

BRAMANTE, DONATO (c. 1443/44–1514), Italian architect and painter. Born in Monte Astrualdo (now Fermignano, Marches), Donato Bramante was one of the leading architects of the Renaissance. In Milan, at the end of the fifteenth century, he introduced a style of architecture newly developed in central Italy. Then, after 1500, he went on to develop a new style of his own, distinguished by its monumentality and by its close associations with antiquity, clearly evident both in the construction of his buildings and in his use of the theories of the ancient Roman architect Vitruvius. Bramante's Tempietto in San Pietro in Montorio and his reconstruction of Saint Peter's Basilica epitomize these transformations in architectural design.

Throughout the sixteenth century Bramante was seen as the father of modern architecture. Indeed, the influential Renaissance architect and theorist Sebastiano Serlio described him in 1537 as the "inventor and guiding light of that genuine and excellent architecture which had been buried from antiquity until his own time" ("inventore e luce della vera e buona architettura, che da gli antichi al suo tempo . . . era stata sepolta"). Both Serlio and the Renaissance art historian Giorgio Vasari placed his works alongside those of antiquity as models for a new style of architecture. Sixteenth-century sketchbooks

or treatises on antique architecture included references to Bramante: the Codex Coner (1513/15), Serlio's book on antiquity (1540), and Andrea Palladio's book on ancient temples (1570), in which Palladio promotes Bramante's work, and the Tempietto in particular, as the paradigm of a new architecture.

As was usual in the Renaissance, Bramante was not educated to become an architect. Like many of his contemporary architects, he began his career as a painter. According to Vasari, he was first active in Urbino. He later moved to Lombardy and in 1477 was already working in Bergamo. During this time Bramante apparently specialized in fresco decorations of interiors and facades that joined figures to an architectural structure. (Examples include the Palazzo della Ragione in Bergamo; Casa Fontana in Milan (?); Casa Panigarola in Milan.) In 1481 Bramante produced the design for an engraving of a *veduta* of a ruined temple featuring *all'antica* ornamentation, now known as the Prevedari engraving, after Bernardo Prevedari, who executed Bramante's design.

According to Vasari, Bramante first took an interest in mathematics, the classical foundation of all architecture, turning to architecture itself under the influence of the *cantiere* (stonemason's lodge) for the Milan Cathedral. Despite the strong reservations expressed during the Renaissance for anything having to do with the Middle Ages, the Milanese *cantiere* maintained an extraordinary reputation throughout Europe because it combined the Gothic tradition of building with the theoretical study of *all'antica* architecture. Under commission by the duke of Milan, Bramante evaluated models for the construction of a dome to be erected over the crossing of Milan Cathedral, and suggested finishing the cathedral in Gothic style to preserve its unity of form.

Bramante in Milan. Bramante first appears as an architect in the construction of Santa Maria presso San Satiro, Milan. In 1480 Duke Gian Galeazzo Sforza backed an initiative to rebuild the ninth-century chapel of San Satiro that would include an image of the miracle-working Madonna, declaring that it should belong among the city's most prized jewels.

San Satiro. In 1482 "Donatus de Bramantis de Urbino" appeared as legal witness to the purchase of land needed for the construction. Building records from the next few years refer to him many times as the project's master draftsman (as they also do for the facade plans—an enterprise never completed past the initial stages).

In designing the church, Bramante proved himself a fully competent architect. He confidently employed a vast repertory of styles throughout, venturing highly original solutions for the special circumstances that arose in the development of the plan. The forms are elegant and combine the newest elements of their kind from Urbino (compare the Cathedral of Urbino, begun in 1482 by Francesco di Giorgio) or from Alberti. The richness of the decoration equals that of the Prevedari engraving. The layout contains many noteworthy features, including wide barrel vaulting that spans the windowless nave of the church (like that of Sant'Andrea in Mantua) and the walls of the transept modeled in shallow niches between pilasters. The most impressive feature is the illusionary choir, in which the altar wall runs parallel to the back wall of the transept along an aisle. With the help of a molded and painted stucco surface, Bramante achieved the illusion of a complete choir three bays deep.

Bramante's pupil Cesare Cesariano also attributes to the master the lavish sacristy created at the same time as the church. Noticeably different in style from the rest of the structure, this room rises steeply above an octagonal floor in a design similar to that seen in small, centrally planned buildings from late antiquity. It contains a triforium (window with three openings) positioned above its lower arches and a steep dome. In contrast to the church, this sacristy stands much more in the architectural tradition of Lombardy.

Ludovico il Moro. In the following years Bramante rose to become the architect of Ludovico "il Moro" Sforza, duke of Milan. Although his name often appears in contemporary documents, it is difficult to say with certainty which projects he actually executed. It is certain, however, that Bramante authored the expansion of the Abbey of Sant'Ambrogio in Milan, a work he executed first for the duke and then for the duke's brother, Cardinal Ascanio Sforza. In 1492 Bramante began the Canonica (chapter's residence), but it was only partially completed. After 1492 two cloisters were built, although Bramante may originally have intended to build four. The general arrangement recalls the Ospedale Maggiore in Milan, a building begun by Filarete (Antonio Averlino) for Francesco Sforza. The originality of Bramante's design called for each cloister to be executed in one of the four columnar orders (Doric, Ionic, Corinthian, and Tuscan). However, he saw only the initial phases of construction to completion.

Bramante is recorded by many documents as being involved in the large-scale works commissioned

by Ludovico il Moro after 1492 to expand the castle of Vigevano into a residence appropriate for a prince. The work was to include a vast square in front of the castle, framed by columned porticoes. The original design of the square and the painted decoration of the surrounding buildings still remain in good condition. Although the specifications for the structure are similar to those for the Canonica of Sant'Ambrogio (porticoes with an upper story interrupted by high-towered entrances framed by pilasters), the styles of the two buildings differ greatly. Vigevano is more rustic and decorative in design. This does not mean that Bramante did not author both works; rather, it shows that he varied his style to meet demands set by the commission of each building.

Only if we accept his skill in stylistic variation can we credit Bramante with building the choir of Santa Maria delle Grazie in Milan. Documentation is poor because the convent's archive was destroyed, but a number of Milanese chronicles name him as architect. Sometime after 1492 Ludovico il Moro ordered the demolition of the east end of the church, which had just been completed in a Gothic style, in order to construct the new choir as a modern, centrally planned structure. He commissioned the building to contain the tomb for his wife, who died in 1497, and himself. (The cover slab for the burial monument is now in the Certosa di Pavia, the traditional resting place of the rulers of Milan.) Bramante designed the mausoleum as a cubical domed chamber in the style of Filippo Brunelleschi and his Milanese followers (the Portinari Chapel in Sant'Eustorgio), but he combined it with the three-lobed design native to northern Italy and other typically Lombard features.

It is unclear what role Bramante played in Cardinal Ascanio Sforza's planned reconstruction of Pavia Cathedral (1487–1505), whose plan called for a three-aisled nave, a three-aisled transept, each section of which contained a three-story elevation with triforium, and a crossing that extended to an octagon with a high dome. The project unites features characteristic of San Lorenzo in Milan, the most famous ancient building in northern Italy, with elements of Milan Cathedral and of the pilgrimage church of Santa Maria di Loretto (in the Marches, part of the Papal States) then under construction. Here antique and Gothic traditions converge in a new synthesis. This project, in turn, exerted significant influence on plans for the reconstruction of Saint Peter's Basilica.

Bramante also served the duke of Milan as the engineer of ramparts and aqueducts, as painter, and as coordinator of festivals. By 1493 his reputation



Donato Bramante. *Tempietto*. The Tempietto is in a courtyard at the church of S. Pietro in Montorio, Rome. Built 1502. ANDERSON/ART RESOURCE

was so secure that, despite having undertaken important commissions in Lombardy, he absconded and Ludovico searched for him in Florence and Rome. At the court in Milan, Bramante encountered humanists and scholars, such as the mathematician Luca Pacioli, as well as fellow artists and poets. Bramante himself dedicated poems to the poet Gaspare Visconti. With Leonardo da Vinci, who had been summoned to the court in 1482, he formed a close friendship and drew inspiration from the architectural style that Leonardo had developed in his manuscript drawings by 1490. The sculptor Gian Cristoforo Romano made his appearance in the court sometime before 1491. Romano's fame rested on his ability to combine practical experience as an artist with a level of schooling in the literary and theoretical writings of antiquity that had not been attained since Leon Battista Alberti. Bramante benefited from his contact with Romano's theoretical studies and generally from theoretical discussions stimulated by the construction of the cathedral of Milan, in the wake of the previous court architect, Filarete, who had prepared the ground for the new Renaissance style of building in his treatise on architecture.

Bramante in Rome. In 1499 the invasion of Louis XII of France dispersed Milan's glittering court.

Bramante traveled to Rome, where the sudden expansion of the papal court signaled a new arena for work. He profited there from his old connections: in 1503 Ascanio Sforza ordered him to adapt the choir of the Church of Santa Maria del Popolo as Sforza's burial place. Pope Alexander VI (Borgia) gave Bramante no notable commissions, but within that pontiff's Spanish or Spanish-influenced circle the famous architect found ready employment.

From 1500 until 1504, under commission to the archbishop of Naples, Cardinal Oliviero Carafa, Bramante built the cloister for Santa Maria della Pace in Rome. The architectural system, including its elements, proportions, and details, had little in common with the cloisters of the Sant' Ambrogio convent that Bramante had begun only shortly before. Now Bramante's work began to reflect his exposure to the Roman tradition of building: thus at Santa Maria della Pace, instead of the usual columnar arcades, he installed ancient-style pilastered arcades like those of Palazzo Venezia. Yet Bramante's design achieves a significantly less volumetric effect than its predecessor; it seems to be more calculated according to theoretical principles.

The Tempietto. For the monarchs of Spain, Ferdinand of Aragon and Isabella of Castile, Bramante created the memorial at the supposed site of Saint Peter's crucifixion at San Pietro in Montorio (foundation stone laid 1502; dome completed after Bramante's death and altered in 1605). The physical specifications for the project were not particularly grand: he was to build a little chapel in the center of a narrow courtyard. However, the symbolic implications of the project were spectacular: according to church doctrine, the site of Peter's crucifixion identified Rome as the New Jerusalem and the foreordained seat of the papacy. The construction of the memorial fit into the context of a new spirit of Spanish patronage, whereby, after unification of Spain, the conquest of Granada, and the discovery of America, the kingdom aimed to set the stage in Rome for status as a superpower.

Although the site at San Pietro in Montorio imposed limitations because existing buildings had to be preserved, Bramante succeeded in creating what in Renaissance terms qualified as an ideal building: the Tempietto. Designed on an ideal pattern, the circle, and a strict, simple system of proportions, the building clearly follows an antique model: the round peripteral temple (a temple completely encircled by columns). Typical of the Renaissance, Bramante's design is guided less by an acquaintance with an-

tique ruins than by Vitruvius's description of the round peripteral temple. For the first time in the Renaissance, Bramante achieved an authentic Doric order of columns as Vitruvius described them.

Around the Tempietto, he had planned a circular courtyard with a columned ambulatory that was to follow the same Doric system as the Tempietto itself (the plan is illustrated in Serlio's book on antiquity). Here architectural theory assumed a real shape, as had never happened before and seldom happened again. Bramante's highly practical architectural skills are evident throughout the design, but particularly in his precise anticipation of the perspectival effect that the building would create within the narrow confines of the proposed courtyard.

Pope Julius II. With the Tempietto, Bramante had so clearly proven his abilities that when Giuliano della Rovere became Pope Julius II in 1503, he appointed the architect to head the papal *cantiere*. With tremendous energy, Pope Julius II took on architectural challenges that had daunted popes before him.

The papal palace, despite various remodelings, was modest in size when compared with the papal palace of Avignon and residences of Italian princes. Earlier, Pope Nicholas V (reigned 1447–1455) had developed the plan for a thorough expansion, but he carried out very little of it. Julius, in his first year as pope, began the enormous extension of the palace. His plan first called for construction of a gigantic courtyard flanked by two lateral corridors, extending from the old living quarters near Saint Peter's Basilica to the Villa Belvedere of Innocent VIII, which contained the papal collection of antique sculpture. Spacious rooms would be attached to the corridors (including a conclave hall and the royal stables, neither of which was ever completed). Some elements in the design of the corridors recall the cloister of Santa Maria della Pace. But there are also distinctly modern features—the rhythmic bays—as well as features directly inspired by antiquity (the steps, the nymphaeum, the interior of the proposed conclave hall). Bramante provided a characteristic accent with the spiral ramp leading up to the Belvedere sculpture court, there demonstrating his theoretical ambitions by superimposing the four classical columnar orders one above the other.

Saint Peter's Basilica, built during the reign of Constantine (306–337) and greatly neglected over time, showed irrevocable signs of deterioration and no longer served the ceremonial demands of an enormously expanded Curia. Neither did the fragile

late antique architecture of the basilica adequately serve its purpose as a showpiece of the church; it lacked the soaring vaults that in the course of the fifteenth century became obligatory to ensure high standards of architecture on the model of Gothic architecture as well as that of antiquity. Nicholas V's plans to expand the choir had hardly proceeded beyond the foundation level. In 1505, therefore, Julius II initiated planning for the basilica's renovation, first adopting the design of Nicholas V.

Bramante, however, submitted a model for the complete rebuilding (preserved in Caradosso's foundation medal and the Parchment Plan, Uffizi UA 1): a monumental centrally planned building with a gigantic dome set above the crossing, and posed between four subsidiary domes and four corner towers. Except for some ground measurements, Bramante's design has more in common with Filarete's proposed cathedral of Sforzinda (an ideal building described in his treatise on architecture) than with the actual disposition of old Saint Peter's. To endow his design with the greatest possible majesty, Bramante united the grandest motifs of architecture from all ages: the dome of the ancient Roman Pantheon; the four-armed design of San Lorenzo in Milan; the Byzantine scheme of a church with domes on pendentives in a cross-shaped pattern, with particular reference to Hagia Sophia in Constantinople, a building regarded in northern Italy at the time as the most impressive shrine in Christendom; and, finally, the largest modern church in Italy, Florence Cathedral, the crossing of which extends out to an octagon with domed pillars so massive that each forms an entire side of the crossing.

Thus, in a certain sense, Bramante's vision created an entire museum of renowned architectural motifs that, in their typology, transcend time and place. When Bramante invented ambulatories for the wings of the crossing, he sketched the models of his new idea on the margin of his design (Uffizi UA 8): Milan Cathedral and, once again, San Lorenzo in Milan. Obviously Milan still exerted a powerful impact on his thinking, even when he turned to Roman works like the Pantheon, the Basilica of Maxentius, and the Baths of Diocletian for guidance. In 1506 the foundation stone for the new Saint Peter's was laid, and with great speed the four piers of the crossing were erected. Thereafter, however, the original design was altered in many respects. The changes are often difficult to interpret now from the surviving evidence; at times they seem so incoherent as to suggest intervention by various parties with conflicting con-

cepts of the project. Most notably, the project was adjusted to the site of the Constantinian basilica.

Other Projects in Rome. From 1505 onward, Julius II undertook wide-ranging measures to rehabilitate the urban infrastructures of Rome and to accommodate the population of the rapidly growing city. Once again, Bramante led the planning and execution. Old roads were refurbished, and new ones were laid out, in particular the Via Giulia and, running parallel on the opposite bank of the Tiber, the Via Lungara, connecting the Vatican to Trastevere. These thoroughfares were joined together at the south by the Ponte Sisto (in the north another bridge was planned but never built). A plot of land between the new Via Giulia and the Via Papalis, one of the oldest thoroughfares in Rome, was to be cleared at the point where the two roads came closest together in order to create a wide forecourt for the projected Palazzo dei Tribunali, a building intended to contain all the courts of the papal jurisdiction. Bramante began an imposing rusticated cubical building, to be flanked at each corner by towers (the design is known from contemporary medals). Despite differences in detail, this building compares in typology to the Palazzo Comunale of Bologna, which Bramante rebuilt after Julius II conquered the city in 1506. On the opposite side of the Tiber from Castel Sant'Angelo, he began rebuilding the parish church of Santi Celso e Giuliano after 1509, replacing the medieval basilica with a church with domes arranged in a cross-shaped pattern along the lines that he had envisioned for Saint Peter's, although on a significantly reduced scale. (The design for the church, never completed and entirely rebuilt since, is known from drawings.)

Architectural Theory. Yet Bramante's fame in his own day was not based exclusively on his spectacular monumental buildings; just as importantly, he counted as the first architect to apply Renaissance architectural theory, in its fully developed form, to actual practice. This is why Serlio refers to Bramante for details of the columnar orders (1537), and why Vasari summarizes Bramante's achievement by claiming that he not only taught how to imitate Roman architecture in new designs, "but also added the greatest beauty and accomplishment to art" ("ma ancora bellezza e difficultà accrebbe grandissima all'arte"). This is why Anton Francesco Doni ascribed a treatise on the columnar orders to him, as well as a treatise on Gothic architecture ("trattato del lavoro tedesco") probably because of his Milanese roots.

In the Renaissance, the columnar orders were regarded as the defining element of architecture; Anton Manetti wrote that only where the columnar orders were found would order itself appear to govern a structure. Strict order counted as architecture's highest principle, and it has been taken so seriously by architects that they often "corrected" even the building plans of antiquity. It was Alberti who first proposed a complete theory for the construction of columns, but this theory was evidently not known until the end of the fifteenth century, and the orders of columns before Bramante were never applied in a correct manner to the practice of building.

Bramante apparently learned of Alberti's theories through his acquaintance with Gian Cristoforo Romano, and, on this basis, developed his own columnar system organized according to the strict Renaissance ideas of order, a system in which each successive columnar type was conceived as developed from its predecessor. Bramante did not take over his system completely from antiquity but altered the typical antique prototypes. As the first to apply such a system of columnar orders to actual building, he demonstrated the achievement in such works as the Tempietto and the spiral ramp of the Cortile del Belvedere in the Vatican. He also, however, copied Corinthian elements directly from the Pantheon (as in Saint Peter's and San Biagio), at that time regarded as the epitome of good ancient architecture.

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HUBERTUS GÜNTHER

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