must have felt he was capable of gradually bringing the pope round to accepting an open facade with a portico, its own benediction loggia, and the extension of St. Peter's square right up to the facade. The longitudinal body of this project would certainly have been one bay shorter, but it would have been considerably wider than the present one, and would have exceeded Florence cathedral in length, breadth and the size of the dome. If Bramante gave the blind arcades of the choir arm the same dimensions as the other arcades, this does not necessarily mean that he was including the possibility of a later integration of the choir arm in a quincuncial system or had even considered as only provisional a choir that by itself had already cost tens of thousands of ducats.<sup>47</sup> Not one of the numerous attempts of Bramante's successors to solve this problem can be considered satisfactory (cat. nos. 311, 316, 317). The shape of the choir arm was entirely calculated as a part of the longitudinal system, and the thickness of its walls must have competed with those of the *thermae*, as if Julius II wanted to ensure a similar life span for his funerary chapel.

Like the facade, the dome of the presumed wooden model seems incomplete; the question was therefore probably not yet decided between the pope and his architect as to whether they would settle for a drum with arched windows (cat. no. 292) or much more likely a colonnade on the outside—perhaps the old columns from the central nave, which otherwise would not have found any comparable reutilization.



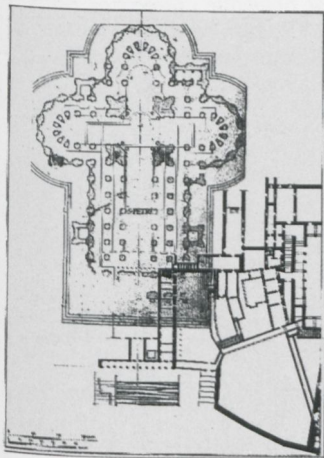
12. Position of the Uff. 20A project in relation to the Vatican buildings (drawing P. Foellbach)

<sup>44</sup> The half-built pier which in Sangallo's plan in Uff. 44A (cat. no. 337) turns again northwest in front of the southwestern chapel, dates back to the years 1511-13, to the period immediately after Sangallo's survey drawn in Uff. 43A, or—much more likely—to the years 1513-15, when Bramante and Fra Giocondo continued to build in this area. The southern corner pilaster could then have led toward the inner articulation of a western ambulatory.

<sup>45</sup> Frommel 1984: 256.

<sup>46</sup> loc. cit.

<sup>47</sup> Wolff Metternich and Thoens 1987: 143.



13. Hypothetical position of the Codex Coner project, fol. 17 in relation to the Vatican buildings (drawing P. Foellbach)

The same financial problems which forced Julius II to reduce the dimensions of Bramante's first projects, conditioned him over the choice of materials. The walls were mostly built of *breccia*, probably that cheap crushed tufa typical of the surrounding countryside;<sup>48</sup> the vaults were at least partly cast, and bricks were used especially for the thin walls and to obtain particular shapes, jutting, or, as in the case of the southwestern pendentive, complex curves.<sup>49</sup> Travertine was only used for the bases, the capitals and the cornices of the orders. A lack of funds was certainly not the last of the reasons for deciding to eliminate the secondary domes, the pedestals and continual cornices of the impost or to reutilize the columns of the old aisles in the windows. It is therefore likely that Bramante had planned to use a fake travertine finish on the walls as he had already done so masterfully for the Palazzo Caprini.<sup>50</sup>

Toward the end of his life Julius II wanted to give the area of the choir a more magnificent appearance. In a papal bull of February 1513 he wrote about marble walls and everlasting (*diuturnos*) sculptural and pictorial works. Next to Michelangelo's freestanding mausoleum with its marble statues and gilded bronze reliefs, he perhaps planned to introduce sculptures in the numerous niches, mosaics and stained glass, as he had already done in the choir of S. Maria del Popolo, in the Sala Regia and in the Stanze.<sup>51</sup> He also mentioned a mosaic floor, which would certainly have been similar to the Cosmato work floor in the Cappella Sistina, and, as in that case, would have indicated the course of the pope's procession. A marble inscription by Julius had already been inserted in the frieze of the giant order instead of the hieroglyphics originally planned by Bramante. All these elements would have certainly been tuned by Bramante into perfect harmony. When his pupil Raphael designed the Cappella Chigi in the last years of Julius II's reign, he drew not only on the architectural shape of the area of the dome, but also on the polychrome splendor of the planned interior.<sup>52</sup> The organization of the building site must also have been "clear and simple," the very expression Michelangelo had used for Bramante's project.<sup>53</sup> Bramante was responsible for the technical and artistic elaboration, while Giuliano Leno was in charge of construction activity. The accounts were kept by some of the pope's closest familiars, such as Cardinal Fabio Santoro, Archbishop Enrico Bruni and two canons, Mario Maffei and Bartolomeo Ferratino. From 1506 to 1511 Julius II spent a total of just over 80,000 ducats for the new basilica, most of which came from the sale of indulgences.<sup>54</sup>

Work began first on the choir arm and on both the western piers of the dome where the partial insertion of the walls of Nicholas V's choir created problems of subsidence, resulting in dangerous cracks. The substance of the old basilica was not touched yet. Only in April of 1507 when the impatient pope ordered the construction of the two eastern piers, parts of the old choir had to be demolished (cat. no. 294).<sup>55</sup> In May 1507 the area surrounding Nicholas V's choir was leveled for the choir arm. This included a part of the early Christian cemetery.<sup>56</sup> A huge crack appeared at the end of May, perhaps because the western piers were being built over Nicholas V's foundations.<sup>57</sup> The four arches of the dome were completed in 1511.<sup>58</sup> After a fruitless military campaign in northern Italy, the pope's once frenetic building activity stopped and only resumed in the summer of 1511. Here the records in the *Liber Mandatorum* (accounts registers) come to an abrupt halt.<sup>59</sup> During the last years of his life Julius II focused his efforts on getting the choir completed, together with the tribune containing his funerary monument. He furnished magnificently the newly founded chapel of the choristers, who were to accompany the liturgies in the Capella Iulia, and ordered marble for the interior of the choir.<sup>60</sup> Under Julius work also began on the technical preparation for constructing the dome proper, and the vaulting began in the Capella Iulia, which was just completed in April 1514, when Bramante died (cat. nos. 299, 300).

During the seven years of building activity under Julius II, Bramante prepared the various stages of construction, first in concert with Antonio di Pellegrino, then, from 1510, with Antonio da Sangallo the Younger as well. The studies for the Corinthian capital of the inner order, perhaps executed by Bramante himself (cat. no. 295), and for the centering of the arches of the dome (cat. no. 296), together with Antonio di Pellegrino's drawings of the curve of the pendentives (cat. no. 297), and Sangallo's studies of the dome (cat. no. 299) and for the vaulting of the apse (cat. no. 300) all illustrate the methodical precision of the design process. The building site was suddenly brought to a halt by Julius' death in February 1513 and by the election of Leo X, a pope of a different character altogether.

#### Bramante's Project for Leo X

In March 1513 the thirty-seven year old Leo X, son of Lorenzo il Magnifico, succeeded Julius II. From his childhood he had been familiar with the principles of *all'antica* architecture, and he was sufficiently young and optimistic to want to outdo Julius II's monumental projects (cat. no. 294). For the first eight months Bramante was the sole architect at work on St. Peter's, and when Leo X appointed two prominent counsellors to flank him, he did it perhaps for both personal and technical reasons. First and foremost, Bramante's energy was beginning to fail him.<sup>61</sup> Fra Giovanni

<sup>48</sup> Frommel 1976: 93.

<sup>49</sup> op. cit.: 93, 128.

<sup>50</sup> See cat. no. 123.

<sup>51</sup> Frommel 1976: 126ff.; Frommel 1977: 43-46.

<sup>52</sup> Frommel 1984c: 21ff.

<sup>53</sup> Frommel 1976: 74ff.

<sup>54</sup> Op. cit.: 64, fig. 5.

<sup>55</sup> Frommel 1984c: 256

<sup>56</sup> Frommel 1976: 100.

<sup>57</sup> "The wall of St. Peter's of Julius II, built over the old [church] has already begun to produce a crack from the lowest to the highest part. The opinion is that these modern architects cannot find the way of the ancients" See Borsook 1973, n. 37.

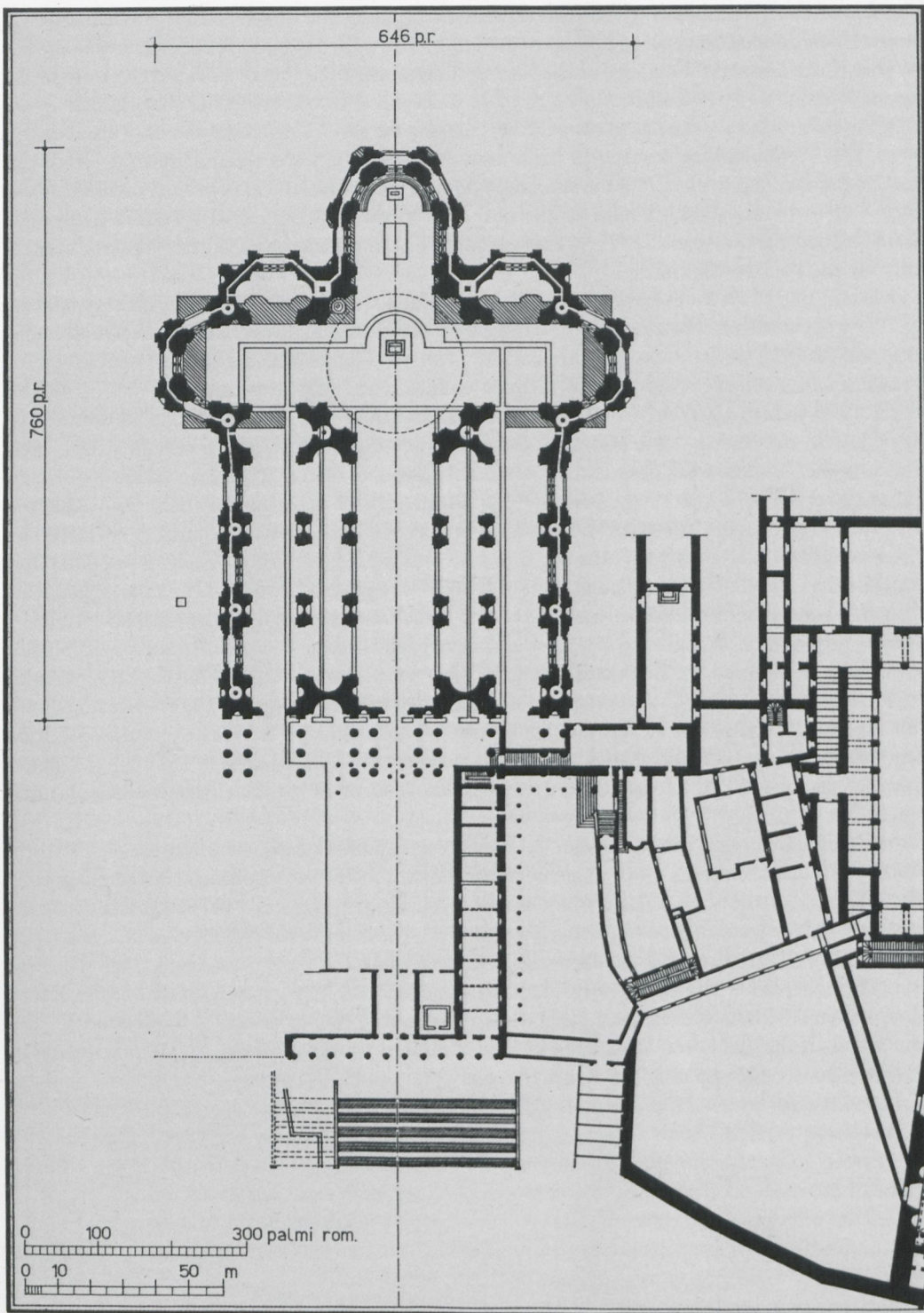
<sup>58</sup> Frommel 1976: 67ff. Grossino sent the following missive to Mantua on 27 May 1511: "Once they [the Bishop of Ivrea and Federico Gonzaga] went to the top of the vault of the chapel of St. Peter's which are all four vaulted ... which are very beautiful and there you can see all Rome"; and on 12 July 1511 he wrote: "All four arches of the great chapel [of St. Peter's] are vaulted which is a lovely thing and admirably fine to see." A. Luzio, "Isabella d'Este di fronte a Giulio II," in *Archivio Storico Lombardo* 39 (1912): 326; kindly pointed out to me by John Shearman.

<sup>59</sup> Frommel 1976: 71.

<sup>60</sup> Pastor 1924-25, IV, 1: 542ff.

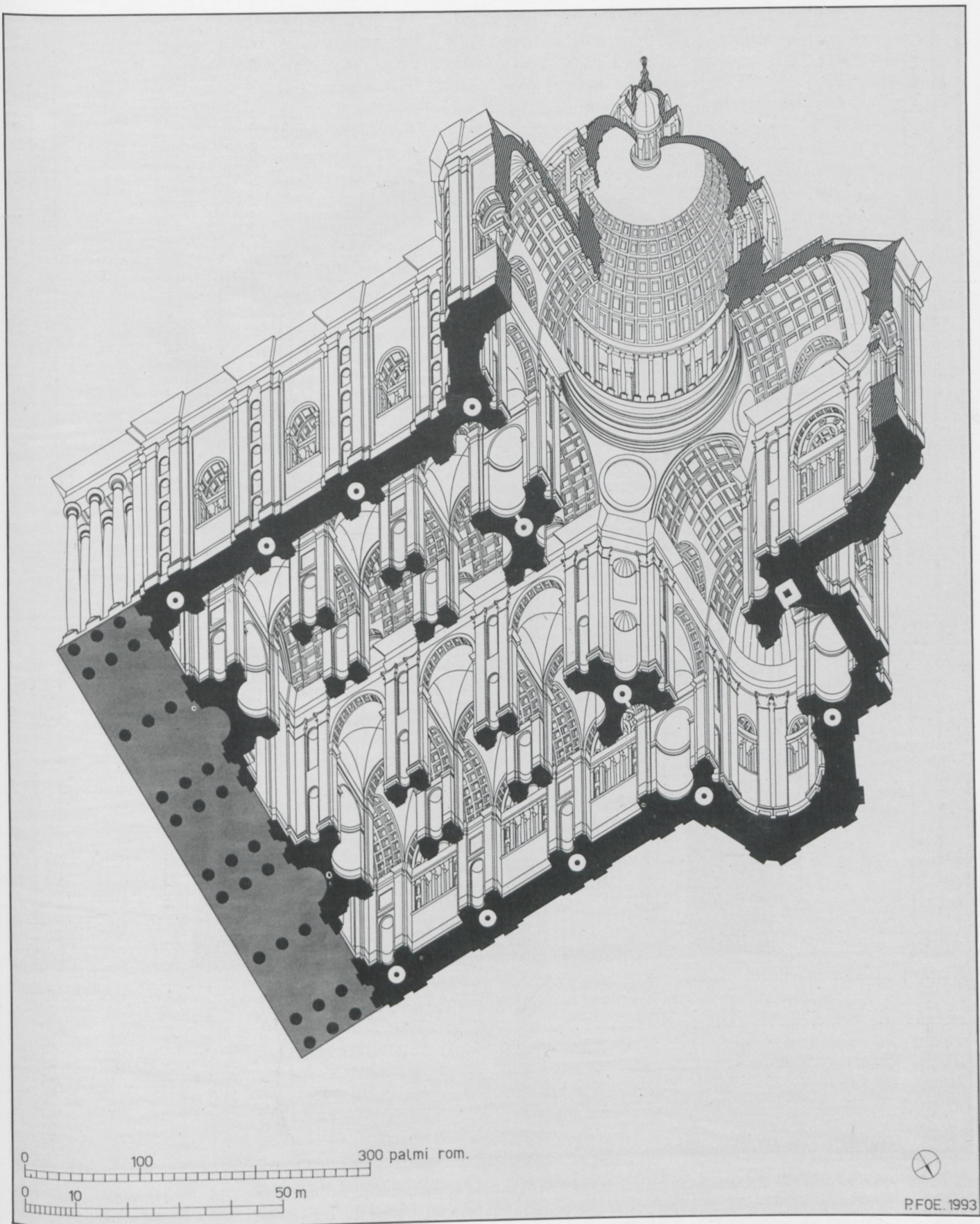
<sup>61</sup> Frommel 1984c: 42ff., 241ff.





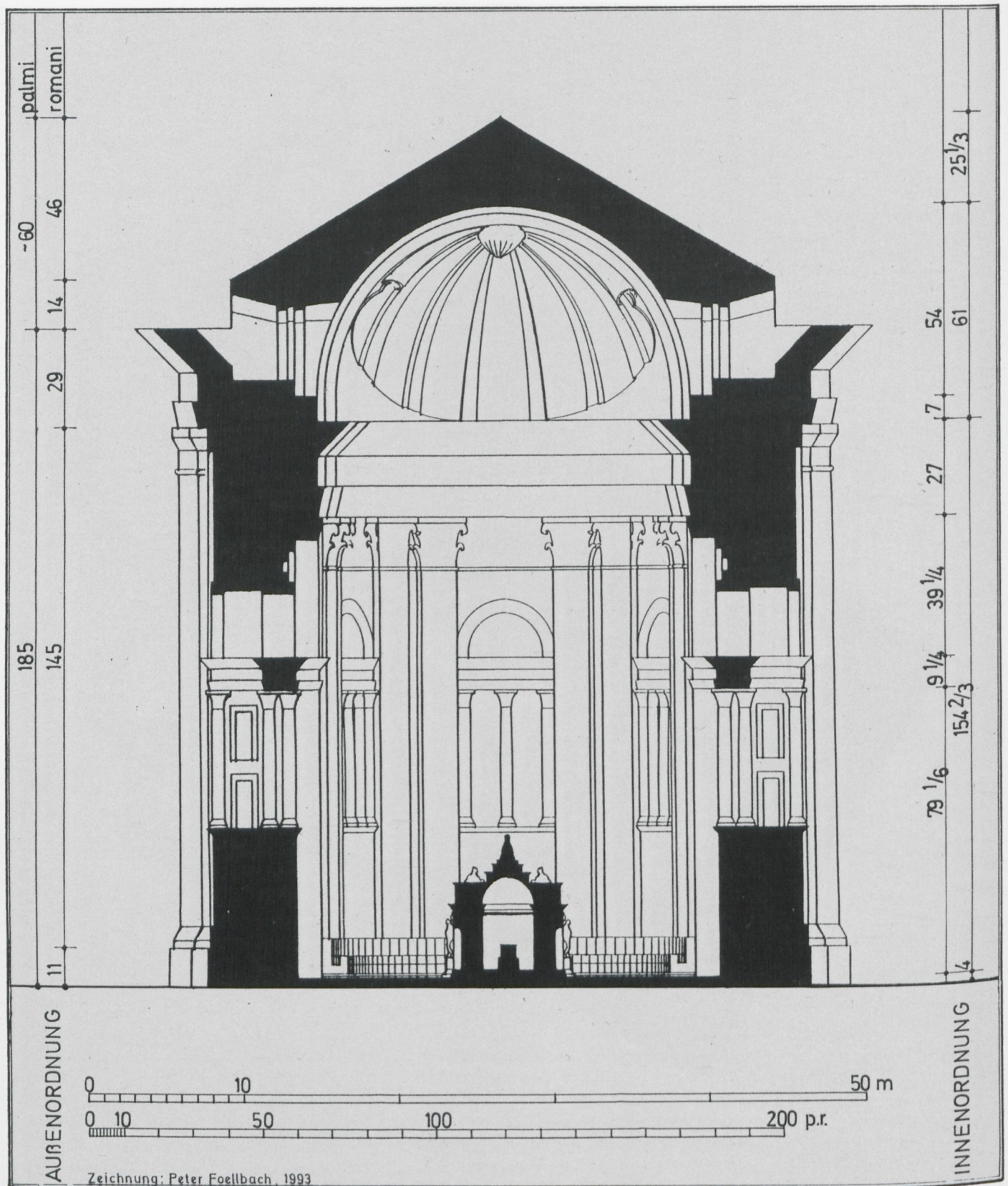
14. Hypothetical reconstruction of Bramante's project of April 1506, plan in relation to the Vatican buildings (drawing P. Foellbach)

Giocondo was appointed on 1 November 1513. He was already eighty, but was famous as a theorist and a connoisseur of antiquity thanks to the edition of Vitruvius he had edited and in 1513 dedicated to Giuliano de' Medici, the pope's brother. He was also considered one of the best engineers in Europe and was therefore indispensable for the imminent problem of vaulting the dome. Giuliano da Sangallo instead was nominated only on 1 January 1514, when Bramante was close to death. This was significant because he was a fellow countryman of the Medici family, someone who had served them for years. Giuliano had in fact rushed off to Rome immediately after the election of Leo X, obviously hoping the pope would make amends for what he had had to go through during the previous papacy. Neither of them it seems acquired any significant influence over the design process while Bramante was still alive. Bramante's new project could date back to the period immediately after Leo's election, so that the work on hand could have been started again in 1513. At the latest in October 1513 the pope ordered Bramante to protect the old presbytery, which had been left exposed to the elements since 1507—evidently because he forecast a much more lengthy period of construction than his predecessor (cat. no. 305). In reality, from the outset Leo X paid greater attention to the enlarging of the project and to the building of the external construction with expensive travertine. He told Raphael that he would spend more than a million gold ducats, 60.000 a year, thus at least tripling the costs. The project of the dome which Serlio attributed to the end of Bramante's life (cat. no. 303), the variations of the plan by Giuliano da Sangallo and Raphael



15. Hypothetical reconstruction of Bramante's project of April 1506 (drawing P. Foellbach)

(cat. nos. 306, 307), the surveys conserved in the *Codex Coner* (cat. no. 310), and Scorel's and Heemskerck's views of St. Peter's (cat. nos. 341-344), all contribute to forming an idea of Bramante's last project. The project of 1506 had suffered in particular from a lack of large chapels and easily accessible secondary spaces. By enlarging the longitudinal body to five bays, closing the narrow inner aisles with semicircular chapels, and making the outer aisles extend into centrally planned chapels, Bramante reduced the longitudinal body to a nave and two aisles (figs. 18, 19, 23) but, at the same time, he widened it to ca. 137.40 meters—a size that would have meant the demolition of the Scala Regia and the removal of the Obelisk. Only the Cappella Sistina would have been safe. The new

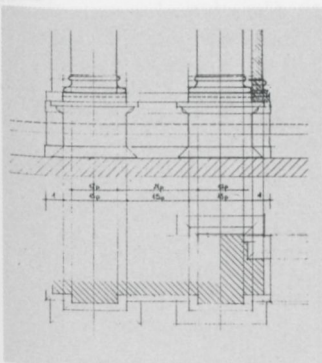


vestibule would have stopped short of the eastern inner wall of the old atrium, making a connection possible with a new south wing of the papal palace. He placed ambulatories around the arms of the transept of the 1506 project, which probably formed semicircular segments beyond the perimeter of the building, as drawn in Uff. 20A (cat. no. 288).<sup>62</sup> However, while the ambulatories in the plan in Uff. 20A made the choir end seem top-heavy, they were now continued by the new chapels and allowed the clergy to reach the sacristies in the side aisles without passing through the main arm of the transept. Considerable obstacles stood in the way of these alterations to the choir arm that had just been completed. Leo X was hardly interested in the overpowering funerary chapel of his predecessor, and by May 1513 Michelangelo had to convert his freestanding monument back into a wall sepulcher, which would perhaps have been placed in front of the piers of the transept (cat. no. 304, fig. 18). If Leo X had excluded the total or partial demolition of the choir, his architects would not have continually tried to bring him round to it. The plans of Giuliano

16. Reconstruction of the choir from Bramante's project of April 1506 (drawing P. Foellbach)

<sup>62</sup> This has already been suggested by Wolff Metternich and Thoenes 1987: 159, and Bruschi 1984: 285.

and Bernardino della Volpaia (cat. nos. 307, 310) show that Bramante had gone as far as contemplating the surrounding Julius' choir with an ambulatory. Perhaps even the so-called "nicchia di Fra Giocondo," the niche built after his death, and the two sacristies next to it belong to his project. In support of the possible facing is the equilibrium of the three arms of the choir—so evidently upset for example in Giuliano's drawing in Uff. 7A (cat. no. 307)—and also the system of illumination of the new ambulatories and chapels. This was no longer compatible with the 30-*palmi* windows of Bramante's 1506 project, which is why he might have designed the windows resting on a cornice—as Sangallo emphasized them in 1518–19 in his facade project in Uff. 257A. These would have started at a height of 115 *palmi* from the floor and would therefore have risen up to just under the entablature of Bramante's giant order on the outside. Light would have penetrated the building obliquely, as in the vault (cat. no. 301). This kind of window could have illuminated not only the chapels in the longitudinal body and the tall ambulatories, but also (indirectly) the windows of the arcades of Julius II's choir.



17. Pilaster of the Basilica of St. Peter: reconstruction from the Disputa, plan and elevation (drawing W. Jung)

Bramante was already borrowing from the Pantheon when he designed the colonnades of the ambulatories. Perhaps he even wanted to make them similar to the windows of the choir with arcades. He used the Pantheon not only as a model for the ambulatories, but also for the drum, with all its measurements (cat. no. 303). While organizing the horizontal and vertical axes in perfect equilibrium and surrounding his cylinder with a *tholos* comprising narrow intercolumniation according to the principles of Vitruvius, Bramante in fact used the dome for his ideal reconstruction of Pantheon.<sup>63</sup> The lower ambulatories would have prepared visitors to the miracle of the dome—a Christianized Pantheon, whose canonical severity, airiness and luminosity would have given body to the most intimate ambition of the Renaissance as no other building could have done. Not surprisingly this was Bramante's last word in architecture, the synthesis of his immense creative capacities and perhaps the part of the church where he was least subject to compromise.

The portico of giant columns that Bramante had perhaps already contemplated introducing in 1506–07 to the facade must have seemed like the embodiment of antiquity to Pope Leo X as well. The prototype was once again evidently the Pantheon, even though the portico was more or less twice the height and four times the length. Bramante probably wanted to increase the somewhat slender columns to 14 *palmi*, as Raphael and Sangallo were in fact to propose in 1518–19 (cat. nos. 311, 313, 318). The job of facing the choir would perhaps have induced Bramante himself to accept an order that respected the canons better. It is likely that he would have surmounted the large central colonnade as well as the lateral ones with alternating pediments, as Peruzzi did some years later in his projects for Paul III (cat. no. 334).

#### Raphael and Antonio da Sangallo the Younger

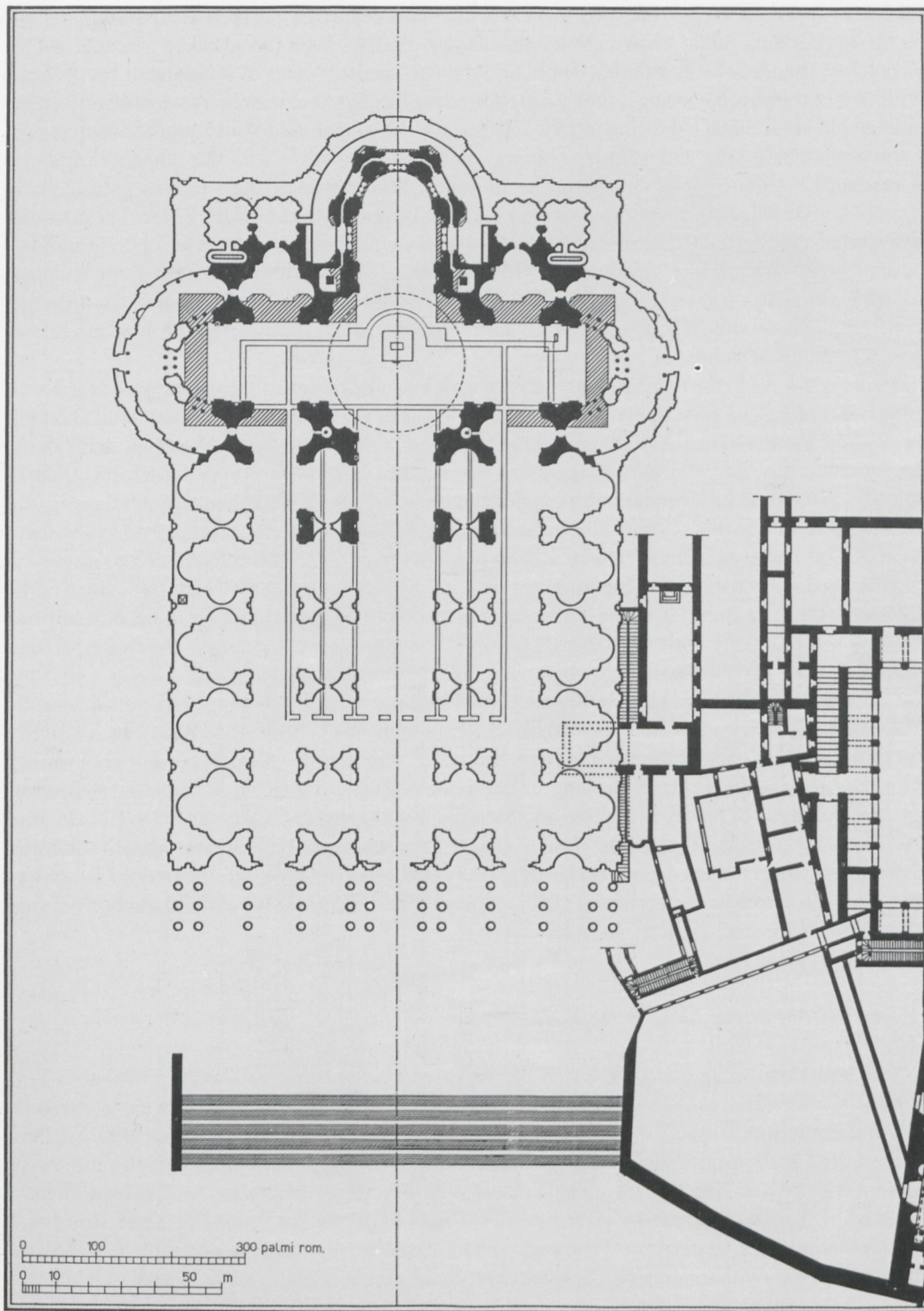
Knowledge of the background history so far discussed is vital for understanding Raphael's first project. It was drafted in the summer of 1514, just before the pope appointed him papal architect and successor to Bramante. In the project that Serlio published in his treatise (cat. no. 308), Raphael first returned to the quincuncial system of Bramante's first set of projects, linking it in a more harmonious way to the larger longitudinal body and to Bramante's ambulatories (perhaps already segment-shaped); such a scheme meant demolishing a large part of Julius II's choir. Even the sacristies in both the western corner towers borrow ideas directly from the plan in Uff. 20A. The care Raphael took in harmonizing the secondary visual axes in the longitudinal body can be seen in his only surviving sketch for St. Peter's (cat. no. 309). In this drawing he also considered the possibility of substituting the overly vertical order of the exterior of Bramante's choir with a system that corresponded better to the inner organism.

Fra Giocondo finally arrived in Rome toward the end of May 1514, before Raphael had been awarded tenure at St. Peter's, and soon played a leading role in the project. According to Vasari, he designed the connection of the foundations of the piers of the dome with those of the buttressing piers started by Bramante in around 1513. In July 1514 it appears that Fra Giocondo was already working on the foundations of the niche that took his name, i.e., on the closure of the southwestern chapels of the transept, perhaps still following a project by Bramante, by which the quincunx system had been eliminated.

If neither this niche nor the adjoining sacristies went beyond the initial phase of construction, Raphael must have imposed his ideas early on, perhaps even before Fra Giocondo died on 1 July 1515. Whatever the case, it is unclear what project was valid and what was built in the years 1515–17—possibly large parts of the cornice of impost and the projecting cornice of the 40-*palmi* niches criticized by Sangallo in his *Memoriale* of 1520–21 (cat. no. 320). Both still corresponded wholly to Bramante's ideas. The supplies of marble in 1517–18 could have been ordered for the projecting cornices of the 40-*palmi* niches, which Leo X had decided to build in marble.<sup>64</sup> On 1 December 1516 Antonio was nominated successor to his uncle Giuliano, who had died a few weeks earlier. So far, however, it has not been possible to ascribe any project to Anto-

<sup>63</sup> For Sangallo's ideal reconstruction of the Pantheon in about 1535 inspired by Bramante's dome, see Frommel, in Frommel and Adams 1994, I: 34.

<sup>64</sup> Frommel 1984c: 245; *Il carteggio di Michelangelo*, ed. P. Barocchi and R. Ristori, Florence, 1965–83, I: 244ff.



18. Hypothetical reconstruction of Bramante's project of 1513-14 with the project for Julius II's mausoleum of 1513 (drawing P. Foellbach)

nio in the period before 1518.<sup>65</sup> Moreover, the difference between his first projects and those of Giuliano is so striking; and yet the affinities with Raphael's projects for the Villa Madama are so evident that it is unlikely that they were elaborated before the summer of 1518 (cat. nos. 312, 313, 314, 316).

After the death of Fra Giocondo and Giuliano's departure just a few weeks later, Raphael finally had become the undisputed head of the building site. His ca. 1518 project (cat. no. 311) reveals that he concentrated first of all on the remodeling of the exterior (fig. 19). As Sangallo's projects of 1518-19 illustrate (cat. nos. 312, 316), until then the project had still kept Bramante's great Doric order created for Julius II's much more modest project, an order which now was to be extended way above the height of the new chapels in the longitudinal body and the aisle domes and which would moreover have made the narrow ambulatories exceptionally high. In his 1518 project Raphael reutilized the precious columns from Old St. Peter's not just in the ambulatories but in the facade as well, continuing the 5-palmi order also along the rest of the exterior. Having established this, he was free to introduce a second order in the area of the chapel windows and to move these inward. While the new articulation of the secondary prospects as conserved in the *Codex Mellon* are not very convincing, the effect of the facade on the square (where Raphael varied once more the design of Bramante's ambulatories) is magnificent. As in the 1506 model, Raphael made the central section of the portico

<sup>65</sup> Frommel 1984c: 266ff.; A. Bruschi, "I primi progetti di Antonio da Sangallo il Giovane per S. Pietro," in *Architektur und Kunst im Abendland. Festschrift zur Vollendung des 65. Lebensjahres von Günther Urban*, Rome 1992: 63-81.

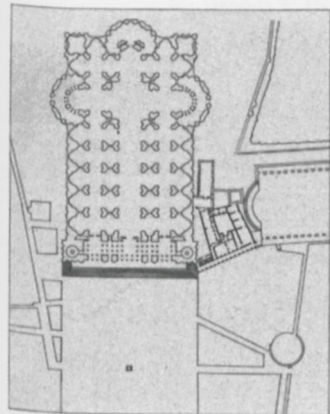
as wide as the whole area of the dome, and inserted a benediction loggia in the upper story in a organic way. But the result could not have been more different. The closely knit arrangement of the towers and the bays of the side porticoes lacks Bramante's monumental spaciousness and dynamism. Splitting the facade in single autonomous blocks Raphael probably followed once more prototypes of Imperial Rome which had used only tridimensional volumes, while the flat facade had been introduced during the Middle Ages.

Antonio da Sangallo pursued completely different objectives. His first projects, such as the alternative on the left of the plan in Uff. 252A (cat. no. 316), or the plan in Uff. 34A<sup>66</sup>, which preserve Bramante's choir, the polygonal sacristies and semicircular ambulatories, and the isolated towers, bring to mind Giuliano's plan in Uff. 7A. In his project for the facade in Uff. 257A (cat. no. 312) he continued to preserve Bramante's giant external order. Nevertheless, when he reduced the bays and the piers of the ambulatories, walled the atrium, made the rhythm of the order more elaborate and enriched it with 5-palmi columns, he must have already known Raphael's project of 1518 (cat. no. 311). Sangallo's personal contribution was above all the widening of the nave through the addition of *cappelle maggiori*, large chapels which he intended to furnish with their own cupolas and altars, in a project which could have had three such chapels as in the plans in Uff. 252A, Uff. 254A and Uff. 36A,<sup>67</sup> or just one as in the plan in Uff. 37A. The central nave with its succession of equal bays as Bramante and Raphael had designed them, seemed to him to be "as long, narrow and tall as an alleyway."<sup>68</sup> If he tried to find a remedy for this "malformation" with more crossing-like centers of gravity, it was perhaps because he remembered the nave in Bramante's Uff. 8A verso, but first of all because he was inspired by Venetian Byzantine prototypes such as St. Mark's in Venice, or S. Antonio in Padua, which had also been the main source of Fra Giocondo's project in Uff. 6A.

Raphael succeeded avoiding the inclusion of such domes in the longitudinal body and, as the right-hand alternative of the plan in Uff. 252A shows, he won the tug of war with his rival over the majority of the other disputes. It is true that Sangallo conserved the domes of the longitudinal body in that plan, but he borrowed from Raphael the quincunx system, the segmental arms of the cross as well as the integration of the towers and the sacristies into a single unit. At the same time he used 9-palmi diameter half-columns, an order mediating between Bramante's giant order and Raphael's 5-palmi pilasters. It appears to have been Sangallo himself who took the initiative to introduce the 9-palmi order, and he later developed it with Raphael during the summer of 1519 to make it ready for the construction stage. The 9-palmi order arrived nearly to the height of the main floor of the papal palace and thus facilitated its connection with the basilica. It conformed to the pilaster strips or the aisles and their chapels and respected the principle of correspondence between the inside and the outside. This solution made it possible to move the area of the windows back as before and resulted in a much more monumental system than Raphael's 5-palmi one. Even the highly plastic detail—all'antica through and through—has close affinities with that of the courtyard of the Palazzo Farnese, and is fundamentally different from the flat and abstract detail of Raphael's previous buildings. The project to which Leo X gave his blessing in the autumn of 1519, was therefore in reality a synthesis of the ideas of all three, Bramante, Raphael and Antonio da Sangallo—a synthesis, however, that complicated Bramante's original ideas and led the even more logically consistent Sangallo on a paper chase (fig. 20).

If Leo X spent the last two years of his life urging the completion of the southern arm of the transept, there were probably several explanations for his decision. The Cappella S. Petronilla (known also as the King of France's Chapel since Innocent VIII had conceded his patronage)<sup>69</sup> had been sacrificed as early as 1513 to the southern arm of the transept. No later than 1514 Leo X extended the name of this chapel to the whole southern arm of the transept,<sup>70</sup> whose southeastern buttressing pier had already caused the partial demolition of the ancient round building (cat. no. 277). As a member of the Medici family, the pope was linked by tradition to the French crown. Not without reason, Raphael gave his Charlemagne the face of François I when he painted the *Coronation* in 1516–17.<sup>71</sup> Leo X, like Paul III,<sup>72</sup> must have hoped for contributions from the ruling families of Europe by conceding them the patronage of important spaces inside St. Peter's. Moreover, in his letter of November 1519 to Isabella d'Este there is mention of "the chapel that the King of France is having built."<sup>73</sup> But first of all it must have been his predelection for the ambulatories which he owed to Bramante and in which he must have seen the essence of classicizing architecture—notwithstanding Sangallo's harsh critics.

When work was going on in the late autumn of 1519 on the foundations of the southern ambulatory, the plan of the transept arms had probably been already settled and perhaps the time-consuming process of cutting the stone for the outer construction had started—now using only travertine. When Raphael died in April 1520 the walls of the southern apse were just beginning to rise above the floor. As from 1519, when both his princely nephews were dead and the war in Urbino that had been a drain on his resources had come to an end, Leo X redoubled his efforts to finance the new building: since Bramante's death in fact the work on the basilica had been far from constant.<sup>74</sup> Antonio da Sangallo must have written his *Memoriale* for the pope soon after Raphael's



19. Raphael project of ca. 1518, plan in relation to the Vatican buildings (drawing G. Kohlmaier)

<sup>66</sup> Wolff Metternich 1972: 42, fig. 40, 42; A.B.

<sup>67</sup> op. cit.: 44, fig. 37.

<sup>68</sup> Frommel 1984c: 296.

<sup>69</sup> K. Weil-Garris Brandt, "Michelangelo's Pietà for the Cappella del Re di Francia," in *Il se rendit en Italie. Etudes offertes à A. Chastel*, Rome 1987: 79ff., 87.

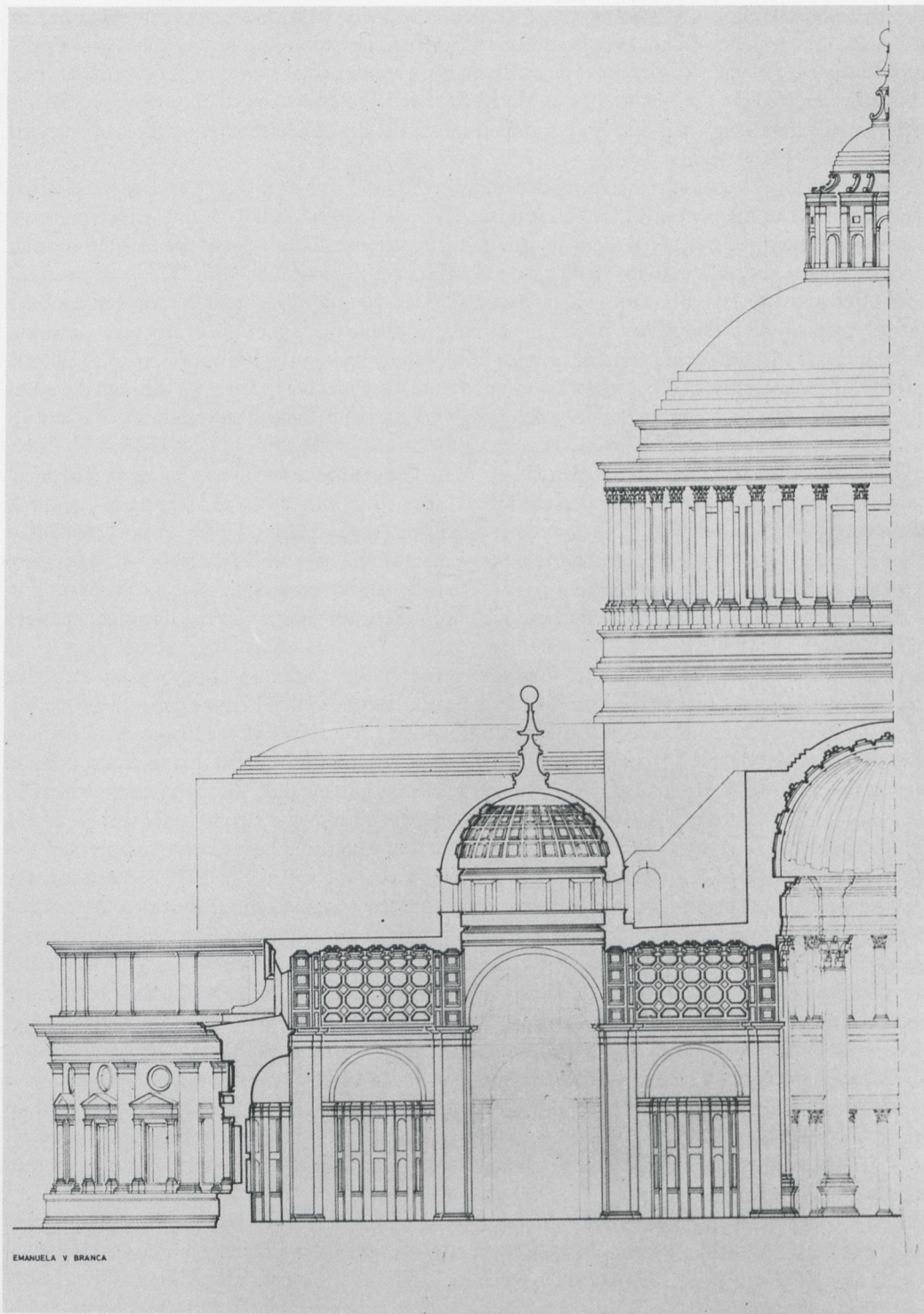
<sup>70</sup> op. cit.

<sup>71</sup> F. Mancinelli, "L'incoronazione di Francesco I," in C. L. Frommel and M. Winner, eds., *Raffaello a Roma. Il convegno del 1983*, Rome 1986.

<sup>72</sup> Pastor 1924–25, V; under Paul III the northern arm of the transept was known as the "Cappella dell'Imperatore," perhaps after Charles V's visit to Rome in 1536 (Frey 1913: 87 n. 431).

<sup>73</sup> Weil-Garris Brandt 1987: 107.

<sup>74</sup> Frommel 1984c: 251ff.



20. Raphael  
project of 1519, section of  
the longitudinal body  
(drawing E. von Branca  
and G. Kohlmaier)

death. At long last he gave vent to all his bottled-up criticisms, and listed all the serious “errors” in the standing project (cat. no. 320). He complained about the lack of large chapels, the inconsistencies of Bramante’s choir which was by no means destined to be demolished, the static problems of the dome, the exaggerated verticality of the central nave, the feeble lighting, the erroneous detail of the orders and even about the ambulatories with their new order which had obviously been started in spite of his unfavorable opinion. The enormous sums of money which such a project would have swallowed up, would have been “thrown away”—drastic words, just like those Michelangelo was to adopt in similar circumstances twenty-six years later. Sangallo, who was appointed architect-in-chief to the papacy in 1520, presented a new wooden model illustrating his proposals for changes in all the features that the pope appeared to agree upon as early as the spring of 1521 (cat. no. 321). As in some of his previous projects, he shortened the longitudinal body to three bays and enlarged the central one to create a second *cappella grande*. He also simplified the side chapels and made the newly polygonal sacristies extend beyond the building perimeter. In an even more economical alternative he proposed keeping Bramante’s choir and abandoning both the quincuncial system and the choir ambulatory. This rash of changes was the result of the new pragmatic spirit that characterized Sangallo’s early period of tenure.

The tendency toward reducing the volume that had been dilated in the first years of Leo X’s

reign—a direct reflection of the critical state of the papal coffers—was continued by Baldassarre Peruzzi, who took over Sangallo's former role as the second architect of St. Peter's in 1520. By transforming the quincunx system with ambulatories of the 1519 project into a strictly centralized scheme (cat. no. 322), and by thus uniting Raphael's last ideas with Bramante's first, Peruzzi reconsidered a line of thought that Sangallo had sketched in about 1519 in the margin of the plan in Uff. 252A. Together with the version published by Serlio, Peruzzi probably presented an alternative which included an atrium and a passage to the papal palace. The view attributed to Jan van Scorel (cat. no. 323) illustrates the state of the building site at the start of Clement VII's reign (1523–34) while those drawn by Maerten van Heemskerck about eleven years later (cat. nos. 341, 342, 343, 344) record the situation at the time of the Sack of Rome. From a comparison of these drawings it is clear that under Clement VII the emphasis moved from the building of the apse of the southern arm of the transept to its main bay,<sup>75</sup> which was completed by Peruzzi. After 1523 both the additional spaces of the southern arm of the transept were duly vaulted; furthermore, the walls themselves were also raised to the height of the entablature of the giant order. In some places Sangallo had Bramante's lower niches walled in (cat. no. 343). He reduced the cornice of the impost (cat. no. 341) and inserted the pedestals and bases agreed upon in 1519, together with the cabling and fluting. It is quite likely that Pope Clement VII, who was quite an expert himself on construction, shared Sangallo's doubts about the suitability of the costly ambulatories. By 1542 both the longitudinal body and the northern arm of the transept had hardly changed from how they were in 1514.

#### *Peruzzi and Sangallo: the Reduction Projects for Pope Clement VII*

The Sack of Rome by the imperial army in May 1527 and the following long crisis of the Curia Romana brought this fourth stage of the building of the basilica to a sudden standstill. In 1531, after having returned to Rome, Clement gave orders to his two architects to reduce the project drastically, and to retain only the most important elements from the functional point of view. In the most radical version of his only surviving reduction project, Sangallo restricted himself to a single nave longitudinal body without a central dome. He also gave up the quincunx system, the ambulatories (cat. no. 336) and a real facade. In an equally drastic scheme of reduction, Peruzzi calculated total expenses at 420,000 ducats (cat. no. 329). These projects are particularly interesting for the fact that even without the quincunx system their volume is only slightly smaller than the present building. In other projects the two architects tried to salvage at least the aisles, the chapels and the vestibule (cat. nos. 326, 336).

During these critical years, during which most of Peruzzi's time was spent on projects for fortifications, for S. Domenico or for Siena Cathedral, his work shows an unprecedented inventiveness.<sup>76</sup> If he started out from a longitudinal body with a nave and two aisles and a central dome, this does not mean that he had accepted unconditionally Sangallo's ideas, but rather that it was a form of respect for the Medicean pope who had given his general approval to Sangallo's 1521 project (cat. no. 321). In spite of this, Peruzzi undertook a completely new approach, considering, for example, the possibility of raising the floor level ca. 30 *palmi* (6.67 meters), thereby reducing the vertical proportions and making the orders more faithful to the Vitruvian canons. The change effectively modified the entire architectural system of the building (cat. no. 326). He substituted the arcades with insertions of colonnades—like Bramante in some of his early projects (cat. nos. 287, 283)—thus continuing the ambulatory system in the transept and nave. By calculating the aisles and secondary areas as lower, he transformed Bramante's highly ramified and hierarchically graded organism into a homogeneous space without any dynamic oscillations. These unifying and anti-dynamic principles went hand in hand with a new approach to antiquity. Peruzzi tried therefore to imitate examples of antiquity to the letter, and brought columns to play leading roles in his projects: a step closer to Palladio and to classicism, compared to Bramante or Raphael. However, even in the majority of his reduction projects, as well as in the 1520 one, Peruzzi lacked that sense of concreteness and functionality with which Sangallo was so well endowed. All the same, not one of Sangallo's reduction proposals was adopted before Clement VII died.

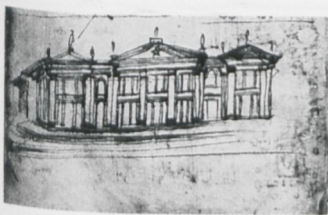
#### *The First Projects for Paul III*

The first builder to have the same energy and perspicacity as Julius II was Paul III Farnese (1534–49).<sup>77</sup> Totally optimistic about the prospect of having the Curia's finances within his grasp, he must have decided from the moment of his election to revive the beauty of Julius II's projects, as he in fact hinted in his first missives.<sup>78</sup> It is quite likely that Sangallo had kept him well-informed about all the vicissitudes of the projects for St. Peter's from as early as 1513, when he was Paul's personal architect,<sup>79</sup> and therefore that the pope knew exactly why Julius II had rejected the medal project in favor of the 1506 project with the longitudinal body. On the other hand, not only



21. Draftsman after Peruzzi project for the interior of ca. 1531–34

Siena, Biblioteca Comunale, Taccuino S, IV, 7, fol. 37r



22. Anonymous draftsman after Peruzzi, project for the facade of ca. 1535

Siena, Biblioteca Comunale, Taccuino S, IV, 7, fol. 36v

<sup>75</sup> Pastor 1924–25, IV, 2: 559ff.

<sup>76</sup> A. Bruschi, "Le idee del Peruzzi per il Nuovo S. Pietro," in *Quaderni dell'Istituto di Storia dell'Architettura* 15–20 (1990–92), pp. 447–484.

<sup>77</sup> Pastor 1924–25, V: 798ff.

<sup>78</sup> op. cit.: 799ff., n. 1ff.

<sup>79</sup> Frommel 1981: 129ff.



Michelangelo, whom the pope recognized as the greatest living authority on art, but Peruzzi too, must have strengthened his preference for a centralized scheme. Only seven weeks after his election, Paul III doubled Peruzzi's pay, bringing it to the same level as Sangallo's. Vasari too, emphasized that the pope expected great things of Peruzzi.<sup>80</sup>

In his famous bird's-eye view of the project (cat. nos. 331, 332, 330) Peruzzi took a decisive step back toward Bramante's centralized project in Uff. 1A (cat. no. 282), giving diagonal faces and niches to the piers of the secondary areas, and therefore reasserting a direct analogy between the center and the secondary spaces of the quincunx. Moreover, he designed an enormous pronaos comprising exclusively of an order of 9-*palmi* columns set in a U that all but encircled the eastern arm of the cross, and whose three sections, surmounted by an attic and pediments, would have led into the nave areas of the main and secondary cupolas.

Perhaps it was difficulty of connecting these colonnades to the palace, perhaps the consent of the pope over raising the floor moderately, which induced Peruzzi in yet another project to maintain the tripartite pronaos, but to return to a 12-*palmi* order and to 5-*palmi* engaged columns (cat. no. 334), ideas introduced by Raphael in his project in the *Codes Mellon* (cat. no. 311). The facade thus certainly reacquired its original monumentality, but not the hierarchical dynamism.

This is the reason why Peruzzi's facade, perhaps the most harmonious of all the known projects, is animated by the same classicizing *genius loci* as his reduction projects for transforming the interior (cat. no. 326).

Sangallo himself was certainly not against a return to the central plan. However, his first surviving project from the time of the new papacy (cat. no. 338) illustrates all the disadvantages of this type compared the longitudinal body connected to the palace. At first, like Peruzzi, Sangallo maintained the quincunx system, with ambulatories opened with pairs of columns and the 40-*palmi* niches which would still have been compatible with the scheme for slightly raising the floor by ca. 13.5 *palmi*. Soon afterward, however, Sangallo eliminated both the ambulatories, the quincunx system and the dome of the longitudinal body. He opened the piers of the longitudinal body to create inner aisles, and even went as far as reconsidering once again the conservation of Bramante's choir. Evidently he wanted to make an impression on the pope with his radical reflections on Bramante's

### 23. Summary of the main dimensions of the projects from 1505 to 1514

<sup>80</sup> Vasari, ed. Milanesi, IV: 160.

<sup>81</sup> C. L. Frommel, "Antonio da Sangallo Cappella Paolina: Ein Beitrag zur Baugeschichte des vatikanischen Palastes," in *Zeitschrift für Kunstgeschichte* 27 (1964) pp. 1-42. In contrast with the suppositions expressed there, everything supports the hypothesis that the project for the Cappella paolina and for the renovation of the Sala Regia must have been closely connected to the final project for the basilica. In the projects immediately prior to the project of the model, the Cappella Paolina was not taken into consideration, and only after the late decision to enlarge the atrium to the east was it possible to connect the centrally planned building with the palace. It is unlikely that the pope would have embellished the chapel with pre-

PROIECTS	Exterior Length (without pronaos)	Exterior Width longitudinal body	Exterior Width transept	Span of the crossing arches	Dome: diameter of the springing line	Diagonal of the crossing	Diameter of the secondary domes
Old St. Peter's <sup>1</sup>	547,45	297,35	407	107,6	—	—	—
Nicolas' V project	ca. 760	ca. 330	ca. 550	40 b. (104,4)	40 b. (104,4)	148	—
Uff. 3A v. 1	—	—	—	40 b. (104,4)	ca. 56 b. (146,16)	ca. 72 b (188)	—
Uff. 3A r.	ca. 760 (?)	160-170 b. (417,6-443,7)	200 b. (522)	40 b. (104,4)	66 b. (172,26)	ca. 79 b. (206)	ca. 23 <sup>1</sup> / <sub>2</sub> b. (61)
Uff. 3A v. 2	ca. 760	ca. 192 b. (500)	—	36 b. (93,96)	66 b. (172,26)	ca. 79 b. (206)	ca. 32 b. (83,5)
Uff. 1A	ca. 600	ca. 600	ca. 720	ca. 105	ca. 185	ca. 216	ca. 92,25
Uff. 104A v.	—	—	—	ca. 105	ca. 185 (?)	—	—
Uff. 7945A r.	ca. 640	ca. 600	ca. 640	105	ca. 195	ca. 220	116,5
Fondation medal	ca. 628	ca. 628	ca. 720 (?)	105 (?)	ca. 195 (?)	ca. 220 (?)	116,5 (?)
Uff. 7945A v.	ca. 685-720	ca. 580	—	ca. 105	185 (?)	ca. 216	—
Uff. 8A r.	700	—	700	100	200	ca. 210	ca. 70
Uff. 8A v.	ca. 900	ca. 575	ca. 800	100	200	ca. 210	—
Uff. 6A	1550 (?)	800 (?)	—	100 (?)	110 (?)	—	—
Uff. 20A r. 1	ca. 760	ca. 380	ca. 775	105	ca. 185	ca. 216	ca. 90
Uff. 20A r. 2	ca. 900	ca. 500	ca. 800	105	ca. 205	ca. 230	ca. 90
<i>Codex Coner</i> , fol. 17	ca. 970	ca. 400	ca. 800	ca. 105	ca. 160	ca. 195	ca. 50
Uff. 124A r.	—	—	—	104	184,5	216 <sup>1</sup> / <sub>6</sub>	—
Uff. 44A	—	—	—	104	184,5	216 <sup>1</sup> / <sub>6</sub>	ca. 66
Final project of 1506	ca. 760	ca. 470	ca. 646	104	184,5	216 <sup>1</sup> / <sub>6</sub>	—
Bramante's project for Leo X	ca. 980	ca. 750	ca. 780 (?)	104	184,5	216 <sup>1</sup> / <sub>6</sub>	—
Uff. 9A	1280-1300	ca. 750	332 b. (866,52)	104	184,5	216 <sup>1</sup> / <sub>6</sub>	—
Uff. 7A	ca. 980	ca. 615	ca. 910	104	184,5	216 <sup>1</sup> / <sub>6</sub>	—

<sup>1</sup> According to Krautheimer, *Corpus*

first project—not the problematic scheme featured on the medal (preferred by Peruzzi) but the one actually approved by Julius II.

Anyhow, he did not succeed to distract the pope from the centralized scheme—neither with Uff. 256A nor with his following more expansive longitudinal projects. Already in spring of 1538 when Sangallo started the Cappella Paolina,<sup>81</sup> he presented Paul III with a compromise that could have been accepted by everyone involved. He extended the centralized inner building through the atrium, bringing it more or less to the limit of the old atrium so that he could connect the papal palace with the atrium by means of a staircase, and link the Sala Regia to the Benediction Loggia through the Cappella Paolina. Only in June of 1539 the Congregation of St. Peter's obliged him to build the wooden model in the unusually monumental scale of 1:30—not because the general project had not been yet ready, but because one hoped to assure its faithful realization.<sup>82</sup>

In conclusion, if this model was merely utopian, as has often been charged, then whoever controlled the purse strings would never have contemplated commissioning such an unusually large and extraordinarily expensive model. Moreover, after the death of Sangallo the congregation of St. Peter's would hardly have insisted on the completion the model.<sup>83</sup> After thirty-four years of irresolution and a series of smaller models, most of them perhaps even incomplete, there was a desperate need for clarity about the project, and Sangallo drew on all his experience to meet the requirements not only of the papal ceremonials and to solve the static problems, but also to unite the various fragments into a single, coherent whole.

Only Michelangelo succeeded in convincing the pope of the need to demolish the fragmentary ambulatory and to accept many other alterations already suggested by Sangallo in his *Memoriale*. Like his predecessor, Michelangelo planned to introduce more regular proportions in the giant orders both inside and out. He also abandoned the nave and four-aisle longitudinal body, created new sources of light, walled up the 40-*palmi* niches and modified the entablatures. It is however unclear what Michelangelo's intentions were with regard to the linkage with the papal palace to which Sangallo had dedicated so much of his time. When Paul V obliged Maderno to return to a reduced longitudinal vessel with inner aisles and an atrium directly connected to the papal palace, he was simply proceeding from considerations similar to Sangallo's in the years 1531-39.

cious stonework and have commissioned Michelangelo to decorate it, if he already considered it as only provisional. The chapel would have been ca. 100 *palmi* above the level of Old St. Peter's, more or less as high as the mezzanine of the tower. The area of the windows and the vaults of the Cappella Paolina would have arrived at the Ionic story of the tower, so that Sangallo could have used its arched windows for the illumination of the thermal windows of both the chapel and the Sala Regia.

<sup>82</sup> E. Francia, 1506-1606, *Storia della costruzione del nuovo San Pietro*, Rome 1977: 49. In June 1539, the Congregation of St. Peter's with the pope at its head, decided the following: "*Quad architectos salaria mandarunt non satisfieri nisi incepto modello.*" Sangallo had probably taken such a long time over starting the model that his patrons had lost their patience.

<sup>83</sup> H. Saalman, "Michelangelo at St. Peter's: The Arberino Correspondence," in *Art Bulletin* 60 (1987): 489.

Width of the dome pier	Span of the arcade	Giant inner order	Depth of the crossing arches	Recession of the diagonal faces	External order	Distance between the central axis and the axis of the aisles	Scale	Date
—	—	5	—	—	—	—	—	ca. 320
—	—	—	—	—	—	—	—	1451
ca. 14 b. (36,54)	20 b. (?) (52,2)	ca. 4 b. (10,44)	ca. 4 b. (10,44)	ca. 8 b. (20,9)	—	ca. 44 b. (114,8)	ca. 1:470	March 1505 (?)
20 b. (52,2)	20 b. (52,2)	ca. 4 b. (10,44)	ca. 4 b. (10,44)	ca. 13, 3 b. (34,7)	ca. 4 b. (10,44)	ca. 50 b. (130,5)	ca. 1:470	March 1505 (?)
20 b. (52,2)	20 b. (52,2)	ca. 4 b. (10,44)	ca. 4 b. (10,44)	ca. 13, 3 b. (34,7)	ca. 4 b. (10,44)	ca. 64 b. (167)	ca. 1:470	March 1505 (?)
ca. 67,5	ca. 57,5	ca. 10	ca. 22,5	40	ca. 8	150	ca. 1:150	spring 1505
—	57,5 (?)	10 (?)	—	—	—	—	1:116 <sup>2</sup>	spring 1505
72,5	57,5	10-12	ca. 22,5	40	8 (?)	153,75	—	summer 1505
72,5 (?)	57,5 (?)	10	ca. 22,5 (?)	—	8 (?)	153,75 (?)	—	summer 1505
72,5 (?)	40-45	10-16	ca. 22,5	40	—	153,75	1:470 <sup>2</sup>	autumn 1505
ca. 115	55	27 (?)	ca. 32	50	8 (?)	185	1:470 <sup>2</sup>	autumn 1505
ca. 115	55	—	ca. 32	—	—	185	—	autumn 1505
ca. 30 (?)	40/100 (?)	ca. 22 (?)	ca. 22 (?)	—	ca. 22 (?)	100 (?)	—	autumn 1505
ca. 70	40	10 (?)	ca. 20	40	—	ca. 145	1:300 <sup>2</sup>	autumn 1505
105-115	57,5	12-15	ca. 45-50	40	ca. 20	ca. 190	1:300 <sup>2</sup>	autumn 1505
ca. 80	40	ca. 15	ca. 50	ca. 30	ca. 15	ca. 152	—	winter 1505-06
—	—	—	—	—	—	—	1:106 <sup>2</sup>	1508-09
85	60	12	39	40,25	12	167	—	ca. 1535
85	60	12	39	40,25	12	167	1:137 <sup>2</sup>	before April 1506
85	60	12	39	40,25	12	167	—	after February 1513
85	60	12	39	40,25	12	167	1:524 <sup>2</sup>	spring 1514
85	60	12	39	40,25	12	167	1:522 <sup>2</sup>	spring 1514

<sup>2</sup> According to Thoenes 1990: 39