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# Questioning the Philosophical Influence of Beauty and Perception in Bramante's Fist Scheme for St Peter's

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# "QUESTIONING THE PHILOSOPHICAL INFLUENCE OF BEAUTY AND PERCEPTION IN BRAMANTE'S FIRST SCHEME FOR ST. PETER'S"

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*Abstract*:

    *The association between the architects of the Renaissance and the philosophy of Plato has long been upheld and reiterated. However recent authors such as Alina Payne and Christine Smith have shown this scholarship to be somewhat limited and reactionary. A closer examination of Donato Bramante's early scheme for the design of the new St. Peter's basilica demonstrates such limitations of the singular Platonic associations that have been previously made. By studying the philosophical influences that Bramante may have been exposed to throughout his education and early career, a decidedly Aristotelian influence emerges. The design for St. Peter's, as presented on the Parchment Plan, reveals a continuation of the employment of Aristotelian aesthetics, which are dramatically distinct and oppositional to Platonic aesthetics in the appreciation of human perception.*

    Aligning the ideas of the Italian Renaissance with Platonic philosophy appears to be a very appealing association. Convincing correlations can be drawn most eloquently between Humanist ideas of perfection or excellence and Plato's theory of Forms, and because of a revival of Platonic texts in fifteenth century Italy, the argument for such an association between Plato and Renaissance architects is further strengthened. Most readers of the influence of philosophy on Bramante's design for St. Peter's have noted a considerable affiliation with Platonic thought, but a close and careful reading shows that he was actually more inclined towards Aristotelian aesthetics. Bramante demonstrates a taste for Aristotelian aesthetics through his emphasis on spatial experience, and I contend that this influence directed him, even if not consciously, just as much as and arguably more than the Platonic influences that are often cited.

    Throughout the Middle Ages philosophical study focused primarily on Latin translations of Aristotle's texts, as knowledge of the Greek language was extremely uncommon.[1] Then, under the tutelage of Byzantium émigré, Manuel Chrysoloras

(c. 1350-1415), the study of Greek letters was revived and a flux of translations Platonic texts ensued. Many Christian philosophers seeking to replace the very pagan Aristotelian texts with another ancient authority warmly welcomed the theology that Plato seemed to expound. As James Hankins notes in an essay on the study of the text of *Timaeus*, "[Plato] was therefore an ideal authority to be used in the polemic against the godless Aristotelianism of the universities."[2]

Plato's *Timaeus* provided, in a single text, the embodiment of Christian theology for early Renaissance scholars. In the *Timaeus*, Plato delivers a tale of the beginning of the universe that is conveniently similar to Judeo-Christian beliefs. Notions such as an ultimate creator, often called by the Greek name for craftsman (demiurge), coincide with the Christian belief in the Father who created everything. Not only does Plato provide these associations, but also he initially presents what would become one of Christianity's stronger arguments for the existence of God, the Cosmological Argument.[3] Most applicably, Plato offers to the Humanists an explicit aesthetic from the intuition that this demiurge, God, created the earth in the most perfect form, a sphere, and this form demonstrates excellence most definitively.

> Hence he gave it a round shape, the form of a sphere, with its center equidistant from its extremes in all directions. This of all shapes is the most complete and most like itself, which he gave to it because he believed that likeness is incalculably more excellent than unlikeness.[4]

Within this excerpt Plato also alludes to a much larger theory that permeates throughout his dialogues, the Theory of Forms (discussed in more detail later), and it is from this excerpt that speculation of Humanist and Renaissance associations are temptingly drawn.[5] Another attribute of Plato's demands for perfection describes a *completeness*, which he seems to derive from the example of organic life: "for nothing that is a likeness of anything incomplete could ever turn out beautiful …as a living thing it should be as whole and complete as possible and made up of complete parts."[6] The Church in the late 15th and early 16th century, as Arnaldo Bruschi mentions, is conceived similarly as "an organic, harmonious microcosm, made in the image of the Divine."[7]

By the last two decades of the fifteenth century, then, a strong Neo-Platonist theology dominated philosophical thought, and from this continued Platonic revival many scholars have inferred a direct correlation between Plato's philosophy and Renaissance architecture. In the long uncontested *Architectural*

*Principles in the Age of Humanism*, Rudolf Wittkower states, "Renaissance artists firmly adhered to the Pythagorean concept, 'All is number' and, guided by Plato and the neo-Platonists and supported by a long chain of theologians from Augustine onwards, they were convinced of the mathematical and harmonic structure of the universe and all creation."[8] Wittkower associates the apparent fixation on geometry of Renaissance artists and architects with Plato, and notes that even though these architects were probably not directly familiar with the actual texts, the ideas unavoidably impacted them.[9] However, as Alina Payne has demonstrated in her critique of Wittkower's established work, the associations he concludes are primarily derivative of Modernist ideology.[10] Wittkower, like the Renaissance neo-Platonists, had attempted to ascertain a certain validation through an historical authority.

Wittkower had avoided (or perhaps had not entertained) the idea that the Platonic revival might have only been a transition rather than an abrupt replacement from Aristotelian aesthetics towards more Platonic aesthetics. In defense of a more subtle and extended transition,[11] debates that emerged between those sympathetic to established Aristotelian reason and those opposing with a fresh Platonic idealism should be noted.[12] The existence of the records of these debates discloses a very important point other authors have also noted: Platonism does not completely supplant Aristotelian thought in the early Renaissance; instead, it only provides an alternative to it.[13] Therefore, we cannot assume so readily that the Renaissance architects, especially Bramante, were solely under the spell of Platonic idealism for two reasons. First, the revival of these texts was fairly contemporary with these architects. Aristotelian thought had held sway over intellectual culture for many centuries prior, and it would be hard to believe that any new philosophy, no matter how appealing, could so completely supersede another with such ease in the course of a single generation. Secondly, while Platonism aligns with Christianity on several points, it also opposes it severely in other respects. Likewise, many of the beliefs adhered to by the Humanists offends some very basic Platonic ideas.[14] Therefore, the option must remain open to at least the likelihood of Bramante as more influenced by traditional Aristotelian thought than by the freshly emerging Neo-Platonism. This proposition becomes more evident through a closer examination of the lineage of philosophical influence on Bramante throughout his career.

According to Giorgio Vasari (1511-1574), Donato Bramante was born in 1444 in the small village of Castello Durante[15], which is in the state of Urbino. In the *Vite* (1550), Vasari describes Bramante as being occupied with reading and writing as well as an interest in mathematics in his childhood.[16] Bramante, as a young man, was interested and studied the painted works of artists such as Fra Bartolommeo and Piero della Francesca (fig. 2), and as Vasari stated, "he always delighted in architecture and perspective."[17] Bramante spent several years in Lombardy, where he became acquainted with an influential friend, Leonardo da Vinci (1452-1519). Bruschi believes the two would have first met around 1482 when Leonardo arrived in Milan at the Sforza court.[18] Then in 1500, Bramante moved to Rome. From here his career lifts off slowly with only a fountain project. However, under the papal reign of Julius II Bramante receives his first of many large commissions by the Holy Roman Church culminating in the design of the new St. Peter's (1506), which according to Wittkower embodied "the divine stillness of the geometry of the circle which leads man to God."[19]

While Bramante, during these years, most certainly did not learn Greek, he was probably still not familiar with even the Latin translations of philosophical works circulating in his time. Instead, he was probably more interested in the work of someone who was familiar with Greek philosophy, Leone Battista Alberti. The treatise on architecture written by Alberti is said to have been influential to Bramante.[20] This being the case, a lineage of influence can be traced through this work, *De re aedificatoria*. Also since it is known that Leonardo da Vinci owned a copy of *De re aedificatoria*[21], Bramante could have had direct access to the work through his friend and colleague. It would have been through this connection that Bramante might have come across philosophical ideas about aesthetics.

Alberti claims in both the introduction and the fourth book that his work derives from philosophy[22], but he does not specify, unfortunately, whose philosophy he is drawing from. In a study dedicated to this question, Caroline van Eck concludes that he is mostly borrowing philosophical principles from Aristotle.[23] Through the subject of rhetoric, van Eck draws specific parallels between Aristotle and Alberti even noting how the structure of Alberti's treatise closely resembles the structure of Aristotle's *Poetics*.[24] Christine Smith opens this hypothetical influence further in *Architecture in the Culture of Early Humanism*: "the complexity of Alberti's attitude has not received adequate attention from scholars, who

have emphasized the Platonic aspect to the exclusion of the Aristotelian."[25] As is shown throughout the discussion of this paper, Smith finds more difficulty in reconciling the perfection of Platonic aesthetics with early Humanists, such as Alberti, than with the aesthetics of experience in Aristotle's texts.

Given what we can reconstruct of Bramante's philosophical education, perhaps Bramante was even considered to be of the Aristotelian vein by his contemporaries. Vasari mentions in his biography of Bramante the mentor like relationship that existed between Bramante and his fellow Urbino citizen, Raphael (1483-1520), and also noting how Bramante "sketched for him the buildings which he afterwards draw in perspective in the Pope's chamber, representing Mount Parnassus. Here Raphael drew Bramante measuring with a sextant."[26] (fig. 3) The figure that Vasari is quoting is in the lower right corner of the painting bent over with a sextant in hand. (fig. 4) The placement of this image of Bramante is important since speculation has been made claiming that the divisive nature of the painting stems from a desire of Raphael to collect philosophical figures according to their influence or participation in a particular school of thought.[27] So, while it is notable that Raphael portrays Bramante as Euclid (a mathematician), he more importantly places the likeness of Bramante on the right side of the fresco associating him with the Aristotelian school of thought.

This painting, in many ways represents the tension that exists between schools of Aristotelian thought and Platonic thought and supports two important issues addressed in this paper. First, this polemic as discussed already dividing Aristotelians from Platonists is represented in the symmetrical division of the surface into two sections that split between the figures of Aristotle and Plato (fig. 5). Next, the division is explained through the philosophers' beliefs on the role of perception. The figure on the left holding the *Timaeus* is apparently Plato, and opposite him is Aristotle holding his *Ethics*. The gestures of the two figures demonstrate more clearly the views these philosophers held in discussions of aesthetics. Plato is pointing towards the sky. Here, as one author has noted, Plato is represented as one whose philosophy extends beyond the earthly limits towards the Christian view.[28] This gesture also suggests a reiteration of Plato's Theory of Forms, which looks to the outside world of Forms that exists beyond our reality here on earth. Aristotle's gesture, on the other hand, is towards the earth and demonstrates his emphasis on the

subjective experience. These views on aesthetics are key to unlocking the philosophical influence that may have impressed upon Bramante in designing the first scheme for St. Peter's.

While it is true that Aristotle came to his conclusion on aesthetics, particularly beauty, through Platonic philosophy, Aristotle does not depend entirely on Platonic aesthetics to define his conception of beauty. In particular, as one author has noted, "Aristotle broke away from the metaphysical framework which was the basis of Plato's aesthetics."[29] Fundamentally, Plato and Aristotle differ in their perceptions of beauty, and this is most evident in their sympathies towards experience.

Plato condemns, outright even, any credibility that is given to subjective experiences, equating understanding (a product of the mind) with reason and opinion (a product of the body) with unreasoned sense perception.[30] This aversion towards sense perception is partly a derivative of Plato's pervading doctrine of the Theory of Forms. In the *Symposium* Plato gives specific attributes of what he considers to be the Forms, and to summarize, he essentially divides the existence of earthly reality from the divine Forms which stand alone and apart from this earth as Beauty, Goodness, Justice, Truth, etc.[31] Rather, things of this world that are named beautiful, good, just and so on are a part of the Forms, and they share in it,[32] even imitate it:

> "So whenever the craftsman [demiurge] looks at what is always changeless and, using a thing of that kind as his model, reproduces its form and character, then, of necessity, all that he so completes is beautiful."[33]

Raphael reflects this in his *School of Athens* with the figure of Plato pointing beyond the earth to the sky. Plato found no beauty in representations that were not truthful to their model, the Form. Just as he found that the likeness of something incomplete to be ugly, he would not find the imitation of reality as a distortion or compensation to be beautiful either,[34] including perspectival illusions.

The Platonic conceptions of beauty mentioned thus far completely collide with Bramante's intuitions of design, most notably his skilled use of perspective. Following from a discussion on Bramante's Tempietto[35] by Earl Rosenthal, Bramante would readily employ the illusions of perspective to create an effect pleasing to the experience, and, therefore, countering the insistent perfection of Platonic Form. For instance, in the Tempietto's original design Rosenthal speculates that the concentric design of the temple and the courtyard around it would have made the small temple appear much larger, an effect that

Bramante would have expected.[36] This perspectival play is also noticeable in the apse in Santa Maria presso San Satiro designed by Bramante while he was in Milan (fig. 6). Bruschi explains that due to space restrictions Bramante could not extend a choir onto the transept in order to truly realize his desire for a centralized church (fig. 7). So, employing the instruction in painting from his young adult years, Bramante created what seemed to be a "fourth arm" that appeared to be as deep as the others.[37] Thus, Bramante created the perfect centralized church, but it is a perfection that can only be understood through subjective experience, not its objective reality. This, according to Plato, would not be approaching the perfection that should be obtained in the actuality of a fourth arm since Bramante has twice removed the imitation of the perfect form. In fact, the success Bramante's trompe l'oeil effects would only prove to Plato the very imperfection of the senses.

To align the Platonic conception of beauty with Bramante's materialized spatial designs is difficult. If we are to assume that Bramante created things that he believed to be beautiful (since surely he did not desire to create things that were ugly), then we cannot associate his ethics of beauty with those of Plato. Instead, a closer alliance can be made with Aristotle's description of beauty and his ethical stance on this issue. In his *Ethics*, the book that the figure of Aristotle holds in Raphael's painting, Aristotle explains beauty through characteristics of aesthetic experience.[38] First, and most importantly, simply by characterizing anything beautiful through subjective qualities, Aristotle at once sets himself apart from Platonic Beauty since he, unlike Plato, finds merit in the perceptions attained through experience. He does not denounce "aesthetic experience" as Plato does in the *Timaeus*[39]:

> The people who find pleasure in looking at things like colours and forms and pictures are not called temperate or intemperate. At the same time we must suppose that pleasure in these things can be felt too much or too little or in due measure.[40]

Aristotle, in this passage, is criticizing Plato's assignment of particular moral attributes that should influence the judgment of beauty. Plato had upheld the importance of the separation of perfect beauty from earthly reality by associating it with morality, which was a hopeful attempt at validating his Theory of Forms. Instead, Aristotle finds that temperance or intemperance, i.e. moral concerns, do not contribute to that considered aesthetically pleasing. When Aristotle does associate morality with beauty, he remains distinctly oppositional to Platonic aesthetics, "That, then, is Morally Beautiful or Noble, which being

desirable for its own sake, is also laudable or which being good, is pleasant because good."[41] Aristotle does not look beyond the thing itself to describe its beauty as it can be beautiful in itself.

Bramante demonstrates his Aristotelian influence once again in his first design for St. Peter's as presented on the Parchment Plan[42] (fig. 8) and in what is believed to be an elevation of this particular scheme on the foundation medal by Caradosso.[43] (fig. 9) This scheme is a continuation of themes already established by Bramante in the earlier works mentioned above. However, as Bruschi comments, Bramante departs from earlier Quattrocento planar design for an emphasis on the volume itself that within creates the space to be inhabited.[44] As James Ackerman and Arnaldo Bruschi both agree, Bramante conceived the interior of St. Peter's as a void that molded and pushed the walls to form as they did.[45] The effect of this on the exterior is key to this point, however. As shown on the Caradosso medal, Bramante conceived of a building that was composed of a hierarchy of volumes that descended from the emphasized central dome and its drum, and as a direct consequence of this composition Bramante's building had no single façade. Bruschi posits that this descending order of the large true dome to the smaller apse half-domes creates an illusion that one perceives a composed façade that demonstrates, as Alberti calls for in his treatise, the spaces of the interior.[46]

Ackerman has suggested[47] that Bramante developed this idea through his studies of ancient monuments,[48] but Bramante's notion of Aristotelian aesthetics and emphasis on the subjective experience also contributes to this transition away from established building form. While Ackerman's point is agreeable to an extent, the examples shown earlier suggest that Bramante did not dramatically transform his design principles once he was exposed to the ruins of ancient Rome. Rather, Bramante's pre-Roman designs are arguably consistent with his later Roman work in light of his appreciation and application of subjective experience throughout his career. In studying the ancient monuments, I assert that he applied the experience of this modeled space to his work as well as its sculptural form.

Unfortunately, interpretive attention has primarily been paid to the form of the dome since its circular form conveniently alludes to a Platonic perfection. In order, then, to offer a more complete analysis of the crossing of St. Peter's, the space that is to be actually inhabited should also receive such attention. Perhaps the crossing's exclusion from earlier analyses has been due to a difficulty in assigning its form to

something of perfection. I argue that rather than actually producing a perfect form on ground level, Bramante worked from the necessity of structure and the effects structural decisions would have on the experience of the central space.

Meg Licht contributes a most helpful study[49] of early design sketches made between Bramante and Peruzzi that provide for the present something like a dialogue that allows glimpses into Bramante's aesthetic inspirations and concerns. Within her study she includes sketches that date throughout the year of 1505 (figs. 10 and 11), a year before the Parchment Plan was presented, which shows the beginnings of the "innovative"[50] diagonal pier formation. On this sketch and several to follow Bramante and Peruzzi are constantly checking the effects their design will have experientially, i.e. rather than drawing the elevation as a perfect iteration of the plan, they sketched the experiential effects through the perspective. This sort of 'checking' also appears in some of Leonardo's sketches, as Ackerman shows, where he too is *looking* to see what effects incur from planametric decisions.[51] Licht notes that from this series of design alternatives the pier was now conceived as a "sculptural element,"[52] formed, as discussed earlier, by the space within. While Licht does not believe that the Parchment Plan follows too easily from Bramante's and Peruzzi's earlier work,[53] the concern here is the experiential result of spatial decisions, most of which can be established through the work she does attribute to Bramante and Peruzzi.

By 'checking' the effects of the organization of the plan in perspectival sketches, Bramante and Peruzzi could verify their design would exhibit the experience they had in mind. The design presented on the Parchment Plan provides even more evidence of his attention to the effects of planar decisions on perception. Allowing that Bramante would have used an acute angle—particularly sixty-degrees—in his construction of a mathematical perspective[54], several instances of a framed view occur. Through a progression of vistas, Bramante creates moments of free, unrestrained views followed by a more constrained, inclusive view within the crossing.

Beginning at the entrance, the observer is presented with a framed opening of the center of the basilica (fig. 12). Flanking this opening, and at the extents of the visual angle, are two carved niches. Likely, two statues would have been placed in these niches looking at the observer entering the space. Here, in a moment of stasis the observer would pause in the progression towards the view beyond. Next,

the observer is presented with a second threshold of the end of the entrance arm where the view opens, and the crossing is visually attainable in a single glance (fig. 13). This prepares the observer to move further into the actual space of the crossing. The next threshold is that of the piers (fig. 14); the visual angle allows only the extent of the opposite piers to be included in the frame of vision. Attention would be drawn to the primacy of this central space as a form within the whole of the basilica, and it would again be further preparation for the climax of the sequence in the center of crossing. Bramante appears to have consciously decided to divide the space so that through the axial progression an observer would notice such occurrences, and Aristotelian, not Platonic, aesthetics must be the guidelines of such experiential design decisions.

Standing directly below the dome in the exact center of the building, the observer's view would be tightly framed by the piers in all four directions (fig. 15). Here, the final moment of stasis holds the observer in the center. The recession of the arm piers beyond compresses the view pulling the apses visually closer, and the frame of the crossing piers eliminate the view of the subsidiary spaces surround the crossing and reinforce the perception of a solitary space in the basilica.

The innovation of the diagonal pier cleverly opens the central space of the crossing, thus, giving the feeling of an uninterrupted singular form. Perceptually, this space is circular and reflects the true circle of the dome above, but since structural limitations seem to have prevented Bramante from forming a circle below, he answered the problem by *making it feel* as if it was circular. Bramante could not accomplish what he had intended literally, but he created the same effect through an illusion. The experience of the crossing would cause an observer to perceive a circle even if the actual arrangement of the piers did not produce one. Aristotelian experience on the ground combined with Platonic perfection above describes more clearly the aesthetic influence on Bramante's Parchment Plan. Bruschi's observations of the effects that the diagonal piers produce aligns with the arguments here, except that he believes the chamfered corner produces a more literal square or octagon.[55] My argument contends that indeed Bramante stepped beyond the Quattrocento solution of placing a dome over four points, but that the effects of his design produce an illusionistic effect of the perfect form, a circle, that would have been highly lauded over the square, rather than actually articulating the Platonic form in masonry – something Bramante reserves for the dome above.

So that, in the sequence of the axial progression, the observer stands under the perfect circular dome in a perceived circular space that appears to have become the only space in the entire building. Therefore, these observations cannot suggest that Bramante was swayed solely towards either Platonic aesthetics or Aristotelian aesthetics. Rather, the influences that are veiled in his designs promote both alternatives in a manner that is arguable in accord with the aspirations of the philosophers themselves: Plato beyond earth and Aristotle of the earth.

Founded in an interest in philosophical influence on culture, this investigation began with the assumption that many have taken, that Plato's philosophy reigned superior in the age of the Humanists of the Renaissance. However, through a more intense study of the philosophy, the education of Bramante, and the drawings Platonism has been assumed to influence, the hegemony of Platonic thought emerges as not quite so absolute. It cannot be denied that the reintroduction of Platonic philosophy in the late fifteenth century infiltrated Bramante's aesthetic decisions in part, but we must also recognize the plurality of influences that affected these decisions as demonstrated by Bramante's aesthetic kinship to Aristotle who may well have been the stronger influence.

**Figure 1**
Manuel Chrysoloras, c. 1350-1415

**Figure 2**
 Piero della Francesca,
 *The Flagellation of Christ*, c. 1458-60

**Figure 3**
Raphael, *The School of Athens*, 1510-1511

**Figure 4**
Detail of Raphael,
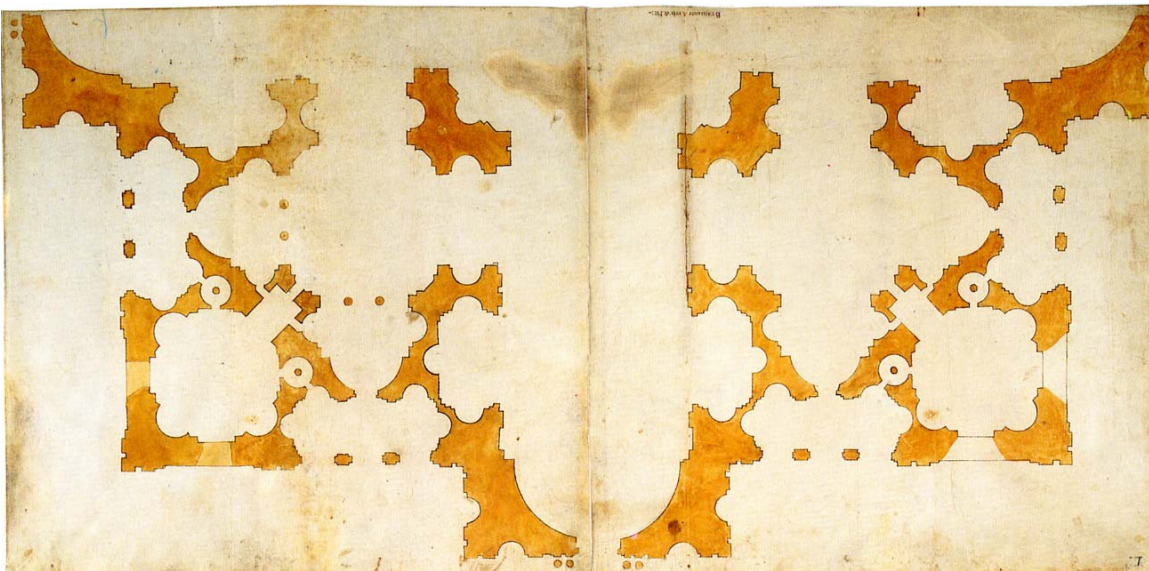*The School of Athens*, 1510-1511



**Figure 5**
Detail of Raphael
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**Figure 6**
Bramante, Apse of Santa Maria
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**Figure 7**
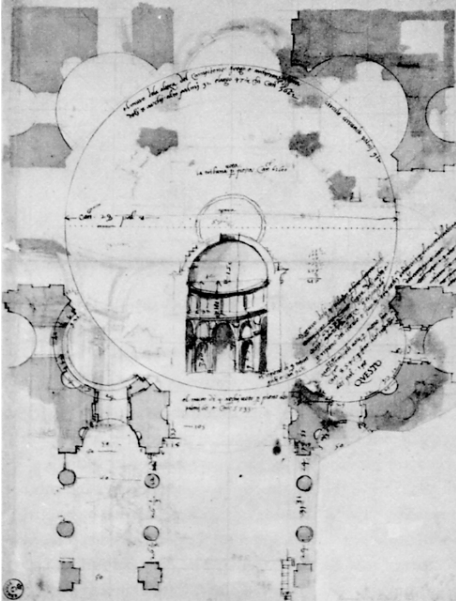Bramante, Exterior of apse of
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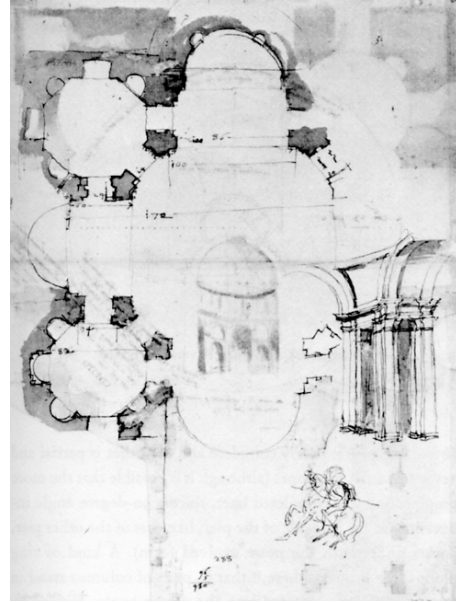**Figure 8**
Bramante, *Parchment Plan* (Uffizi 1A), 1506

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Caradosso, Foundation Medal for the new St. Peter's as designed by Bramante, 1506

**Figure 10**
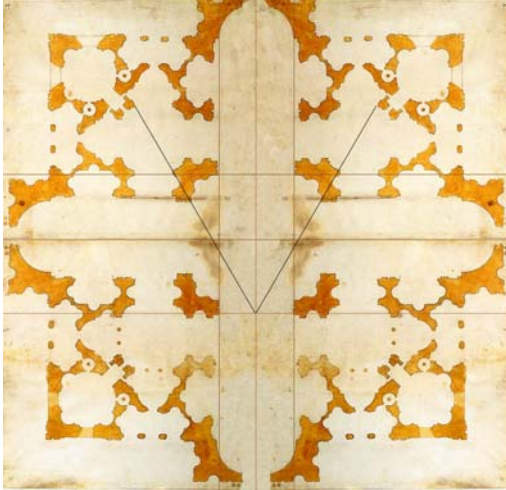Bramante and Peruzzi,
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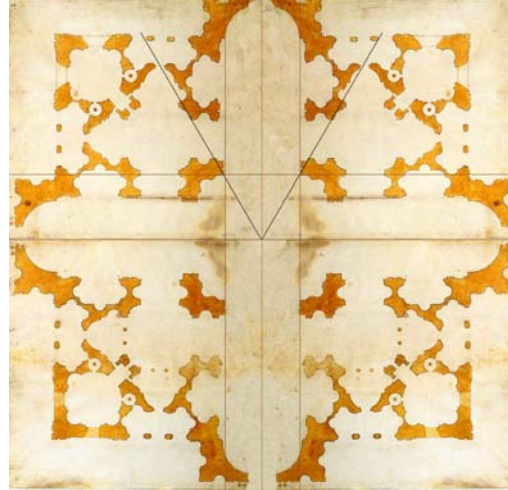Bramante and Peruzzi,
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The first threshold, the entrance.

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**Figure 15**
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**Notes:**

[1] Hankins, *Plato in the Italian Renaissance*, 3-4. This does not entirely discount studies of Plato; however, relatively few translated Platonic texts survived from antiquity. Only Calcidius' and Cicero's incomplete copies of the *Timaeus* existed along with a few quotations in the writings of Cicero, Augustine, and various other early philosophers.

[2] Hankins, "The Study," 80.

[3] Plato, "Timaeus," *The Complete Works*, (28c).

[4] Plato, "Timaeus," *The Complete Works*, (33b).

[5] This connection is especially clear in Wittkower's discussion on centralized churches in which Wittkower quotes, in part, this excerpt. Wittkower, *Architectural Principles in the Age of Humanism*, 23.

[6] Plato, "Timaeus," *The Complete Works*, (30c-33a).

[7] Bruschi, *Bramante*, 148.

[8] Wittkower, *Architectural Principles*, 27.

[9] Ibid., 28.

[10] Alina Payne, "Rudolf Wittkower and Architectural Principles in the Age of Modernism."

[11] For further studies on this transition see: Arthur Field, *The Origins of the Platonic Academy of Florence* (Princeton, N.J., 1998).

[12] For a detailed discussion on these debates see especially: Hankins, "Bessarion vs. Trebizond," *Plato in the Italian Renaissance*, 236-263.

[13] Smith, *Architecture in the Culture of Early Humanism*, 128.

[14] Hankins, *Plato in the Italian Renaissance*, 8-9.

[15] Bruschi, *Bramante*, 15. Bruschi believes that Bramante's birthplace to be Monte Asdrualdo, today known as Fermignano.

[16] Vasari, *Vite de' più eccellenti pittori, scultori et architettori*, 183. Vasari notes that Bramante "was continually doing the abacus."

[17] Ibid. 184.

[18] Bruschi, *Bramante*, 39.

[19] Wittkower, 26.

[20] Bruschi., 65. Bruschi claims here that Bramante "undoubtedly knew well" Alberti's treatise.

[21] Ibid. Leonardo owned the edition printed in 1486.

[22] Alberti, *De re aedificatoria*, IV.1.

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[23] van Eck, "The Structure of *De re aedificatoria* Reconsidered," 287.

[24] Ibid.,288.

[25] Smith, *Architecture in the Culture of Early Humanism*, 92.

[26] Vasari, *Lives*, 187.

[27] Joost-Gaugier, "The Invention of Philosophy and its Platonic Connections in Raphael's School of Athens," 111.

[28] Most, "Reading Raphael: *The School of Athens* and Its Pre-Text," 165.

[29] Tatarkiewicz, *History of Aesthetics*, 139.

[30] Plato, "Timaeus," *The Complete Works*, 1234 (28a).

[31] Plato, "Symposium," *The Complete Works*, 493 (211a-b). "First, it always *is* and neither comes to be nor passes away…Second, it is not beautiful this way and ugly that way…It is not anywhere in another thing…but itself by itself with itself, is is always one in form."

[32] Plato, "Symposium," *The Complete Works*, 493 (211b). "in such a way that when those others come to be or pass away, this does not become the least bit smaller or greater nor suffer any change."

[33] Plato, "Timaeus," *The Complete Works*, 1234-35 (28a-b).

[34] Plato, "Timaeus," *The Complete Works*, 1236 (30c). "…for nothing that is a likeness of anything incomplete could ever turn out beautiful."

[35] San Pietro in Montorio, Rome, 1502, commissioned by Ferdinand and Isabel of Spain.

[36] Rosenthal, "The Antecedents of Bramante's Tempietto," 70.

[37] Bruschi, *Bramante*, 37.

[38] Aristotle, *Eudemian Ethics*, (1230b)

[39] See note 29.

[40] Tatarkiewicz, *History of Aesthetics*, 153. This term, "aesthetic experience" and these summations are derived from Tatarkiewicz's discussion on Aristotle's aesthetics.

[41] Aristotle, *Rhetorica*, 1366a.

[42] Referred to categorically as Uffizi I A dated to early 1506.

[43] Also dated to 1506.

[44] Bruschi, *Bramante*, 152.

[45] Bruschi, *Bramante*, 151. Here Bruschi quotes and elaborates on Ackerman, *The Architecture of Michaelangelo.*

[46] Ibid. 152-153.

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[47] Ackerman, *The Architecture of Michaelangelo*, 197.

[48] Vasari, *Lives*, 184. "Bramante had earned money in Lombardy and at Rome, and on this he hoped to live, by dint of severe economy, and to be able to measure all the ancient buildings of Rome without it being necessary to work."

[49] Licht, "*I Ragionamenti* – Visualizing St. Peter's."

[50] Several authors have noted the diagonal piers as being innovative.

[51] Ackerman, *Studi di Storia*, 201.

[52] Licht, "Visualizing St. Peter's," 120.

[53] Ibid.,123.

[54] Edgerton, *The Renaissance Rediscovery of Linear Perspective*, 140. Edgerton opposes the John White's assertion that Filippo Brunelleschi employed a ninety-degree visual angle in constructing his mathematical perspective of the Florence Baptistry. He bases his argument partially on an excerpt from *Della Prospettiva* (thought to be written by Paolo del Pozzo Toscanelli in the early 1460s), which states that the visual angle was "always acute and never as an obtuse or right angle." For the counter-argument by White see *The Birth and Rebirth of Pictorial Space*, 113-116.

[55] Bruschi, *Bramante*, 150.