

Hans Rose, *Commentary to Heinrich Wölfflin, Renaissance and Baroque*, fourth edition, Munich: Bruckmann, 1926, 181-328.

Translation by Arnold Witte and Andrew Hopkins

NB. In this translation, underlined words are typeset double-spaced in the original. Page numbers in square brackets refer to the original page numbers in the 1926 edition. Words and parts of sentences in square brackets refer to insertions by the translators in order to help the readability of the text. Footnotes provided in this translation are the footnotes of the original version. Bibliographical information has been added to the footnotes in order to conform as far as possible to the style sheet of the *Journal of Art Historiography*.

[181] Commentary

Article 1: **Subjectivism**

The issue of the causes for changes in style, that we indicate with the terms Renaissance and Baroque, have found a temporary answer in the second part of this book, where both mechanical and psychological factors have been considered in order to explain this process; however, [these] have more to do with the characteristics of the [Baroque] style than with its origins. It is presumed that the birth of the new style can be traced to a crisis in the world view of both eras, but in an important passage where Wölfflin discusses the issue of historical reactions with reference to Hegel's philosophy of history (p. 76 note 2), he rejects the possibility that an artistic style can be derived from ideological conflicts. "The history of art should not submit to this construction" he states, "and the facts would have to be forced, comparable to the way in which the history of philosophy was made conceivable as abstract thinking by means of the relationships between its concepts." And even if it were possible to point out analogous developments, the underlying principle of how an ideological worldview influences artistic concepts still would not be revealed. Notwithstanding this warning, the issue of the cause of change in style is posited with increasing urgency. Perhaps it is the sheer number of details that require systematic ordering, or maybe it is the recurring tendency toward the metaphysical, that strives for the Absolute in all segments of spiritual life and which nourishes the awareness in us that we are witnessing an artistic crisis of immense impact. Certainly we have to take into account that, as a result of the humanistic research questions, art historical periods are being unravelled in all their aspects, so that the unique process of stylistic development can be understood as a result of an exchange of ideas.

For this reason, today the core issue of the Baroque is research into the ideological foundations of its style. Werner Weisbach has attempted to interpret early Baroque painting, usually indicated with the questionable word "Mannerism",

as an expression of Counter-Reformation spirit.<sup>1</sup> I think, however, that the [182] relation between the Church and the arts has been explained in too literal a way, apart from the fact that the religiosity of this period is not identical with the prevailing worldview. Because Weisbach locates the beginnings of the new style at a late moment in time, he discusses not so much the causes but only the effects of this spiritual change. From an entirely different perspective, and in a publication where one would not expect such an argument, Max Dvorak in his characteristic, animated way tried to explain Baroque form, or non-form, through the persona of the ageing Michelangelo, the collapse in his figurative art, and the shift towards the other-worldly, whereby he “turns his *Terribilità* into a moving confession of humble fervour.”<sup>2</sup> What occurs here is a move away from the art of the Renaissance based on “imitation and idealisation of nature, and a shift towards that other, anti-naturalistic concept of art which also had been characteristic of the Middle Ages.” In other words, new concepts of art, and the work of art, are being formulated and research into this also promises to illuminate the causes of the change in style.

The title of this book, ‘Renaissance and Baroque’, is essentially based on an opposition of form, and it cannot be expected from this commentary, given its boundaries, that the development of this opposition in style is ideological. It is also dubious whether research into building history will provide the most useful material for gauging these spiritual changes, as architecture enjoys less favourable conditions than the visual arts in terms of being an art of expression, in as much as regards the subjective sensation which was so important for the Baroque. But perhaps the continuation of the preceding study in the direction of building history is especially apt in the current context, as it has been observed more than once in art history that architecture compensated for its lack of creative power by exerting its own particular moments of energy that become effective bearers of a new ideal, and, according to the level of idealism, [183] incorporate the other arts in her supremacy or dominate them. Indeed, in Baroque studies I consider the relation of the tectonic to the visual arts to be the main issue that requires research and, from the perspective of present-day artistic production, attracts the most attention.

With respect to the intertwining of form and spirit, which without any doubt has reasonably been called into question, here this should be examined through the concept of the Classic. Of course this concept has to be used in its exclusive definition in order to serve as a measure for Baroque forms. With Classic, I intend those pinnacles of absolute beauty and measure that are indicated with the names of Phidias and Raphael. Because only this kind of classicism aims at beauty that is connected to an object in this world, which is not affected by subjective

<sup>1</sup> Werner Weisbach, 'Der Manierismus', *Zeitschrift für bildenden Kunst*, [vol.30,] 1919, [161-183] and more generally in *Der Barock als Kunst der Gegenreformation*, Berlin[: Cassirer,] 1921.

<sup>2</sup> Max Dvorak, *Kunstgeschichte als Geistesgeschichte*, Munich [:Piper,] 1924, Chapt. VII: 'On El Greco and Mannerism', p. 267. Julius von Schlosser discusses the same phenomenon in his 'Bemerkungen zur Kunsttheorie des Barock', *Materialien zur Quellenkunde*, [Vienna: Höller, 1920, 10 vols,] part IX, 90: 'This rejection of nature is ... almost a return to the 'Gothic' will of form that already appears during Mannerism and accompanies the Baroque in strange ways, and which again today is being pursued ardently by expressionism.'

interpretations, and only this classicism strives for pure beauty, which is to say without any kind of ethical admixtures. [184] So far this is a purely terminological agreement; with respect to the Baroque, we are interested in other aspects.

The word 'Classic' is commonly used as a concept of form. Beyond this formal meaning, it also comprises other, ideological concepts that are relevant to us in the present context: classical art in its exclusive meaning is only possible at a particular level of individualistic ideology, namely when the emancipation of the individual is perceived from a higher idealistic standpoint as fragmenting, and when a general cultural idea, or an elevated type of humanity, is constructed above the concept of the perfection of the individual. This could be called the sociological aspect of classical artistic production, although there is more at stake here than mere forms of socialisation. We are concerned with concepts of unity that are first interpreted in a cultural context and that subsequently leave the domain of aesthetics to tinge those of religion and political morality. With the idea of the 'great' man, aesthetic value is turned into ethical value. Both the urge to unity and the impulse towards the ethical are beyond the boundaries of individualism, and also beyond the limits of classical creation. – On the other hand, classical art only becomes possible with a certain level of naturalistic ability, the development of which is intricately linked to the existence of an individualistic ideology. The question is whether man is so familiar with this world that he will demand an image of himself and the surrounding world. I would like to call this the morphological side of classical creation: classical in the exclusive sense is unthinkable without the preliminary work of naturalism. The character of the classic appears there, where the mere recording of reality is perceived as being meaningless, which is to say, abundance necessitates a selection of the artistically desirable, and therefore an orientation towards ideal beauty. This idealising, which logically goes hand in hand with a unification of forms, constitutes the first a-naturalistic moment that appears within classicism as the moment of greatest spiritual control over the real world. Then, this leads to increasing detachment of the work of art from the natural object, giving free reign to that subjective concept of beauty that, with a corresponding exaggeration of the concept, necessarily finds its culmination in a declaration of expressive non-form, which is to say, with a newly coined concept of the work of art. The conditions for the development of classical works of art therefore lie partly outside the domain of the artistic, and because of the rarity [185] of this spiritual constellation the idea of the classical could be realised only in a few historical periods. Even when the classical was striven for, and the formal methods of classicism were fully known, it was not possible to force this. At the end of the eighteenth century, classicism remained impure because the awareness of individuality in this age was tainted by democratic ideas, and the intellectual side of classicism had not been prepared for by any kind of naturalistic endeavour. From this point of view it is impossible to speak of early or late classicism, but only of quintessential 'classicism'. This does not provide a concept of its development, but one of shape [and form: *Gestaltungsprinzip*]. This seems to be the reason why in systematic art history the term 'Late Renaissance' has proven to be dysfunctional: "where something new shows itself, there we see the symptoms of the Baroque" (see above, p.3).

In order to understand the genesis of the Baroque, questions should be asked about the components of classical creation mentioned above: individualism, naturalism and shaping objective beauty, and whether these can be assumed to be generally operative forces in the further development of art, or whether a reversal in [artistic] forms also extends to the relation of human beings to one another and to nature. Therefore, the question is whether each and every crisis in individualism brought about a formal change to the anti-classical, and whether this change necessarily also meant a turn towards the non-figurative [*das Bildlose*], with the final aim of a-naturalistic art rejecting the principle of imitation, or only tolerating naturalistic objects in the context of a superimposed architectonic structure. The development of the entirety of early modern art, from the Renaissance up to today, might then be explained as a struggle between the old, pro-image and the newer, image-undermining powers – or alternatively as an antagonism between two convictions of which today the supra-individual and nature- and image-hostile [tendency] seems to be victorious – if the mutual dependence of these forces could be proven. Only in this widest of contexts would it become possible to formulate specific questions as to what extent spiritual and artistic changes find their starting point in the early Baroque, where image-hostile symptoms occur that disrupt the classical balance of the arts. There can be no doubt that a struggle between opposite tendencies starts during the early Baroque, but their development does not follow an imagined standard curve, but force and anti-force appear from decade to decade in a real and continually fluctuating course. Michelangelo, who [186] did not have anything in his personality that made him capable of generalising, became the spiritual exponent of this age because of the conflicting aspects of his nature. The defining essence of his being, namely a sense of personal guilt as the result of the contradictory nature of his person, left its mark on this era, and in particular did not allow other creative natures to come to rest.

My soul, troubled and perplexed, finds within itself  
 no other reason for this than some grave sin  
 scarcely known to me, although it's not concealed  
 from the boundless pity that relieves the wretched.  
 ([Cesare] Guasti, [*Le rime di Michelangelo Buonarroti, pittore, scultore et  
 architetto*, Florence: 1863] 265, [Henry] Thode, [*Michelangelo und das Ende der  
 Renaissance*, vol.] II [ *Der Dichter und die Ideen der Renaissance*, Berlin: Grote,  
 1920,] 454 [translation in English taken from Sarah Rolfe Prodan,  
*Michelangelo's Christian Mysticism. Spirituality, Poetry and Art in Sixteenth-  
 Century Italy*, New York: Cambridge UP, 2014, 75])

The Middle Ages had occupied itself with the issue of sin, but sin was presented in the medieval world view as something general, as Original Sin, for which the human soul was only partially responsible. During the Renaissance, this awareness of sin diminished, and the lighter side of human nature displayed the liberating individualising of mankind. The Baroque made a synthesis of these two: it individualised sinfulness, for which the liberated will made itself responsible. Individualised sin is guilt, and this became the foundation for the ideas of redemption that dominated the religious and artistic life of the Baroque.

This spiritual change proceeded in gradual ways; even in religious discussions, where enormous forces collided and differences of opinion were more explicit than in artistic matters, the situation only gradually became more acute. Initially, it was believed that the conflict could be bridged by education. Those people inclined to mediation were accused of half-heartedness and were pressured by the disputations of the orthodox into making increasingly sharp statements.<sup>3</sup> Those who, around 1530, represented general opinion became victims of the Inquisition in the fifties. There were further external reasons why Rome suddenly witnessed the disappearance of Renaissance culture: this was caused by the unworldliness of Hadrian VI, the depletion of papal finances, plague, and the misfortunes in war of Clement VII.<sup>4</sup> Meanwhile, people never ceased [187] to long for a return to the golden age. Paul III seemed to fulfil these hopes; his ideas about power and beauty did not differ from those of Julius II, and he responded to the new spiritual demands with concessions. Responsibility for spiritual reform was shifted to [Cardinal Gasparo] Contarini, and this established a government with separate roles that corresponded to the dualism of the ecclesiastical powers; subsequently this repeatedly proved its worth, for example during the [papacy of] Pius IV, who won over Saint Carlo Borromeo as the embodiment of his spiritual conscience. During the conclave of Julius III, the indecisiveness of the transitional period clearly manifested itself. Clever [cardinals] were feared because of their humanism, the orthodox were feared because of their hostility to culture, and the powerful for their nepotism. Therefore, the choice fell on the mediocre [cardinal] who had remarkably little capacity for the requirements of his time. Therefore, the crisis was prolonged until 1555, and because the pendulum had artificially been drawn to the side of party-happy paganism, a swing back to the extremes of orthodoxy took place, that in turn again released humanistic opposition. In this game of action and reaction, an important factor was the brevity of pontificates of the severe popes, while those of the culture-minded popes were long-lasting. Carafa reigned for four years; in the six years of his pontificate, Ghislieri created difficulties for the artists of Rome so many left the city (Martino Longhi the Elder, Giacomo della Porta). Sixtus V reigned for five years, and one can only predict how the artistic character of Rome would have changed if this supreme power had been in his hands for a longer period. In the six years of his pontificate between [Carafa and Peretti], Pius IV healed the damage that his predecessors had inflicted on the culture of Rome, and the regime of the Buoncompagni pope was, in architectural respects, one of the most prolific of the entire sixteenth century. His [papacy] began with a good omen: the Turks and the Huguenots were defeated and the mood of victory drove out spiritual doubts. Notwithstanding this, the pope deemed it necessary to justify his patronage of the arts with unusual idealism, by means of stipulating public good: "he had many buildings erected, not so much for his own fame, as from Christian devoutness, as he used to say that building was a public duty of

<sup>3</sup> Eberhard Gothein, *Ignatius von Loyola [und die Gegenreformation]*, Halle: Niemeyer, 1895], 51 ff.

<sup>4</sup> Ludwig von Pastor, *Geschichte der Päpste [seit dem Ausgang des Mittelalters]*, Freiburg i.B, 1901-1931] vol. 4.2, 46 ff and 172 ff.

love.”<sup>5</sup> Sixtus V accepted the inheritance of this political and sovereign direction of art, with the single difference that he did not promote architecture for social reasons, but as a symbol of order and power. [188] Towards this goal, he stripped it of any personal character and directed it towards a hard and schematic regularity that his pupil in politics, Cardinal Richelieu, later consciously pursued as a royal artistic direction. 1590, the year of Sixtus’ death, was the last year of crisis. Under his successor, the opposition between forces relaxes, and from this balance originates the world-view of subjectivism that still latently contained the previous oppositions within itself. Especially the relation of the detail to the whole remains ambiguous. From the term ‘subjectivism’ one could deduce that this is an aggravated form of individualism. This is only true to the extent that not all capacities of the human intellect are decisive, but only the power of feeling and, with this, a moral disposition. This notwithstanding, the isolation of each human being does not increase, but instead there is a tighter inclusion of the individual into the larger whole. The student of the intellectual Renaissance remains isolated with his problem [189] and with the objective facts to be researched. On the other hand, the human being with his capacity for feeling, which constituted the Baroque type, was confined to positive or negative responses. Even hermits of the Baroque era count on the reverberation of their being in the receptive subject. In art, the creation of objectively beautiful forms no longer has to be reckoned with because of the greater sociological inclusion of Baroque man and the emphasis on the element of feeling. “The cult of feeling spoils the delicacy of bodily feeling.” (see above, p. 85). This touches upon a partial problem that should be dealt with in the general context of artistic development.

If this assumption is correct, the strain on the ecclesiastical sense of community that can be observed after the death of Leo X should have resulted in a corresponding increase in building activity, and indeed the construction of St Peter’s received more attention in the early Baroque [190] than at the time of the laying of the foundation stone. The old container was filled with new contents. During the reign of Julius II, the colossal proportions had been derived from the old structure, mostly without second thoughts, but partially they had been increased in a conscious way that borders on wantonness. However, the building would have remained a ruin if it had not been rescued by the idealism of the Counter Reformation. The Baroque [191] would rather have renounced all figurative decoration than entirely abandoned the completion of this building project. After taking over the supervision of the construction, Michelangelo dedicated himself almost exclusively to architecture, while in his late figurative works he searched for the beauty of shapelessness that equals a renunciation of figuration. But the course of history has proven that this tendency did not endure, because it only had an effect as long as the perfectly finished form constituted the measure for non-form. The tragic [result] of this renunciation only functioned in [the work of] Michelangelo, the former master of form, [while] it turned into incapacity in his followers. On the other hand, in architecture Michelangelo found a richer reward for his abandonment of figurative art than any of his [contemporaries], as he was able

<sup>5</sup> Giovanni Baglione, *Le vite de’ pittori etc*, Rome [:Andrea Fei], 1642, 4 – [see also Werner] Weisbach, *[Der Barock als] Kunst der Gegenreformation*, [Berlin: Cassirer, 1921], 8, 9

to depict more monumentally the struggle of the will against colossal burden (the aspect that interested him most in the human figure) at least as impressively in architecture as in the human figure. In his imagination, muscle power and tectonic forces, mimetic and architectural expression became equal, and no one was able to follow him in this shift of the tectonic towards the organic. The architectural mask, a symbol of this fusion, certainly became the standard [192] requisite in architecture well into the eighteenth century. Especially with Federico Zuccaro, the artist who occupied himself the most in emulating Michelangelo, and his bizarre houses in Florence and Rome, did these fundamental elements create mere caricatures of architecture. Also with Ammanati we find many blunders between form and non-form. He did not completely master the relation between figure and space through which the Baroque experience should prove itself, and therefore his colossal tomb for the count of Urbino had to be demolished (Urbino, Santa Chiara). In his old age, almost blind, he abjured the depiction of nudity in his youthful works, prompted by the insinuations of the Jesuits who, with ever-greater tenacity, had turned against the profanely sensuous because they increasingly relied on the abilities of sensory perception as one of the most important factors in religious life. Ammanati perhaps listened to them because, in any case, art became estranged from the objective factualness of the human figure, and the urge towards the subjective found a more effective expression in clothed figures than in the nude.<sup>6</sup> This was also to a certain extent because the nude figures in question, especially the bronzes of the Neptune fountain in Florence, had been designed in a decorative way and therefore championed a courtly taste, which lacked any problematic seriousness. Rome had hardly been affected by this kind of art. As long as Paul III lived, there was an aversion to the decorative and so the Farnese were unable to decide how to complete Villa Madama, which they had inherited. What they considered decorative can be observed in the Sala Regia of the Vatican where, according to the description by Vasari, a combination of travertine and stucco ought to result in colossal works that approximated exterior architecture.<sup>7</sup> Under Julius III there was a reversal to the side of the agreeable. He did pretend to admire Michelangelo, but employed artists who strove after the exact opposite of what Michelangelo wanted. These artists are Girolamo da Carpi and Pirro Ligorio, the former a painter from Ferrara, the latter an archaeologist from Naples, and both had been recommended by the d'Este family that Julius, [193] after his ambiguous conclave, had to win over at any price. As an architect, Girolamo da Carpi worked mainly in a decorative [style]. One might assume that decoration would most willingly have submitted to Baroque principles, but this was not the case. In Rome, decoration remained dull, in contrast to Florence

<sup>6</sup> 'I agree with most of you in the conviction that it is not less difficult and no less artful to clothe a statue in beautiful dress, and to drape the clothing in an agreeable way and to gather it up, than it is to depict it fully nude.' Letter to the members of the Accademia del Disegno, Florence, 1582. Bottari III 529; Ernst Guhl and Adolf Rosenberg, *Künstlerbriefe*, [Berlin: Guttentag, 1880,] 312. The same concepts [can be found] in the letter of Grand Duke Ferdinand of Tuscany (around 1590). [Johannes] Gaye, *Carteggio [inedito d'artisti dei secoli XIV, XV, XVI]*, Florence: Molini, 1839-1840] vol. 3, app. 578; Guhl [and Rosenberg], 315 ff.

<sup>7</sup> Giorgio Vasari, [possibly: *Le vite dei più eccellenti pittori, scultori e architetti*, Florence: Sansoni, 1906,] vol. 1, introduction, 123.

where versatile grace never fully disappeared, and where agile Flemish motifs were introduced with fertile effect moreover. Girolamo da Carpi avoided Michelangelo's issue of human figures and, as architect of Palazzo Spada, he had a role equivalent to Giov[anni] da Udine in Raphael's time. The scheme was derived from Palazzo Branconio, but the deviations are highly significant for the fifties (fig. 117 and 118). Notwithstanding the neighbouring Palazzo Farnese [194] there is no block-like effect but facade-art. The ground floor [has] not been opened up by means of arcades, but has been given the effect of a base with artificial rustication. The main storey does not have a window sill. The motif of the gable has been transferred from the unadorned small windows to the niches that have been decorated with figures. The mezzanine seems to have been adorned in the guise of seemingly mobile festive decoration (the draperies and the griffins are later additions). It is possible to speak of a revival of the Raphaelesque grotesque undertaken by a provincial [artist]. As an example of how these decorative artists, when creating human figures, preferred calm, pleasant and relaxed postures, one could point at the bearers of the escutcheons that originally decorated the facade of Palazzo Spada and that nowadays have been applied to the rear wall of the courtyard, with the addition of a *pendant*. These can probably be attributed to Girolamo da Carpi (fig. 119), [but] in accordance with their decorative character, these works have not been able to keep the memory of their maker alive; the question of their attribution is reserved for later study. The figures in the interior decoration are of equally elastic movement, even though they do relate to Michelangelo's motifs of weight-bearers and atlantes. This art was not able to develop itself. At the Villa Pia Pirro Ligorio was the only one to attempt to augment Girolamo da Carpi's decorative system with a number of archaeological requisites, swelling it to sheer overload in a Baroque way, before the system died and was only applied fragmentarily to suburban villas (fig. 121). For the rest, there is a marked decrease in figurative interest among the leading architects. Vignola, much of whose style became comprehensible through the attempts at reaction discussed above, only made designs for incidental objects.<sup>8</sup> Nothing figurative by Giacomo della Porta has been preserved; we would not expect this from him as he succeeded in the difficult task of translating Michelangelo's motif of struggle into pure architectural proportions. This system was adorned with figures only by Maderno. Finally, Fontana, who constituted a dangerous opponent to the sensitive Giacomo della Porta, was not able to design a cartouche or [195] *mascarone*. With [Fontana], creative faculties descended to an absolute zero, and it seems that precisely for this reason he gained the patronage of the Peretti pope. In order to do him justice, it is necessary to approach his art from another perspective.

<sup>8</sup> It can be deduced to what extent Vignola sometimes approached Raphael's style from the vestibule of the Santa Maria in Domnica, which until very recently was taken for a work by Raphael, and as such received unlimited admiration by formalist [art historians of the] Renaissance. When Vignola became papal architect in 1550, the debate about Michelangelo's Baroque had just been started. He [Vignola] never wholeheartedly decided in favour of or against Michelangelo.

Michelangelo had been ousted from building the Nicchione of the Belvedere by Girolamo da Carpi.<sup>9</sup> Julius III's excuse that he wanted to preserve the old man's powers is not at all convincing. It was a moment of crisis for Baroque artistic creation in general. The moving force at this point seems to have been Pirro Ligorio, who openly opposed Michelangelo's late style, and who, until 1568, held a position of official power that could hardly be broken, notwithstanding his limited talent. The mark of his style is a dry clarity and a delicateness of line, a taste he obviously [196] inherited from his Neapolitan background, and one that is close to that of the academician Vignola. After Carpi's retirement, Ligorio took over the building of the Nicchione, and with his linear art created such a convincing result recuperating Bramante's style that until recently the Nicchione was considered to be masterpiece by Bramante. It was not so much on stylistic grounds, but rather on the basis of archival and static arguments, that the attribution to Ligorio became convincing. Ligorio was not one of the many artists who were reprimanded by the Carafa pope; he remained in his position as building master of the Vatican palace. He was spared not on artistic grounds but by pathetic considerations of Neapolitan citizenship, and solidarity between nobles. Under Pius IV, a glorious time began for Ligorio. In a short span of time he built the Villa Pia, and the west wing of the Cortile del Belvedere up to the third storey (see the inscription above the arcade in the courtyard). The Nicchione was completed, and the palace of Pius IV on the Via Flaminia constructed. He also used Michelangelo's death to obtain, through the favours of the Medici pope, the position of supervising architect of St Peter's. He was however prevented from this intention, and was expelled from Rome by Michelangelo's friends.<sup>10</sup> [197] This permitted the rise of the Roman school, and Giacomo della Porta in particular. But in the same years that Ligorio left Rome, another artist from Como, Domenico Fontana, settled there, and he began exactly at the point where Ligorio had stopped. He [Fontana] surpassed his predecessor as much in violence as he was inferior to him in education. Already from the days of Pius IV, issues of city regulations and urban planning had emerged as typical characteristics of a supra-individual spirit; apart from Michelangelo's Baroque, this represented the newest and most unheard-of that could be expected in [the field of] unified concepts. It was Domenico Fontana's questionable merit that he applied Ligorio's hard linear style to the urban structure as a whole, and to bestow it here and there with the impression of a French regulated settlement. [198] It is possible that [Fontana] took up Pirro Ligorio's idea of a nave for St Peter's in his own project.<sup>11</sup> Fontana, the artisan, was the only architect of the early Baroque who dared

<sup>9</sup> Dagobert Frey, *Michelangelo-Studien*, Vienna: [Schroll] 1920, chapter 2.

<sup>10</sup> Christian Huelsen, 'Der Cantharus von Alt-St.-Peter un die antiken Pignes-Brunnen', *Mitteilungen des deutschen archäologischen Instituts. Römische Abteilung* vol. 19, 1904], 145 [here Rose referred to Huelsen in *Römische Mitteilungen*, vol.XVI, 1901 p. 145, which does not correspond to any publication by Huelsen]. On 10 July 1568, Ligorio obtained permission to export antique statues [from Rome]. Obviously, he had moved to Ferrara by then. According to D. Frey, he had already been discharged from his position as official [papal] architect on 31 October 1565 (*Michelangelo-Studien*, [Vienna: Schroll, 1920] chapter V, 111).

<sup>11</sup> [Filippo] Bonanni, *Historia Templi Vaticani [Numismata summorum Pontificum templi Vaticani fabricam indicantia, chronologica ejusdem fabricae narratione*, Rome: Felicis Caesaretti, & Paribeni, 1696], tab. 20. See also below, article 4.

to completely ignore Michelangelo's motif of struggle, not even referring to it in decoration (Scala Santa, fig. 122). Nothing betrays the inner discord of the age more clearly than the fact that an artist like [Fontana] could be equal to Giacomo della Porta. Apart from that, Fontana devoted much attention towards technical issues so that, despite all the differences of artistic forms, one is reminded of the spiritual behaviour of a medieval building master. The erection of the obelisk of St Peter's and the completion of the cupola, the former being considered the most complicated, are monumental testimonies to his spirit. It is the element of energy that places itself as a respectable, but in the end un-artistic if not anti-artistic quality, before the necessity of form. During the period of spiritual relaxation discussed above, when Fontana had departed Rome and found work in Naples, Ligorio's native city, Maderno brought about the final turn towards the agreeable in Rome. On the one hand, this distanced itself from Michelangelo's spirit but on the other hand still operated with his forms, creating the basis on which Bernini founded his revival of Michelangelo's true architectural principles. Quite how the motif of struggle has been diminished in Bernini's buildings – analogous to his figures wrestling with matter – and has been replaced by more subtle movement does not belong to the present theme.

During this crisis, which without any doubt was hostile to images, nobody really considered eliminating images, or forcing buildings [to adopt] non-human shapes by means of utter contempt for the classical canon. Contrary to the theologians who based their program of reform on Medieval literature,<sup>12</sup> in artistic matters it was unthinkable to return to a time which for Italy epitomised barbarianism and chimera-like shapelessness. Architectural proportions remained human, even though from the point of view of the classical they were muddled, and classical forms of support remained in use. There is no other period like the second half of the sixteenth century during which so many books on the classical orders were written. Even the monumental building of St Peter's, which certainly does not lack Baroque rhythm, did not produce a shape that is unlike the human form. The design of doors and windows refrained from [199] extending towards the superhuman, as church architecture reminiscent of medieval examples sometimes does in northern Europe. It was only Borromini who dared to use respond-like supports instead of columns (San Carlo alle Quattro Fontane). In Rome he found no followers for this extravagance. Invading Palladianism found the classical forms of supports almost unchanged. So too the Counter Reformation had little intention to fight the visual arts in general. When the Carafa pope attempted to revive the art of Byzantine mosaic in order to convey a specifically religious mood, this remained an isolated episode.<sup>13</sup> Painting was too important in general as an expressive medium, and intrinsically it was too closely related to the Baroque, for it to be done without (see above, p. 85). This was partially because architectural energy was not sufficiently capable of containing all the ideals of the era, and therefore painting and sculpture, and decorative art in particular, had to assist. To a certain extent, painting shows its capacity of cooperating actively and through its own means in order to express the new ideas. Without any doubt, it has more abundant means than

<sup>12</sup> Gothein, *Ignatius von Loyola*, 47/48 and 130 ff.

<sup>13</sup> Gothein, *Ignatius von Loyola*, 88.

architecture for the depiction of human moods. The demands of Baroque religiosity depicting holy stories as palpable as possible pushed art along the path of realism, which continued to work just as unthinkingly with the old figurative apparatus as did architecture by retaining the classical orders.<sup>14</sup> Compared with classical art, there even seems to be an increase in natural truthfulness, which began with Barocci and found its epitome in Caravaggio. In vain the image-hostile Sixtus V resisted the expansion of painting. Being both sublime and obstinate, he applied all the resources of the papal coffers with remarkable exclusivity to building, turning Rome into a modern city and, by completing the cupola of St Peter's, he brought the largest undertaking of Baroque collectivism to a conclusion. Subsequent reaction favouring the image followed under Clement VIII and when, according to the immanent laws of balance that seem to govern interrelations between the arts, the trajectory of architectural energy declined rapidly, visual imagery regained its old freedom. This notwithstanding, around 1590 the visual arts in Rome were so much in decay that northern [200] Italian workers had to be brought in and carefully be taught the techniques of a new art of expression. No generation of artists had died off during the crisis, and there had been no decline in craftsmanship. Within a short span of time, painting and sculpture would regain all their capacities. A balance similar to the classical was restored between the tectonic and the visual arts, and this remained valid until the 1660s. However, it differed from the true classic in two essential characteristics: firstly, the concatenation between the arts was closer than it had been previously, inclining towards a synthesis that towards the end of the seventeenth century resulted in a decorative form. And that which remained from the periods of instability was an enormous range of feeling that still contained contradictions within itself: namely idealistic and naturalistic directions in art, the conflict between which can never be reconciled, but which was extinguished in the late Baroque by a new upsurge of decorative forces.

[201] **Article II: Material and colour.**

The following consideration of materials is not prompted by a return to materialism since the first appearance of this book, but rather the contrary. Today we are less inclined to credit materials with the power of creating a style, even though we must admit that technique and factual choices regarding materials do influence artistic creation. A historical view of the Baroque does not call into question this perspective, but perhaps the more muddled our delicate sense of form, line and proportions has become, the more we credit material and colour with corresponding artistic importance. And perhaps the increased distance from the monuments required by intellectual, historical study has prompted our reaction to come up close to the monuments and scrutinise their material restrictions.

The overall architectural impression of Rome is distinguished from that of other Italian cities by the predominance of brick, which because of its material conditions contains in itself the potential for grace as well as a serious effect of mass.

<sup>14</sup> The demands of sensual perception of religious events [is] in the *Spiritual Exercises* of Ignatius of Loyola. Furthermore [it can be found in] the *Dialogues* by Giovanni Andrea Gilio, in Borghini's *Riposo*, etcetera; see Weisbach, *Der Barock als Kunst der Gegenreformation*, 12-15.

Thus its artistic treatment in the Renaissance expressed the individual units of a brick wall while the Baroque [stressed] the tenacious unity of its earthly substance. The marble cities of Venice and Genova, where ashlar blocks of pure consistency and with a great capability for bearing imagery, met the requirement for decoration and constituted the opposite [to Rome]. Florence, which lies on a bed of sandstone, was building along deviant lines, following the principle of incrustation for the creation of Renaissance forms, that was difficult to apply to [buildings of] monumental proportions. Rome, on the other hand, was occasionally similar to the brick cities of Lombardy, such as Bologna and Milan, in its conception of materials. Bramante in Rome can be explained not least of all by his northern Italian education and his rejection of the predominant Florentine tradition. The material of brick certainly functioned under special conditions in Rome: it had to deal with Florentine architectural types that had been transplanted to Rome from 1450 onwards without ever taking root there. It had to come to terms with the gargantuan dimensions of the town that date back to antiquity. And because the greatest foible of brick construction was that it could not endlessly expand its mouldings, its architectural prospects would indeed not have been very positive had natural stone [202] not provided assistance. Especially travertine, harbouring completely different material possibilities, has been willingly combined with brick notwithstanding its noble character. In Rome, travertine was the second basic construction material owing to which fact this artistic capital has remained unaffected by the hegemony [elsewhere] of chalky marble. One wonders if travertine alone could have satisfied the versatile building needs of this metropolis. In the duality of travertine and brick combined lies the singularity of Roman material conditions. Other cities with architectural genius, such as Florence and Bologna, Turin or Paris, have experienced how Rome, thanks to its richness of building resources, remained unsurpassed. The question remains, however, why this specific quality could only be developed during the Baroque period, and this can only be answered by the entire Baroque will to style.

Roman brick, which is preferably produced in the Valle dell'Inferno behind the Vatican Hill, shares with other Italian brick its fine-grained quality, making possible smooth bricks that can be piled up in thin layers to [create] buildings of extraordinary durability. Its colour is unusual as it is not the bright and informal red hovering over Bologna, which often gives the Northern [Italian] brick cities their threatening appearance. Colouristic variety is ensured by the fact that bricks in two colours are used: first, unfired bricks that have been dried in the open air and thus preserve the dull, dust-grey or silvery colour of the earth from which they have been produced. An example of this can be seen in the Cortile del Belvedere, a pale building that has been made purely of brick, contrary to Bramante's plans, and the brightness – and at the same time lightness – of which finds an echo in the white tinsplate of the neighbouring dome of St Peter's. Secondly, the same clay is used to make fired brick, which in its material fineness and force of colour stands only slightly behind terracotta. These possess the potential to take on either orange-yellow or russet shades during firing, and the colouristic appearance of the city owes its sonorous base tone to them; this golden glimmer is very delicate in its contrast with the white marble and the poisonous green of the oxidised copper roofs. These colours of dust and rust constitute the duality that comes together in the streets of Rome, and one can sense this peculiarity even more clearly as both

types of brick, the grey and the brown, [203] were imitated in stucco-work in the first decades of the Baroque. This was used partially as a surrogate when the colour and quality of the bricks used were not uniform. Apart from that, large dimensions have a hostile effect on the material. In part the new style required the detailed texture of bare brick buildings to be painted over to become uniform monolithic masses. One of the earliest examples of this is the Palazzo Pandolfini in Florence where rendering might have been chosen because of the lesene [pilaster strip]. At Palazzo Farnese, the ground floor has been covered with grey plaster, while in the upper storeys the distant view is such that the texture of small bricks vanishes anyway. As a brick-work building, Sangallo's own residence is late but one could imagine it covered with plaster. A number of relieving arches on the ground floor do suggest that at least here render had been planned. [It is] possible that plastic gravity would have turned into cumbersomeness. The city facade of the Villa Medici, which repeats the same wall structure in muddled proportions, has been completely covered with render and provides us with an idea of the [difference]. The reconciliation of the [overall] impression lies in the smoothing of the edges, by way of which Palladio also produced the boldness of his blocklike designs. Besides, by the 1550s reddish-brown roughcast had come into use, but never without the enlivening element of travertine (Palazzo Ruspoli, Sapienza). This characteristically Baroque choice of materials, that boasted Michelangelo's recommendation, did not go unchallenged by adversaries. In this context it cannot be coincidental that the two large buildings by Pirro Ligorio, the Villa d'Este at Tivoli and Palazzo Pio IV, were left without plaster because Ligorio wanted to display the joints. It was under this same building master that bare brick got the upper hand in the Cortile del Belvedere, and even Ammannati, from whom this would not be expected, complied with the taste for brickwork at the Collegio Romano. Although Giacomo della Porta advocated russet plasterwork, the exposed brick wall reached the epitome of its technical perfection during the papacy of Sixtus V in the Palazzo della Prefettura by Domenico Paganelli (fig. 123). This building, commissioned by cardinal Alessandrino, a nephew of pope Pius V, was begun in 1585. (Its execution was by Domenico Fontana because Paganelli returned to his native Faenza shortly after construction started). All these unplastered edifices are built with dust-grey bricks that have been laid out with a clear delight in joints and pilaster strips. It was only Bernini, in the Palazzo della Propaganda [Fide], who provided the model for the colour-hungry seventeenth century, [demonstrating] how [204] effectively a building could be formed from reddish-brown bricks with a restrained application of travertine (ill. 127). This building found no following.

Light lemon-yellow was the third colour that was adopted for plaster in the course of the sixteenth century, but this did not imitate the colour of any type of stone and for this reason revealed itself to be an ideal coating. This yellow is predominantly used for villas: very early on at the Belvedere of Innocent VIII, where the yellow coating encroached onto the Nicchione. Vignola – perhaps under the influence of Ligorio – seems to have provided the example for the Baroque at the Villa di Papa Giulio. This was imitated widely: Villa Pia, Villa Medici, Villa Borghese, where the yellow becomes even paler, in order to generate a mild, and exceedingly noble harmony of colours, taken together with the cypresses of Baroque gardens. Among city palaces, only that of the Barberini, in accordance with its

suburban position, adopted the yellow villa-coating, that does not go together very well with the more serious travertine parts however. This vogue did not become a general phenomenon. Bernini gave the Palazzo Odeschalchi a wonderfully warm shade of orange that made one balustrade of red terracotta stand out, but alas a modern layer of paint has impeded this emotive colouristic effect. With Borromini, late Baroque taste arrives to soften the material of stone by way of stucco. The interior decoration encroaches onto the exterior, and plaster colours become even lighter: the traditional reddish brown becomes pink, the colour of travertine turns into ochre yellow, the former silver grey becomes a light green which appears in Rome at the Palazzo del Grillo, for example, and which, with its imitation of a certain fashionable French sandstone colour, carries the obligation of a slate roof.

During the fifteenth century, Rome did not limit its choice of natural stone to that which was available, but kept to what the Florentines dictated. Except that material conditions were completely different in Florence; there in the first place they built with *pietra serena*, a fine-grained greenish sandstone, which in its best variety can have a greenish-black effect. Strangely enough, Vasari calls this colour 'azzurro' (vol.1, Introduction p. 125). Florentine interiors owe to this stone their clear and still subdued effect of black and white (sacristy of San Lorenzo etcetera). This stone could not be readily applied to exterior use, as it has a tendency to weather and flake off. Therefore, this sandstone is only used for rustication, as it is easily chiselled and less effected by weathering. Alternately, one could opt for marble incrustation, the minute detail of which sometimes lends these buildings the impression of cabinet-making. Indeed, the Sangallo had been makers of wood-intarsia. However the highest quality of [205] *pietra serena*, the so-called *fossato*, was weatherproof, but its use was restricted to rulers and to public buildings. The issue of material must have played a role in the project for the facade of San Lorenzo. It was undoubtedly planned as a two-colour design. It was only in Rome, and even there only gradually, that the principle of polychromy was abandoned, and classical monochrome was executed in travertine, if not in marble. *Fossato* is not compatible with Baroque stylization; because of its fine-grained quality it produces more the effect of having been cut than shaped. Vasari's Uffizi was built in this stone, but although it was the most important building erected during the early Baroque, it does not have a Baroque effect from the perspective of the materials applied. So, while Florence was distanced from the Baroque by [the use of] *pietra serena*, Rome found its true Baroque language in the application of travertine. The use of travertine was never [206] given up entirely, but it was processed in a way that contradicted its nature, namely as if it were sandstone; *peperigno* [sic] was given precedence as it was hoped to wrest from it the traits of *pietra serena*. Travertine is a chalk sediment that only forms where outlets of limestone mountains are dammed and deposit their alluvial materials in these lakes. For this reason it is not only a young stone, but also one that is continually renewing itself. It is mined in its soft condition and then in the open air hardens to such an extent that it is almost as strong as granite. This hardening process – which resembles the flow of life – is analogous to that of shells; this was a favourite shape of the Baroque that was preferably cut out of travertine, thus representing a fusion of organic life with

inorganic matter.<sup>15</sup> Vasari calls travertine a 'congelazione di terra e d'acqua', a mixture of two elements that fulfilled the synthetic urge of the Baroque like no other. Moreover, the porosity of the stone seems to be immediately willing to take on the liquid element again. No wonder that the early Renaissance in Rome did not understand this characteristic of travertine. It was treated dryly in a Florentine way and therefore adhered more to the brittleness of dried [matter] than to the dampness of fresh travertine. It was an especially painful experience for the Romans that it was impossible to produce rustication and fluting in travertine, as it is not chiselled but cut, mostly in water mills. It is a curious idea that Rome's abundant water was procured to do compulsory labour for its architecture. It is for this reason that Roman architectural exteriors almost exclusively have smooth, unfluted columns and pilasters, notwithstanding the preference for the Corinthian order. Only in exceptional cases where marble was used on exteriors was the attraction of fluting not renounced (the portal of Santa Maria dell'Anima, which was allegedly only added under Julius III; the same goes for the portal of Santa Caterina de'Funari. Also the columns of the main portal of St Peter's are fluted). Neither can rustication be produced by means of cutting. Therefore, they had to make do with brick facades (Palazzo di Venezia) or cut the square stones in such a way that the joints functioned as recessions. The ashlar facade of the Cancelleria, for example, is eminently different from the soft pillows of Florentine rustication. This notwithstanding, both here and there it is the same architectural concept that alters its meaning in the [207] Roman material. They did strive for cut rustication, so when Palazzo Giraud and a great number of other private buildings in Rome adopted this scheme, rustication became established in Rome. This however did not happen, as a thorough re-examination of material conditions was undertaken in 1499, contemporary with Bramante's arrival.

First, *peperino* had to step in as a replacement for Tuscan limestone. It is a dark green lava that is often intermingled with stone formations and it crops up in many places in the campagna, and also on the Capitoline Hill. It is an ignoble and cheap material; it was possible to produce rustication with *peperino*, but it only had an artistic effect when it was piled up in cyclopean blocks as in aqueducts or in the lower storeys of the Tabularium. For Renaissance buildings, with their more delicate skins, *peperino* was not very suitable. As soon as the stone is polished, the impurities become disturbingly clear. And moreover, *peperino* is not a durable material as it cracks and breaks easily and its colour does not combine very well with Roman brick walls. Its dull green does not accord with grey, nor with brown bricks (Palazzetto Spada, Palazzo Costa). When Ligorio applied *peperino* to the Palazzo di Pio IV he did not do so voluntarily, but only to conform with the fountain begun by Sansovino; this represented the last known example of its monumental application.

As a result of his broad education, Bramante was familiar with all kinds of material, except for the Roman. He deployed a veritable sample book of stone at the Tempietto (which Vasari erroneously described as exclusively built with travertine): marble, travertine, *peperino* and a construction of rubble work hard as steel, the substance of which has not been studied. In general, Bramante spent much time dealing with the problem of surrogates; Vasari notes that presumably he was the

<sup>15</sup> Alois Riegl, [Die] Entstehung der Barockkunst in Rom, Vienna: Schroll, 1908, 77.

inventor of a new technique of casting. At his own house he tried to combine brick construction and cast walls in larger dimensions. Perhaps this material artificiality is one of the reasons why this beautiful building has not survived. He sculpted the beautiful coffered triumphal arch of St Peter's (see below, article 4) in the same technique. The handling of the plastic clay of Lombardy, in combination with the study of antique cast vaults, obviously suggested these experiments to him. From this moment onwards, rustication also was often done through imitation materials, either by underpinning the blocks with bricks and covering these with a plaster coating in rusticated form in which sometimes [208] even the imprint of the chisel was artificially suggested; or by the negative procedure, of deepening the joints in the rendering, and giving the whole the appearance of limestone by spraying sand onto it. Often rustication is only executed in real stone up to the head height of passers-by, and above that it is fake. A very plastic and convincing imitation rustication can be found at Palazzo Maccarani.<sup>16</sup> All these methods, that originate in the imitation of Florentine models, and that found the widest application in Vicenza and Verona, harbour a seduction through details that Rome did not wish to succumb to. For this reason it was a decisive moment for architecture in Rome when Bramante and his pupils, with their fine sense of native necessity, turned away from rustication. They brought back into fashion pure brick construction for the general architectural needs of the city, [209] and at the same time they thus [revived] lesene [pilaster strips], the dividing element of the wall, that is as typical of brick construction as rustication is characteristic of limestone buildings, and which could hardly have been created in Florence. Palazzo Cicciaporci-Segni, formerly Palazzo Alberini (ill. 125), is a prime example. Vasari notes that it was built by Giulio Romano after a design by Raphael, but Vasari was generous with this kind of attribution. It does seem to be correct that the building was constructed after 1516 following earlier plans. The vicissitudes of the Alberini family makes it plausible to assume that the execution of these grand plans was interrupted for several years, and more than once. Indeed, I would like to explain a certain number of inconsistencies in this building, that have been attributed to Giulio Romano's hand (see above, p. 133), through early Lombard influences that Bramante introduced to Rome. The heavy proportions of the upper storeys [210], the weak profiles, the rather monotonous prolongation of the mouldings and the treatment of the materials with which we are occupied here first and foremost are Lombard. For example, the use of shaped bricks made from clay or terracotta in profiled mouldings that frame the wall panels at Palazzo Cicciaporci is Lombard; in Milan this kind of panelling can often be found (Santa Maria delle Grazie). In Rome, on the other hand, these are odd, unique elements. The Roman High Renaissance abolished this kind of graceful detail and was content with wall pilasters without profiles that likewise became fashionable after Bramante arrived there. A kind of flattening out,

<sup>16</sup> [This is] the former Palazzo Paolo Stazio (ill. 124). According to the reliable caption on the Lafrery print of 1549, it was built anew according to an older design. 'Ad veterum normam ac formam recens exstructum'; see also [Christian] Huelsen, ['Das] Speculum [Romanae Magnificentiae des Antonio Lafreri', *Collectanea variae doctrinae Leoni S. Olschki*, Ludwig Bertalot and Giulio Bertoni, eds, Munich: Rosenthal, 1921,] 163, nr. 105. The rustication is in the style of Giulio Romano.

or in, is done most delicately and in accordance with the material, making the building appear thin-walled and therefore un-Roman. A kind of elegance results especially when subsequent layers of plaster or modern paint have flattened the relief of the walls even further - this only became a general style in the French late Baroque, the period of the *panneaux*. This kind of pilaster strip can be found at Palazzo Maccarani, where the arches above the windows also suggest a comparison with France. With Raphael (whose fine sense of linearity favoured lesene), pilaster strips make the orders wholly superfluous, at Palazzo Pandolfini for example.<sup>17</sup> Later on, this motif is sacrificed to the Baroque urge for unification, and its role would have been entirely discarded had Michelangelo not seized lesene and magnified them to gigantic proportions in his travertine architecture, not as a linear framing motif, but rather as an aid to rhythmic duplication. The prelude to this is in the Biblioteca Laurenziana where the strange recessions on the facade are not linear but conceived with mass and therefore rhythm (fig.69). In the Capitoline palaces, the lesene are made of travertine and have the double aim of functioning as a framing device in the upper storey and as the sides of the pillars at ground level. Because their walls are made of brick, the lesene loosen themselves from the wall and are taken up in the supporting structure because of their material and colour. At St Peter's, where this motif is presented in colossal proportions and becomes indispensable as the bearer of rhythmic animation, the lesene has completely lost its character as a frame (fig. 126). [211] The stretched proportions in height do not permit the development of a division into planes in the strict sense; therefore, the lesene constitute a substrata for the pilaster grid and the impression of window recesses only appears (in the upper storey) through the painterly effect of the wall having been hollowed out, that is to say it has been pushed back behind the supporting framework. From this position it was only a small step to turn the lesene into a half pilaster and, in the context of secular architecture, Michelangelo himself drew that conclusion in the upper storey of the Palazzo Farnese courtyard. This was followed in ecclesiastical architecture, where the motif became one of the most general forms of expression during a time when secular architecture had become estranged from the orders (the facade of the Gesù). Thereafter, there was no place for lesene on the Baroque church facade; they only took the form of rectangular fields that could be decorated like windows according to rhythmic requirements; so they were treated not as frames, but as decorative filling [212]. In contrast to this, brick buildings maintained lesenes as their proper form of ornament. The Collegio Romano, the extension of the Cortile del Belvedere and the High Baroque Collegio del Propaganda Fide are the most monumental examples of this (ill. 127). In the latter case, the frames prop themselves up as abutments against the wall, while the recessed panels maintain the perpendicular. By way of this very simple means, the

<sup>17</sup> It is not unique that late Baroque concepts are prepared during the High Renaissance, but they have a different meaning there. Compare, for example, the wall design of the great hall of Palazzo Massimi with the *panneau* structure of the later period ([see Hans] Rose, *Spätbarock. [Studien zur Geschichte des Profanbaues in den Jahren 1660 – 1760*, Munich: Bruckmann, 1922], 234). Also the lesene of Palazzo Pandolfini found imitators in the 18th century because of their elegance, for example in the garden pavillion at Döbling (idem, p. 158).

facade was brought towards plastic relief. This was lacking on the Collegio Romano which gives an impression of being crushed in its lower sections, and notwithstanding its massive proportions does not convey the impression of mass (ill. 8). One could believe that the Jesuits preferred brick-work construction.

With respect to the mixed techniques of brickwork and ashlar, Bramante led the way with his project for the Belvedere courtyard. He never conceived this enormous construction in natural stone; the wall surfaces were to be made of brick and the orders and other ornaments were to be made of stone: the two lower storeys in travertine and the upper storey (which Sangallo maintained in his extension) in *peperino*. This is a remnant of the Florentine two-colour scheme and we can assume that Bramante's St Peter's could not have been executed entirely without *peperino*. Sangallo's design relied on the duality of golden brown travertine and whitewash. It was only Michelangelo who built pure travertine architecture; and it was the first monumental building since the Colosseum in Rome to be covered entirely with travertine.

At the Cortile del Belvedere, great pains were taken to keep the stone profiles within the surface plane in order to harmonise with the brick walls – a pure Renaissance conception, and one realises that travertine could not manifest its unique characteristics in this context. But under Sangallo's direction, the stone elements start to swell up. The most decisive step was taken by Michelangelo who established a contrast between travertine and brick, and thus a Baroque motif of struggle. Brick has the capability of constituting small, flat and dry profiles, and in true brick cities such as Bologna (where it had to be combined with an equally brittle stone: the bacon- and porcelain-like *pietra dura*) the impression of sobriety cannot be avoided, and the Baroque style is not achieved. Rome was in a better position because of its travertine. As soon as it became possible to maintain the liquid quality of its geological origins, the travertine profiles swelled, and because the handling of the porous material excluded all detailing, [213] travertine buildings often have more relief than necessary. Because brickwork had a mitigating effect and the formal contrast was accompanied by colouristic differences, an artistic advantage was obtained. Michelangelo used pale red brick in combination with travertine at the Capitoline palaces, and silver-grey brick on the upper storey of the Farnese courtyard. Presumably the palace that Michelangelo was planning for Julius III would have expressed a powerful and colouristically delicate type of Baroque mixed technique, combining reddish-brown plaster surfaces with travertine.<sup>18</sup> It is only natural that the church facade did not participate in this achievement; it cultivated the contrast of the solid travertine facade with the rear parts built in brick; and it remained in all respects monochrome. Only Maderno began to conceive architectural forms in explicitly colouristic terms, therefore seizing this opportunity to let a glimmer of colourfulness invade the grey travertine facade of St Peter's by means of the green columns in its vestibule. This is also an example of his architectural complaisance. One last form of mixed technique must be mentioned as it is not unimportant for the understanding of the Roman [214] Baroque, namely the combination of travertine with travertine; the stone is indeed found in two varieties,

<sup>18</sup> There is a weak imitation of the Capitoline lesene in the courtyard of the Palazzo di Firenze (ill.6).

less porous in warm, yellow shades, and a very porous ash-grey sort that takes on a pale, whitish patina with weathering and which is occasionally interlaced with deep black, oxidised stains caused by trickling [water]. The typical appeal of travertine architecture consists in combining the two varieties in one building; the yellow sort below, the silvery one above. The latter variety is considered second rate and is normally only used in places where distant vision is intended. Michelangelo recognised a peculiar Baroque attraction in the porous and stained effects of this second-rate material, and without prejudice preferred this rough stone to the finer varieties. Vasari meant exactly this when he wrote that Michelangelo ennobled travertine in the courtyard of Palazzo Farnese (see above, p. 45). His remark can only refer to the upper storey, as the two lower storeys are indeed made of travertine, but of course the more refined quality, and it was Sangallo who had chosen this material. The porous travertine was applied only in the famous (upper) storey with windows and, as Vasari mentions, it was worked with the same dedication as marble.<sup>19</sup> However, the detail of the sculpted forms is not yet completely balanced with the character of the porous material. Later on Michelangelo himself moulds larger forms from softer material. After 1550 there is no building made of travertine that does not construct the upper part from porous stone because, apart from the beauty and cheapness of the material, it also had a colouristic attraction as a building would lighten up at the upper edge, and contrast in dazzling brightness with the sky. One can enjoy this effect on the grandest scale and unhampered by shadow-throwing cornices in the attic of St Peter's, which is made in porous stone. Considering the [latter] for this reason as less original than the lower storey would be a mistake; this attic was started by Giudetto Guidetti during Michelangelo's lifetime, and the rear parts were finished during the 1560s. The shift in colour and the heavier sculpting were certainly in accordance with Michelangelo's intentions. Since that time, church facades in two stories often had the upper storey made of porous stone; and the change in material was not an expression of a newer style (Santa Caterina de'Funari, see above p.12). In the course of the seventeenth century, ashlar blocks became larger, [215] and the techniques of cutting them became more refined. They learned how to shape woodlike grains and curving surfaces from travertine (Sant' Andrea della Valle and Santa Maria della Pace). Porous stone was still preferred because of its soft appearance. Even where the formal contrasting motifs of the early Baroque were sacrificed to the abundance of decorative frills, the mixture of the two travertine varieties was retained (Santa Maria in Campitelli). The custom of imitating wooden and stucco shapes in stone leads, however, to the complete loss of pleasure in travertine. Borromini is the first to counter travertine by using plastic brickwork and stucco on exteriors. Indeed, this transgressed fundamental boundaries that until then had been respected in silent agreement about the selection of materials. Borromini challenged not only the Roman art world, but the entire continent and opinion over centuries: the issue of materials became a problem of style that has encountered contradictory standpoints up until today.

<sup>19</sup> Vasari, *Vite*, vol. I, introduction, p. 123. See also ill.31.

[216] Article 3: **Urban planning**

Rome is one of the cities whose location is not determined by the position of bridges because the main thoroughfare that runs from Etruria to Campania crosses the Tiber a few kilometres from Rome at the Ponte Molle [sic], a location where the fate of the city was decided several times during fierce battles. Its founding was prompted by a fortified hill or, to be more precise, a range of fortified hills that were eroded out of the soft volcanic soil by currents of water. It is because of this context of hills that the scenic nature of the place could not be effaced completely by the two metropolia that sprawled over this site. From the point of view of the particular beauty of the cityscape, this is an advantage. The disadvantage, however, is that already in antiquity the streets of Rome lacked the purposefulness that naturally occurs in cities on a plain or through practical plotting of bridges. The hills obstructed the construction of roads, and all the preconditions for a civilian and commercial crystallisation of the city were absent. The layout of the streets is more idealised, or to be more precise, triumphal; this impression must have been even stronger in antiquity than it is now, as a result of the large number of public buildings. There were two principal triumphal roads, the Via Lata and the Via Appia, which constitute the only north-south roads bisecting the city that are not blocked by hills. Towards the end of the Middle Ages, not much remained of these ancient ideals: the city covered less than ten percent of the surface area of the ancient city, and these settlements had even withdrawn from the main thoroughfares. Private houses crowded first like a frightened flock to the area of the Tiber Island and the castle of the Savelli, and later on to the north-western part of the city on the spit of land that is shaped by the curve of the Tiber. This western position was not chosen because of healthier air, as would later be the case, rather the inhabitants tolerated fevers and flooding in order to enjoy the security of this natural ditch and its visible proximity to Castel Sant'Angelo (ill. 128). There, in the Rione di Ponte, a Renaissance town would have developed if Rome had been so disposed. Indeed, the Banchi quarter is the heart of this part of town, where the branches of foreign banks encircle the landing of the Ponte Sant'Angelo. With the new expansion of the city, this area had become precariously cramped, and the houses jostled together, for which reason [217] the Rione di Ponte still makes a medieval impression today. The allotments were divided up again and again, [so] almost unconquerable practical obstacles stood in the way of an architectural urge towards the massive. From the high number of registered house numbers that even palaces of humble size had, one can deduce how difficult the smoothing out of building plots must have been. Almost every second bay of windows has its own number, so that any large project had to be undertaken by way of forced expropriation, and the creation of offices with special powers of expropriation was indispensable (see below, p. 241ff). In order to mitigate these hardships a regulation was enacted whereby mortgages on expropriated plots could be conceded to the new holding, but this caused a complicated entanglement in the Roman system of encumbrance. I will return to this below [to show] how the Roman palace facade was affected by these conditions.

In the Banchi a network of bridges had been created that was typical for commercial towns. Here these were not typical roads that attracted commercial traffic, but the entrance to the papal area of town that had been affiliated to the ancient city as a creation of the early Christian period. Later, under Sixtus V, this area was added as the fourteenth precinct [218] to the old system of administrative districts. In itself, during this period of decline the city had no need to cross the river in the western direction, and maybe this never would have

happened had not the grave of the Apostle at the foot of the Vatican Hill lured traffic and buildings to the other side. When Leo IV had this new part of town fortified it came to be called the Città Leonina or, commonly, the Borgo. This area was not attractive as living quarters, as only a small corridor remained between the two parallel walls, on the right of which were the malarial plains and on the left the slope of the Gianicolo. On the western side St Peter's and the Vatican were sealed off by their own fortifications, which played a decisive role in the building history of St Peter's basilica (see article 4). As soon as Florentine architectural concepts wandered down to Rome the question was raised as to whether the Borgo or the Rione di Ponte should be newly settled, what should be done in the present situation, and whether new parts of town should be developed or could be recovered.

In general the Renaissance showed a remarkable clumsiness in urbanistic matters; of course, the monumental spirit of the age required a suitable context for its buildings here and there. Crooked medieval angles were abolished, at least in theory, but mostly the regulations that were devised remained ideals. Moreover, it was mostly public building that aspired to such architectural concepts. What is so entirely different from the principles of the Baroque is that these regulations apply to the individual architectural object, and cling to it. Only when the creation of a building leaves any energy, are the circles drawn wider. The sense of the whole and the artistic qualities of a regulated cityscape are completely absent; obviously this sense of the whole (which is highly characteristic for the Baroque) was dependent on a subjective worldview. Only when a certain distance from the object was established and more attention was beginning to be paid to the subject as beholder, was the whole prioritised before the detail. If one assumes that the sharpening of formal consciousness we observe in the Renaissance would necessarily spread beyond single buildings to their surroundings, the wrong conclusion is drawn. The conditions are different: the Renaissance achieves the highest perfection of the individual work of architecture exactly because it concentrates on the object and is not distracted by the whole. For the Baroque, the opposite is true: as soon as the sense for the whole has awoken, individual form suffers, which is to say: the coarse or refined individual building becomes absorbed into the cityscape. To this extent, [219] regularized urban planning belongs, as far as it concerns practicalities, to the true and crucial issues of the Baroque. This main question has been posed only very recently; in the original edition of this book it was hardly dealt with. On the other hand, A.E. Brinckmann's *Platz und Monument* can be considered the most decisive step of Baroque studies into the issue of urbanism.<sup>20</sup>

## THE BORGO

I consider it a symptom of architectural bad taste when, in the Renaissance, it was deemed possible to turn the unfortunate structure of the Borgo into an ideal city, let alone an earthly paradise. A comparison with the pagan paradise that Emperor Hadrian had built in the hills of Tivoli offers a standard for the decreasing sense of scenic beauty throughout the Christian centuries. The Renaissance ideal city clings to the holy tomb and the protection of defence walls. During the time of Eugenius IV, the Borgo was still an area for pilgrim's hostels, taverns and sutlers that usually settle into pilgrimige sites. This pope also intended to induce the middle classes to move to the Borgo.<sup>21</sup> It was only his successor, Nicolas V, who

<sup>20</sup> A[ilbert] E. Brinckmann, *Platz und Monument*. Berlin[: Wasmuth,] 1912

<sup>21</sup> [Ludwig] von Pastor, *[Die Stadt] Rom zu Ende der Renaissance*, Freiburg i.B.[: Herder], 1916, 57. There were tax exemptions to the height of ten *lustra* for the building of houses and palaces. [See Ferdinand

according to the extensive description in Vasari's *vita* of Bernardo Rossellino toyed with the idea of the ideal cities derived from L[eone] B[attista] Alberti's theory and who pursued this with the kind of uninhibitedness that incidentally also led to the prefiguration of Baroque motifs in the visual arts.<sup>22</sup> The Vatican Palace constituted the starting point; it would be aggrandised to such an extent that it combined in a single place residence, administration, courts, collections and cardinal's apartments. How this could be achieved architecturally is not mentioned by Vasari, but we can assume it was not to have been an extension towards the Belvedere, as done later on by Bramante, but an enclosure of St Peter's Square with the facade of a multi-storey loggia-courtyard. This would have conformed to the taste of the Renaissance that was so highly focused on the object, so that the public square was not seen as an open space, but as a courtyard of larger dimensions. Indeed, in my opinion a part of this project [220] was executed: Paul II's three storey benediction loggia leaning against the old ring of Vatican walls was sacrificed in 1606 for St Peter's facade by Maderno; this was nothing other than a fragment of the said loggia-square (ill.129). If this hypothesis is correct, we have a smaller copy of what was planned for Saint Peters' Square in the spacious courtyard of Palazzo Venezia, which, as is well known, was built by Cardinal Barbo (later Pope Paul II) during the pontificate of Nicolas V (ill. 88).<sup>23</sup>

Nicolas V conceived a very strange plan for populating the Borgo: palaces would be constructed there by civil servants, nobility, artists etcetera, and the trades would be located adjacent, divided up and each type in its own street or square. In Baroque cities [221] such neighbourliness was not possible. But back then, the chasm between civil servants and the working classes had not yet been split open, and papal regulation that palaces in the Borgo should be furnished with shops was voluntarily followed until the late sixteenth century. It is difficult to determine the extent to which a classification of residential housing into types had developed. It is possible that behind the decision to protect houses from the threat of malaria was a desire to standardize housing.

It was only in the last instance that the issue of street regulation was taken up in the Borgo, even though the provision of access was, in our view, the first and most urgent problem to be solved.<sup>24</sup> The neighbourhood was built over even before the alignment of houses had been planned, which necessitated many adjustments. Even the street-obsessed era of the Late Baroque was not able to regularize this situation; it merely offered a proposal to tear down the blocks of houses [from the Vatican] to Castel Sant' Angelo – an intervention that was impossible to realise. The oldest of the four streets that permit longitudinal access to

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de] Navenne, [*Rome et*] *le Palais Farnèse [pendant les trois derniers siècles*, Paris: Honoré Champion, 1923], 101.

<sup>22</sup> Vasari, *Vite*, vol.3, 100 ff.

<sup>23</sup> The project of the loggia-courtyard and the reconstruction of St Peter's square with a palace complex was taken up again by Alexander VII in the year 1656; by then, the idea of the palace became the starting point for the concept of the Colonnades by Bernini. From the designs for the arrangement of Saint Peters' square that were published by [Stanislao] Frascchetti, [*Il Bernini. La sua vita, la sua opera, il suo tempo; opera contenente 270 riproduzioni delle opere del maestro*, Milan: Hoepli, 1900], 309-311, the attribution of which seems doubtful to me, it becomes clear that a palace with two-storey loggias should encircle the oval square that had the form of antique arenas. Bernini idealised this obviously older project by abolishing the palace facade, doing away with the arches and turning the halls into single storey colonnades (see article 4).

<sup>24</sup> Vasari does report that Rossellino had made a design for the access roads, but he was uncertain whether the existing streets were the result of that ([See] Vasari, *Vite*, vol.3, 100).

the Borgo, the Borgo Vecchio, is not aligned with the main axis of St Peter's but with its southern wall. The Borgo Santo Spirito is oriented towards the slope of the Gianicolo. Sixtus IV reoriented this street with his new hospital building. From an urbanistic point of view [222] the construction of the hospital was an irreparable error, as this extensive building blocked the ideal perspectival axis that otherwise could have been realised from the Pons Neronianus towards St Peter's, and restricted the entrance to the strip of houses, which was narrow anyway. The Borgo Nuovo, the third and most beautiful street of all, was planned by Alexander VI, and is wider than the other two. The revision of the alignment of houses by Giuliano da Sangallo (1514-1515) perfected the layout of the street. This street is not aligned with the portal of St Peter's, but on the former gateway of the Vatican Palace that had been renewed by Innocent VIII.<sup>25</sup> Originally, this street was called Via Alessandrina, and only around 1570 was the street renamed Borgo Nuovo and another, newly laid out street, at Palazzo Ghislieri (near Trajan's Forum), was given this freed-up name. The fourth street of the Borgo, that runs directly along the defensive walls, and which is also called 'Borgo Nuovo' in the Lafrery map, had no function for the circulation of traffic; it was only meant for the maintenance of the walls; with this fourth street, the growth of this quarter [223] came to a provisional halt. Only under Pius IV was an extension towards the north realised; he had the Castel Sant'Angelo fortified (1560), renamed the old border road as 'Borgo Sant'Angelo', opened eight arches in the old defensive walls and constructed three new fortified quarters around the Citta Leonina: the Borgo Pio, the Borgo Vittorio and the Borgo Angelico, the walls of the last joining the Vatican Palace near the Belvedere.<sup>26</sup> The former entrance gateway of this quarter, the Porta Angelica, was sacrificed during the construction of a modern square (ill. 131).

#### THE RIONE DI PONTE

A development of the old city could best be planned on the other side of the Tiber because at this point, since antiquity, two grids of streets that extended a fine network across the Rione di Ponte, met. One grid is aligned with the Ponte Sant'Angelo and its main thoroughfare called Canale di Ponte - because of its frequent flooding - which led via numerous forks to the Campo dei Fiori and, with numerous turns, to Palazzo San Marco.<sup>27</sup> The second grid was aligned with the ancient ruin of the Ponte Neronianus and its main connecting street, the Via de'Coronari, which had been adjusted by Sixtus IV according to the ancient alignment of the houses. This served the important goal of connecting the old city centre with the completely different orientation of the grid of streets around the Piazza del Popolo. Via Giulia, formerly called Via Florida, belongs to this same system of the Pons Neronianus as a second branch, and was created by Julius II. As is well known, it was the pope's intention to restore the Pons Neronianus, even though the hospital in the Borgo built by his uncle stood in the way; the street would have led in a straight line from the bridgehead that was never built to the Ponte

<sup>25</sup> The oblique sides of Bernini's 'Piazza retta', the [part of the] square immediately before the facade of St Peter's, can also be explained from the axis of the Borgo Nuovo, namely by prolonging it. The approach of the portal to the Vatican should take its course along a unified axis; considerations of perspective only played a secondary role.

<sup>26</sup> Santa Bargellini, *Il Palazzo di Pio IV [sulla via Flaminia]*, Milan: Bestetti e Tumminelli, 1923], 23.

<sup>27</sup> Von Pastor, *Rom gegen Ende der Renaissance*, 29-31. The present name of the street, Via di Banco S. Spirito, dates from the time of Paul V.

Sisto, also a work of Sixtus IV.<sup>28</sup> Therefore, this street opened up the Rione della Regola, and was given a fountain by Paul V at its southern end as a termination and backdrop.<sup>29</sup> The Via Giulia is the most rigorous intervention that the old city had to deal with, and at the same time it was a street that aimed to represent state and society.<sup>30</sup> Aesthetic [224] and even scenic considerations seem to have carried more weight than during any preceding period. The High Renaissance had a predilection for river bank sites, which seemed almost literary (Farnesina). The end of the Via Giulia gardens bordered on the river, where loggias allowed a view of the unfortified Gianicolo (Palazzo Sacchetti). Notwithstanding this, no true riverside streets following the curves of the river were laid out. Even the corresponding street on the other side, the Via Sancta, begun by Alexander VI and finished by Julius II, is laid out on a straight line, so that it is only tangential to the river.

There was not a single square among the maze of houses in the Rione di Ponte, but in the neighbouring quarter of Rione Parione the Circo Agonale, one of the largest squares in Rome, had miraculously remained undeveloped, a clear indication that it was on the periphery of the Renaissance city. Even nowadays, this oversized square contrasts with the small plots of the old city in such a way that it gives no favourable measure for either of the two. Neither did the traffic know how to make use of it, as none of the thoroughfares mentioned above related to it, and even seem to avoid it. To the east, however, in the direction of the Pantheon, there was an underdeveloped and inexpensive building site. A number of [225] cardinals embraced this opportunity by building here palaces of unusually imposing stature (Palazzo San Marco, Cancellaria, ill. 132). The majority of patrons preferred the proximity of the Ponte Sant'Angelo, but certainly, they could not be too choosy about the form of the building site. Oblique alignments, re-entrant angles and the narrowest alleys were deemed fit for building (Palazzo Ricci, ill. 133). These palaces did not even object to neighbouring houses of ill repute, and even today some of the purest Renaissance palaces have to be studied from barely practicable corners that are filled with rubbish. Indeed, this kind of defect does less harm to the artistic situation than later centuries that deprived comparable examples of their inner-city character and the conception of the facade as attuned to the proximate view, by placing [them] along green avenues [226].

For a certain time, plots with acute angles were even preferred, and it seems that this was the first time Baroque design made its appearance on architectural exteriors. This newly awakened sense of form was not yet ready to deal with church facades (facade of San Lorenzo), and actually it first manifested itself on an interior (Staircase of the Laurenziana). Neither the facade-palace nor the rectangular cube of the domestic palace offered a focus for the Baroque sense of form, while the acute-angled corner required Baroque rhythm outright, [and] had the same inviting attitude towards to the Baroque as the cartouche. The most important monuments are Palazzo Costa, the Zecca Vecchia (Banco di Santo Spirito) and, a late-comer without much argumentative force, the Palazzo di Pio IV on the Via Flaminia. The first two were built almost contemporaneously around 1530, and offer different solutions to the problem of the corner (ill. 134). It is easy to understand why Heemskerck

<sup>28</sup> See E[rnst] Steinmann, *Die Sixtinische Kapelle*, [Munich: Bruckmann, 1901-1905] vol. 2, 59 for the projected rebuilding of the Pons Neronianus.

<sup>29</sup> Illustrated in [Giovanni Battista] Falda, *Le Fontane di Roma*, [Rome: De Rossi, 1675], tav. 22.

<sup>30</sup> This [street] was finished in 1512; see the commemorative inscription in the Via de'Banchi Nuovi 29-30. [This inscription is] mentioned and illustrated in Pastor, *op.cit* [*Rom gegen Ende der Renaissance*], 30, 31.

specifically included these two corner cartouches [sic!] as model examples of modern architecture in his sketchbook. Today, his drawings function at the same time as proof of authenticity (realised before 1535). The first building has the Doric order, the second Corinthian.

At Palazzo Costa, the corner was filled in with an aedicule (ill. 21 and ill. 134, right hand side). This concept comes from the Renaissance, but now, pilasters are used rather than semi-columns, so that the segmented pediment becomes predominant. The escutcheon of Clement VII, now missing, was attached to a lion's head and truly Baroque festoons, greatly contributing to the rhythm. But in general, the aedicule was not shaped like a window; it encroaches on the attic – which is, from the point of view of the Renaissance, an unsurpassed infringement – and in this way loses its harmonic proportions. The central field shows tension [while] the lateral fields have been squeezed to nothingness, and consumed by the duplication of the pilasters. This motif of tension has all the more effect as the rest of the wall scheme shows squeezed proportions (see ill. 73). This corner solution does not manifest a special talent for invention; the artistic means are too classical to not perceive the stretching of the proportions as unharmonic. With respect to this fact, it is difficult to understand why until very recently the design of this palace was considered to be by Raphael.<sup>31</sup> [227] On the other hand, Egger favoured a later execution date for this palace.<sup>32</sup> We see no reason to doubt its attribution to Baldassare Peruzzi.

Antonio da Sangallo was much more original with his facade for the Zecca Vecchia, which is already so Baroque that [228] the alterations by Alexander VII were accepted as a major part of this [effect]. Except for the crowning statues and the shell-shaped escutcheon on the roof, the entire scheme is documented by Heemskerck's design as original (ill. 134, left, and ill. 136). This building was executed towards the end of Clement VII's pontificate ([see the] Medici coat of arms in the Heemskerck drawing), therefore immediately after the Laurenziana staircase and for the same patron. Of all the buildings by Sangallo, this has the most clearly Baroque forms, and its novelty must have had a great impact as it relates to the space of the street. It seems to me that Sangallo wanted to demonstrate that he was also able to do something like this. The drawings collection [229] at the Uffizi contains a sketch for this corner building that is extremely indicative of the genesis of this style (ill. 135). The transition from sketch to finished building contains in itself the entire change in style. The fact that this drawing contains an oversized, Baroque Farnese escutcheon does not infer a later date of execution, as it is not, as one can see, the papal but the ducal coat of arms. Paul III liked the building so much that he had it copied for the mint at Castro, the ducal seat of his son Pier Luigi.<sup>33</sup> Obviously Sangallo intended to satisfy papal demands with the old design.

Although it is densely composed, the old scheme is still based on the concept of the rhythmic bay. The openings are tightly placed [230] within the panels, but their size is not beyond the norm. The base and the entablature are in a straight line, and the concave curve of the facade has not yet been planned. Obviously, in the building as realised this can be explained by the context of the street crossing, the concept of the circus (circular square) that already here exerts its influence. In the new version, the corners become more pronounced

<sup>31</sup> Th[eobald] Hofmann, *Raffael [in seiner Bedeutung] als Architekt*, [Zittau: Menzel, 1911], vol. 3, ch. 3, column 39-47.

<sup>32</sup> [Christian] Huelsen and [Hermann] Egger, *Die römischen Skizzenbücher des Maarten van Heemskerck [im Königlichen Kupferstichkabinett zu Berlin]*, Berlin: Bard, 1913-1916], vol.1, 35.

<sup>33</sup> Vasari, *Vite*, vol. 5, 463, 'Vita of Antonio da Sangallo'.

than they were in the first sketch through the different selection of motifs, contrasting with the rest of the facade scheme. The side bays have become even narrower, and the openings create deep cavities of shadow between the pilasters. This is also the way in which Heemskerck perceived them.<sup>34</sup> The centre is filled, however, in accordance with the colossal pilasters, with a colossal arch that was originally decorated with a cartouche and a coat of arms. The base has been given crossettes in the form of pedestals.<sup>35</sup> But this was not enough: the middle bay projects forward as a whole, and the entablature has to contend with the fact that not only it recesses above the side bays, but also that [it] juts forward again over the corner pilasters. If Heemskerck had not pointed out this curious detail, we would not have believed this possible at such an early date. He also testifies that the stacked up attic is original, and that it participates in the recession of the lower parts. Not even the High Baroque could add anything essential to this. However, Sangallo immediately abandoned this direction, as he was not comfortable with it. In the buildings for Paul III he accepted the unpainterly severity that had been handed down to him by Bramante.

In general, the private palaces of Rome fell short of the Florentine. There were no royal merchants; large businesses were only branches, and trade was a sad enterprise. Instead, around 1500 an educated and passable middle class of civil servants, notaries and doctors, were building in Rome, clearly expressing their social and economic position through architecture.<sup>36</sup> The number of smaller and medium-sized palaces was greatly increased by the residences of foreign ambassadors, who were almost all in the Rione di Ponte at the beginning of the Baroque.<sup>37</sup> In formal respects, the Roman middle-class palace deviated from the Florentine patrician palace in important details. The three-dimensional block-like effect is lacking, as is fortified pride. [231] It is conceived with a [focus on] the effect of the facade and the most subtle division of planes, while the small dimensions of the plots of land often led to two repeatedly applied solutions that seriously shattered belief in the formal infallibility of the Renaissance. First, the high price of land led to vertical building, as for example at Palazzo Turci, that rises like a tower at the corner of the street and which reminds one of London city views through the joylessness of its proportions (ill. 137). This scheme derived from the Cancelleria could only be justified in domestic architecture when applied to an entire street row. This principle of building in cells was un-Italian and violated the urge towards individual distinction, for which reason these buildings were undertaken. Secondly, a system of adding on was introduced to take advantage of the possibility of Renaissance forms to be reduced to their components, allowing for the addition of storeys according to needs, or adding axes at the sides. The formal design of the small and brilliant Palazzo Baldassini, an early work by Antonio da Sangallo, concluded with the moulding [*Gurtgesims*] above the main storey (ill. 138). The storeys above that, which give us the impression of being unfinished, were indeed planned as such and were no longer veneered, so to speak. Material and proportions deteriorate, and the roof of rafters [*Sparrendach*], which is a Florentine requirement and seldom in Rome, works as temporary roofing. One was not supposed to look at the upper storeys, and neither did they believe that with additional attics the scheme as such was impeded. Possibly even festive architecture, such as Bramante-

<sup>34</sup> Heemskerck erroneously left out the base strip under the main storey.

<sup>35</sup> See also the earlier Palazzo Baldassini, ill. 138.

<sup>36</sup> [Leopold von] Ranke, *Die römischen Päpste [in den letzten vier Jahrhunderten]*, Leipzig: Duncker & Humblot, 1923] 12th edition, 213.

<sup>37</sup> Pastor, *op.cit.* p. 90.

Raphael's palace, was intended to be burdened with an attic; this robust scheme could certainly have coped with one. Indeed, most attics which were formerly considered to be later additions because of their coarse execution, were proven at closer inspection to be original (Palazzo Vidoni, Palazzo Costa). During the Baroque, this element is considered to be pernicky. As soon as the block-like effect of the whole became the main issue, the mezzanine was inserted under the entablature, and the latter element provided the sole concluding element. The attic storeys of the Roman Renaissance were further developed in another place: it was Palladio who interpreted the motif not as a dividing element, but as a weighty one, and thereby made it available for use in the following centuries. Towards the end of the sixteenth century, the custom of assimilating the mezzanine and its windows into the architecture of the entablature is introduced at Rome (Palazzo Laterano; Palazzo Alessandrino-Bonelli, 1585). This is neither a logical nor an agreeable solution. Only Bernini was able to offer a completely new proposal for preserving the autonomy of the entablature and still maintaining a mezzanine. [232] At Palazzo Odeschalchi, which is distinguished by the powerful effect of its crowning cornice, [he] hid a dwarf storey, with a recession of a few meters, under the balustrade of the roof. This artful trick was so well done that only few spectators notice the existence of this storey.

Making additions to the sides was more common and artistically more important. Even the design of the austere Palazzo Rucellai in Florence was calculated for extension to the sides, and more generally, the facades of Roman Renaissance palaces are based on a system of additions. This had the double advantage of allowing building in stages, and not impeding the later addition of extensions. The Palazzo Vidoni-Caffarelli was extended from seven to seventeen bays without any consideration of the overall proportions. The all too frequent repetition of the same element does have a tiring effect, but in all other respects the system could not be spoiled [233] as it was precisely based on the principle of addition. Baroque palaces, on the other hand, were unsuited to such interventions, as their rhythmic compositions, however they were achieved, is one-off and unalterable. At Palazzo Odeschalchi, where the extension was designed by covering the formerly recessed bays with the pilasters of the central part, the Baroque rhythm has thereby reverted to a classicist composition, and the core of its artistic intentions was destroyed.

With respect to the rhythmic compositions of the Baroque, an advance was made when a new method of addition was introduced in the more open areas of the city. It seems that Palazzo Pandolfini in Florence led the way and consisted first of building the entrance portal and the ground floor to enclose the plot of land, later adding the upper storeys or extensions at the back according to requirements. [234] This was a concession to villa architecture, in which the wall tends to be the primary [element] of the complex. The enclosing walls, which could be constructed quickly and cheaply, contained the promise of the whole and the magnificent, and especially [implied] the development of the entire block; how far this could be realised was of secondary importance and did not change any of the intentions. The death of Leo X led to a sudden halt in constructing Palazzo Pandolfini, leaving it as a fragment with only four bays of the upper storey executed, while the rear parts were only made inhabitable in a provisional and plain way. On the other hand, with the Palazzo Farnese we find the opposite: this comparable building was not only entirely completed, but during the long period of construction was subjected to considerable extensions. The building originated with the right-hand side of the façade, where already during the first period of construction (1514-1521), there were complaints about the lowering

of an ancient foundation wall.<sup>38</sup> Furthermore we are told that, already in 1514, Cardinal Farnese obtained permission to transport columns from the monastery of San Lorenzo fuori le mura to his palace.<sup>39</sup> As these columns were used in the vestibule, we can assume that this was planned from the start and had also been begun by then. Probably the entrance was on the side of the residence, as at Palazzo Pandolfini. On the left hand side, the ground floor consisted of a garden wall, that presumably, had not even been extended to the corner of the block. In 1519, the palace had progressed sufficiently that Leo X was able to visit the patron in his apartment.<sup>40</sup> At that point there probably was already an upper storey, but this can only refer to the first six bays of the right half of the palace, in other words to a part of the present palace which most likely could have functioned autonomously and which, separated from the rest, still presents an impressive building. The relation as a whole of the small windows to the enormous facade, which is often criticised, would have been much more satisfactory in this case. [At this point] there was no mention of a courtyard, the development of the whole plot, or a second storey, and construction was halted between 1521 and 1534; there is only reference to filling out the plot by the acquisition of neighbouring houses. It was only with the elevation of Cardinal Farnese to the papacy in 1534 that [235] the fragment suitable for extending was turned into the present giant building. The Piazza Farnese, the lower-middle class houses of which had been bought by the Farnese for the accommodation of their servants, was opened up. This striking measure is one of the earliest examples of a Baroque forecourt situation that aims at arranging free space in relation to the architectural mass. The left half of the palace, containing the huge, two-storey hall was extended; as a result of the fragmented building history set out above this does not occupy the central axis of the building but its corner. The extension of the facade also required the addition of a second storey so that the block-like effect could be maintained; and, finally, this second storey was also needed inside, so the hall would be of double height, while Pier Luigi and Ranuccio Farnese needed the old apartments in the wings. The central window over the entrance portal, which has the important function of optically connecting the two halves of the palace, obviously did not succeed at first; when the second storey was added, at the last moment Michelangelo undertook the construction of a very effective window-loggia (ill. 23). The Lafrery print of 1549 provides the *terminus ante quem* for its completion. After 1534 we also hear about a courtyard. The right hand wing along the Via de' Farnese was built first, then the wing for the staircase was added, the construction of which had progressed to the first storey by the death of Sangallo in 1546. Michelangelo and Vignola completed this [part of the palace]; the gallery wing towards the garden was not executed at this time. The plan of Rome by Bufalini (1551) shows the palace in the form of a horse-shoe.<sup>41</sup> Originally, an open colonnaded hall was meant to connect the two wings.<sup>42</sup> It was only in the 1560s, when Michelangelo's proposal for a garden view over the river had been abandoned, that Vignola undertook the closure of the first storey [of the garden wing]. From 1573 onwards Giacomo della Porta directed the construction of the

<sup>38</sup> Account of Flaminio Vacca, see Navenne, *Le Palais Farnèse*, 10.

<sup>39</sup> Navenne, *Le Palais Farnèse*, 158.

<sup>40</sup> Entry in the diary of Paris de Grassis, see Navenne *Le Palais Farnèse*, 157.

<sup>41</sup> F[rancesco] Ehrle, *Le piante maggiori di Roma dei sec. XVI e XVII, riprodotte in fototipia [a cura della Biblioteca Vaticana]*(con introduzione di Francesco Ehrle), Rome[: Danesi], 1908.

<sup>42</sup> It was reproduced in this way by [Antonio] Lafreri, *Speculum Romanae Magnificentiae*, [Rome: Lafreri], dated 1560. [This is] comparable to the later courtyard design of Palazzo Borghese.

upper loggia. The conclusion of the entire building in the year 1589 is recorded by an inscription in the garden vestibule.

#### [236] THE CORSO

The Via Giulia did not maintain its social position for long, even though the street was esteemed because it crossed the Farnese neighbourhood, and the Farnese's building activities continually drew attention to the Rione della Regola. After the death of Paul III, the fame of the area began to fade and Palazzo Spada (begun 1550) was the area's last grand palace. During the pontificate of Julius III two events occurred that pushed the growth of the city in another direction. Firstly, the development of the Corso slowly reestablished its reputation as the main thoroughfare of Rome, and secondly the building of the papal villa outside Porta del Popolo also lured traffic to the north and prompted the development of *vigne*. This shift in urban perspectives expressed itself for example in the fact that while Bufalini (1551) and Pinardus (1555) devised their views of the city of Rome from the west, i.e. from the Gianicolo, (in 1561) Dosio was the first to record the panorama of the city from the north, from an ideal standpoint on the Via Flaminia.

Until 1550, the Corso was partially lined with domestic houses for the lower middle classes, partially flanked by gardens, and interrupted shortly after the present Piazza Colonna by Hadrian's triumphal arch. Beyond this arch, in the direction of the Porta del Popolo, there were only a few houses standing. The plots of land were cheap and enticed patrons to yield to the Baroque urge for the colossal. The first grand palace along the Corso is Ammannati's Palazzo Ruspoli, characteristically not a cardinal's palace, but a private project of the Florentine Rucellai family that was undertaken at exorbitant expense independent of the Carafa pope's artistically hostile regime (ill. 71). It was located beyond Hadrian's arch and unobjectionably occupies a sheer, immense and oblique block, not inferior to Palazzo Farnese. The vastness of the plot of land certainly was no advantage for the architectural design. The cumbersome and monotonous horizontal width of the palace, the indecisive division into storeys, the lack of a second upper storey and therefore the absence of a block-like effect no doubt can be attributed to the fact that a uniform development of the available plot did not allow a higher degree of formal opulence. The palace was a form of land speculation that turned out – not immediately but over the course of several decades – to be extremely adroit. However, it took 24 long years for a Roman family to take a comparable step. [237] Notwithstanding their riches, the Chigi had contented themselves with a small urban palace in the Via del Banco Santo Spirito (nr. 44-46), [although] they had compensated for their humble dwelling by means of their villa on the Tiber, later the Farnesina. When in 1579 they were forced by Cardinal Alessandro Farnese to cede this villa to him, they used the proceeds of the sale to build the famous Palazzo Chigi on the Corso, which was begun in 1580 by Giacomo della Porta. This second palace along the Corso also was a private building that competed with cardinals' palaces. Here, no longer is there a discrepancy between dimensions and style as at Palazzo Ruspoli. The plot of land, a full rectangle, is somewhat smaller and Giacomo della Porta's full Baroque architecture certainly succeeds in balancing the division into storeys and the block-like effect with the area.

#### COUNTRY ROADS

Julius III was not very interested in issues of urbanism and traffic. The cruises he used to undertake on his luxury galley from Castel Sant'Angelo to the small harbour at the Via Flaminia were rather playful, and the fact that the sojourn meant more to him than the

journey to it agrees with his Renaissance-based principles. In contrast, Pius IV was a man who ascended the papal throne intending the city to be traversed at quite a different tempo. He reintroduced the habit of riding horses in the Vatican and, to the astonishment of the Romans, he appeared on festive occasions at the head of a cavalcade of cardinals. As a result of this, his zeal in construction was directed towards the improvement of roads, gates and bridges. A diarist noted that a year before his death in 1564, the pope had ridden through the old town of Rome all morning, drawing roads and buildings so that, should he still be alive, some years hence the city would hardly be recognised.<sup>43</sup> This change should not be interpreted as rhetoric; indeed Pius can claim to have transformed Rome into a Baroque city, adumbrating the building activities of Sixtus V, because the alignments on the map of Rome that Sixtus drew up during his short pontificate would have been completely inexplicable as practical and artistic achievements if Pius had not anticipated the expansion of urban perspectives twenty years earlier. [238] The importance of Pius IV for the fate of art in the following centuries lies in the fact that he had a different concept of movement than that held during the rest of the Baroque, especially by Michelangelo and his followers. Until that moment, the concept of the Baroque had been to fill the artistic object with movement. This does not hold true for the works of art that were created for Pius IV. The architecture of Pirro Ligorio is objectively so immobile that it could be even described as a restoration of Bramante's architecture. On the other hand it is the curious merit of Pius IV to have introduced the impulse of subjective movement into newer art. It is the beholder who moves, sets himself further goals, beholds wider outlines. Partially, this can be explained on an individual level from the rash temperament of the pope. On a deeper level, it can only be interpreted as a general adjustment towards the subjective, which is to say, towards a subjective worldview. The nervousness of the Baroque forces this direction. What Pius IV had created with alignments no longer refers to the single architectural object, but is an end in itself as a supporter of movement. Herein lies the Baroque, and at the same time the non-Roman element, because in Rome this urge to movement remains a[n isolated] episode. Only Sixtus V surrendered to this once more, with even more energy and consciously artistic means. Thereafter, however, it was transplanted to France, where it immediately proceeded with native certainty. The reverse, though, was that from the increased movement, the transitory relation of the beholder to the work of art inevitably should emerge, to which the works of art themselves eventually reacted through correspondingly transient design. In another context I have tried to explain the nature of transitoriness, and this is the core issue of the late Baroque.<sup>44</sup> More recently, the urge towards movement has been increased notwithstanding many retarding influences, and I am convinced that the decomposition of form in the present day is, just as in the sixteenth and seventeenth centuries, an interaction with the increased tempo of life.

Pius IV tended to conjure up for himself interiors as mobile, and as a result, extremely uncomfortable. Audiences and conferences were peripatetic.<sup>45</sup> They went up and down stairs. His extension of the western Belvedere wing springs from a downright passion for corridors. Moreover, his brain was filled with numbers; he measured his buildings according to steps and yards. [239] His inscriptions are not commemorative stones but

<sup>43</sup> Bargellini, [*Il palazzo di Pio IV*], 28.

<sup>44</sup> Rose, *Spätbarock, Studien zur Geschichte des Profanbaues*, 6 ff.

<sup>45</sup> Ranke, *Geschichte der Päpste* [meaning *Die römischen Päpste*], 169.

milestones.<sup>46</sup> Wherefore in the Villa Pia every space leads towards another space, as the gaze is invited to lose itself in endless [views], so too, air is invited to enter, and this resulted in the singularity of the project; the villa was nothing more than a summer-house. Even a grand building like the palace on the Via Flaminia was not conceived as a residence; it was created around the wall fountain of Ammanati and the interior was criss-crossed by passages, corridors and staircases so that only two halls remained in the entire complex, and even those do not possess balanced proportions (ill. 139 and 140). One could assume that this was a kind of gatehouse for an unexecuted palace, which is not the case here. [In] the adjacent Villa di Papa Giulio, these spatial issues were decided still in favour of repose.

We have already discussed the extensions to the Borgo; yet its grid of streets had repercussions beyond this quarter. From the Porta Sant'Anna, Pius had a street four thousand feet long laid out in a straight line to the Ponte Molle [sic], where it met up with the Via Cassia.<sup>47</sup> Pius had also acquired land on the other side of the river; or rather, he had accepted land as a donation in lieu of restitution from the Del Monte family. He immediately revived Julius III's plans for development [of this area] by way of building his palace and, linked to this, he regulated the Via Flaminia and had the Porta del Popolo faced with the architecture of a triumphal arch.<sup>48</sup> To the west, he regulated the Via Aurelia, to the south the Via Appia Nuova, both of these being radial streets. But the most important of his projects was the Via Pia that was intended to provide access to the Rione dei Monti. Pius IV had the Palazzo Venezia restored, and extended in the form of a summer residence;<sup>49</sup> related to this was the decision to lay out a straight street from the portal of this palace to the Ponte Nomentana – a connection that formerly was only by way of paths. In other words, the pope took into consideration stretches of many kilometers. This street was meant to ascend the Quirinal hill in direct ascent, and as the old Porta Nomentana was outside the line of perspective Pius decided that this gate [240] had to be moved westwards about 100 meters. This became the Porta Pia. That the road does not ascend the hill by way of curves one can deem inartistic, but in the construction of streets we have to reckon in general with primitive concepts. Partially, the relation of man with nature was too active to adjust the alignment of streets to the geographical situation, while on the other hand it was considered practical wherever possible to draw streets according to beelines. Only the construction of country roads in the nineteenth century departed from the principle that distance is easier to overcome than ascent, and that therefore [hills] should be bypassed by means of curves. In the form in which Pius had conceived the project, this could not be realised. The street that today is called the Via 20 Settembre starts from the top of the Quirinal Hill and floats, unfixed, with one end above the roofs of the houses of Rome. As a result, the goal of providing access to the Rione dei Monti was only partially achieved. The fact is that Roman nobles used to have their *vigne* in this area, and it is well-known that Paul III loved the Quirinal, where he had a terrible row in the *vigna* of Cardinal Carafa with his grandson Cardinal Farnese which caused his death. But this area was not yet developed. Up until this time, neighbourhoods that had not been given the fine sounding names of the hills, because they had been developed on the borders of the Tiber, and in the 'valley'. This phenomenon

<sup>46</sup> Inscription in the Belvedere courtyard, illustrated in Th. Hofmann, *Raffaël als Architekt*, vol. 4, tab. XX ill. 5, text col. 52.

<sup>47</sup> Inscription at the Porta St. Anna, see Bargellini [*Il palazzo di Pio IV*], 22

<sup>48</sup> Inscription on the exterior of the Porta del Popolo.

<sup>49</sup> Inscription at Palazzo Venezia.

has been preserved in the names of churches (Santa Maria in Vallicella, Sant'Andrea della Valle, and further also in the name of the Della Valle family). [241] This situation can be mainly explained by the [need for] water supply.<sup>50</sup> In those days [Romans] still drank water from the Tiber, and the Monti were short of water. Under Julius III the squandering of water in the papal villa had led to uprisings, so Pius IV was unable to demolish Ammanati's fountain even if he had wanted to. This issue of water supply was only resolved by Sixtus V.

Gregory XIII, the Buoncompagni pope, was not greatly interested in these problems; he considered it to be a political necessity to traverse the territory of the ecclesiastical state with country roads, but in the city itself he was more concerned with architectural monuments. Immediately after ascending the throne, his building activities focused on the object, and therefore the individual, and this was the spirit that elevated Giacomo della Porta, Michelangelo's most important pupil. The most prominent urban project [242] of his pontificate was planning the Capitol. We are only told about the construction of roads in the context of the building of the Collegio Romano, for which he had a number of old alleys in the Rione della Pigna eliminated. Furthermore, it is his merit to have begun the construction of the Via Merulana, and in contrast to the exit roads of Pius IV, he introduced the concept of the ring road. According to the plan of Dupérac (1577), Gregory only saw half of the street constructed but gave it his own name.<sup>51</sup> It was Sixtus V who completed the street and transferred Gregory's name, which he did not like in this context, to a little street near Trinità dei Monti (Via Gregoriana). Besides, Rome owes to the pontificate of Gregory XIII the promulgation of constitutions settling questions of expropriation [in which] official institutions were given significant rights over private citizens, and on the other hand favouring with privileges private building enterprises of public utility.<sup>52</sup> Some years later, from the office of the Magistri Viarum emerged the congregation for the construction of streets (Ranke, *Päpste*, vol. I, p. 243). These were the juridical foundations on which his successor, Sixtus V, could tackle the enormous task of regulating Rome.

#### THE RIONE DEI MONTI

As is well known, Sixtus V was very shrewd, and indeed property speculation of impressive scale was the first action he undertook after his elevation to cardinal: acquiring (1570) the largest *vigna* on the Esquiline, for which at that moment he never could have had the means. He was only able to utilise this possession during his pontificate. The Villa Montalto is a fundamental project in the history of urbanism and garden design, on which everything else is based (ill. 101). It is a new type of garden: not a hillside garden, as for example the Villa Medici, but a fairly level garden that had not been planned with spatial effects but as a traffic complex.

The expansion of the grounds of the villa then became completely different, comparable to the way things had been arranged with plots along the Corso, and this required vigorous structuring. Maybe it was the Slavic descent of the pope that enabled him

<sup>50</sup> Ranke, [*Die römischen Päpste*], 252, Pastor, [*Geschichte der Päpste*, probably vol. 7, 602-603].

<sup>51</sup> Bargellini, [*Il palazzo di Pio IV*], 25 erroneously claimed this road construction for Pius IV. The Dupérac plan has been published by Francesco Ehrle, *Roma prima di Sisto V. [La pianta di Roma Du Pérac-Lafréro del 1577]*, Rome[: Danesi], 1908.

<sup>52</sup> Eberhard Hempel, 'Die Spanische Treppe. Ein Beitrag zur römischen Stadtbaukunst'. *Festschrift für H. Wölfflin*, [Munich: Bruckmann, 1924], 273. Idem, *Francesco Borromini*, Vienna: [Schroll, 1924], 64. These constitutions were promulgated in 1574.

to solve such unusual issues. [243] The artist who realised all this was Domenico Fontana, who had risen up from the lower strata of society as had his papal lord, and who likewise introduced non-Roman concepts from lake Como, his homeland. Two principal innovations were his: the radial layout of roads, which until then had only existed as forked roads in the city center. This [form] was unilaterally used as *Patte d'oie*, or in the round as a roundabout. The great exedra of the Baths of Diocletian was not without influence [here]. Secondly, he introduced the motif of the allee in garden design. These two elements constitute the plan and elevation of garden[-design] so that it became possible to ignore entirely the material qualities of building and the topographical character of the grounds.

As pope, Sixtus V undertook what he deemed necessary with the greatest hurry, and all of it at the same time. He conducted the Aqua Felice from the Agro Colonna, which was primarily intended to supply the papal villa with water, terminating in the Moses Fountain for public use. This artificial stream not only made the Rione de'Monti inhabitable, but actually transformed it into the most desirable part of town, and Rome returned to its old inhabited areas. The size of the city was doubled. Only now the Corso became its real backbone. The second task was planning the streets around Piazza del Popolo. According to Bosio's plan, the three main streets that constitute the entry to the city were already prepared and developed by 1561. Nevertheless, the eastern one of these, the Via del Babuino [sic], was easy-going and lower middle class. But Sixtus wanted more; as the large painted city view in the Vatican Library indicates,<sup>53</sup> six streets were to radiate out in the form of a fan, [which meant that] except for those already extant, two short rays [would lead] towards the Tiber, and on the hillside, a colossal street would rise along the slope of the Monte Pincio, leading in a straight line to Santa Maria Maggiore. Just as with the Via Pia, the ascending part (up to Ss. Trinita de'Monti) was not realised. [Nowadays] it is blocked by hotel gardens, and indeed one feels starkly the absence of this connecting road. If bypassing the lower streets should ever become of serious importance, this break-through might relieve the situation. The other street that was built is known by the name of its creator, Via Sistina. In its guise as Via delle Quattro Fontane, it crosses the completely different street of the former Via Pia. As becomes clear from its history, it is pure coincidence that this crossing is not a complete right angle, but just approximate, and [244] it is part of the charm of the city, which avoided crass symmetries instead of searching for them, that this especially dishomogeneous crossing has been decorated with four similar wall fountains.<sup>54</sup> This street connected the *vigna* of the pope with the road network of the city, and [this *vigna*] was, until the mid nineteenth century, the most beautiful and precious park in Rome. Today it has completely disappeared and the modern development of the Esquiline - as a curse to the city - has not even maintained its ground plan. Finally, Sixtus V started laying out the ring roads. These do not run parallel to the old fortification walls, but were intended to connect the main churches in the periphery of the town. Only the Via Merulana from Santa Maria Maggiore to the Lateran was ever finished, but had Sixtus been active for some years more, with his energy he would have succeeded in closing the circle from San Lorenzo fuori, along the Vatican and San Sebastiano up to San Paolo fuori; thereby constructing a connexion that even today is only constituted by paths through fields and which, especially now, when the terrain cannot be developed, would be made accessible by country roads.

<sup>53</sup> Main reading room, the lunette above the left hand exit towards the Gallery of Pius IV.

<sup>54</sup> For more about this complex of wall fountains, see Hempel, *Francesco Borromini*, 33 and note 2.

The merits of Sixtus V are great, and he was aware of that; the city view in the Vatican bears the following caption: Dum rectas ad Templas vias sanctissima pandit / Ipse sibi Sixtus pandit ad astra viam.

This notwithstanding, one would not have desired Sixtus to have continued his urbanistic activities. In less than five years he got to the point where the streets could be embellished with obelisks and fountains, and with these he crowned the gigantic works of his pontificate. The genius of the city did not endure this violence for long. After the pope's death, Fontana had to flee; his urbanistic projects were abandoned and the visual arts returned. Not even Maderno, who only shortly afterwards held the architectural fate of Rome in his hands, and who one would have expected to have his uncle's projects at heart, intervened in the alignment of the city. The spirit of Michelangelo, even if weakened into the decorative, greatly gains the upper hand, so that the individual building is again preferred above the design of urban context. The building is again granted its individual effect. Only fifty years later was the account drawn up between the liberality of Rome and the urbanistic concepts of the late French Baroque, and the victory of the latter was decisive for northern Europe.

#### [245] Article 4: **The church of St Peter's**

In the course of history, it does not always hold true that the centres of political power coincide with those of artistic initiative; at least during the Middle Ages this was not the case. The leader of universal ecclesiastical power resided in Rome, but in terms of artistic capabilities the northern realms were superior. The Gothic had arrived at the gates of Rome, but it had been refused entry. Those who might have gone from Paris to Rome in order to study architecture would have been disillusioned. And even if reverence for relics would not have permitted criticism to arise, Rome had failed, and the desire to make up for this omission provided the starting point for the Idealism of later periods that redeemed themselves rather dubiously. When the papacy wanted to assert itself, sooner or later architectural primacy had to be added to ecclesiastical primacy. But the historical moment when the realisation of this idea could be taken into consideration came rather late, when cultural primacy had shifted to the south, and the allegiances of the Church with Humanism had produced a new idealistic art [*Ideenkunst*]. Rome was the last of all the cities in the West to build its cathedral. The foundation of new St Peter's on 18 April 1506 was an epoch-making moment,<sup>55</sup> and one might question whether this was a favourable moment for a project of this magnitude. In the ecclesiastical context, this was certainly not the case, as the North had already been wholly exhausted by such monumental undertakings, and the individualism of Italy did not have sufficient religious strength to bear this kind of burden. As a result, in the North the new building was considered presumptuous, and before long it became a mill-stone for the Roman system. Without a doubt the ideals of the project were overlooked, but the course of history has judged the naysayers. Indeed, construction only became possible when the flowering of Italian civil culture began to fade and the collective forces that were summoned forth for this building carried the Renaissance to its grave. As has been indicated above, the meaning of the building changed; from being a monument to a

<sup>55</sup> Laying the foundation stone of Saint Veronica's pillar; see the sources in Pastor, *Geschichte der Päpste*, vol. 3, p. 768 – Steinmann, *Die Sixtinische Kapelle*, vol. 2, 49f – additional sources in Dagobert Frey, [*Bramante St. Peter-Entwurf und seine Apokryphen*] *Bramante-Studien*, [Vienna: Schroll, 1915] ch. 2, 50ff.

mundane sense of form it became the most noble vessel of transcendental inspiration, and an instrument of the Counter Reformation. [246] The art historical conditions were not favourable. Certainly there was the feeling that they were standing on a summit, but this brought with it descent as a necessity, and if the classical forms became fluid, what would become of the original project, which by its very nature had to extend over several decades, as each decision determined what followed? In the shift to the Baroque, which already exposed buildings of a smaller size to the fate of formal confusion, the cathedral of St Peter's became a lesson of tribulation. Notwithstanding this, if it produces an artistic impression of passable cohesion, this can be described as a miracle. Yet the real reason for this is that the decisive arrangements were made not in 1506 but only around 1546/47, during a period when the triumph of the Baroque was already clear.

Constantinian St Peter's was a basilica with two aisles on either side [separated by] columns, with a pronounced transept, and without a chevet (see ill. 141). Among the many damaged constructions that Nicolas IV was supposed to have found in Rome were the transept walls of St Peter's. I cannot find proof that these were indeed in need of repair, as the same walls stood for another fifty years. Pretexts were sought for a new building. The occasion for new plans was prompted by the influx of pilgrims during the Jubilee year of 1450.<sup>56</sup> Only extensions to the transept and choir were planned at that time. Perhaps this kind of partial structure would not have been satisfactory for very long; yet this way of proceeding was not unusual. Even Bramante, with his ambitions, had to come to terms with the existing transept at Santa Maria delle Grazie. L.B. Alberti chose Bernardo Rossellino as the master-builder and executor [for St Peter's], and we can reconstruct what he had in mind from three different sources: from Manetti's account,<sup>57</sup> from the ground plans found in later designs, and from the frescoes by Fra Angelico in the Saint Nicholas chapel in the Vatican, the architecture of which provides us with a vivid image of its unbuilt elevations. The transept was to be widened by a third towards the west (exceptionally, the church is oriented toward the west). Therefore the tomb of Saint Peter, which previously was situated under the main altar, was shifted to an irrational location in the new space. Furthermore, a choir with semicircular apse was to be added (ill. 144). Fra Angelico's frescoes and the width of the walls lead to the conclusion [247] that these parts were to be vaulted, possibly with barrel vaults. This system could not be applied to the nave, however, as it could not be constructed on rows of columns. In this respect, the concept was incomplete, but the assumption that the vaulted western part was to be finished with a dome over the crossing cannot be refuted.<sup>58</sup> What this would have looked like can be reconstructed from the slightly more recent, and certainly smaller dome over the crossing of S. Agostino (1483).

Almost nothing of this project was executed, because after the [248] death of Nicolas IV in 1455 any [further] driving force was absent, and the old church remained intact. Only outside its perimeter walls were the construction of new exterior walls for the transept and a new choir continued. The latter must have progressed to an impressive height, as otherwise

<sup>56</sup> Georg Dehio, 'Die Bauprojecte Nikolaus des Fünften [und L.B. Alberti]' *Repertorium für Kunstwissenschaft*, vol. 3, 1880, 241-275

<sup>57</sup> Gianozzi Manetti, Biography of Nicolas IV, published in [Eugène] Müntz, *Les arts à la cour des Papes pendant le XV. et le XVI. Siècle*, Paris: Thorin, 1879-1882], [vol.] 1, 339.

<sup>58</sup> Hans Willich, *Baukunst der Renaissance in Italien*, (*Handbuch für Kunstwissenschaft*, vol. 4:3), [Berlin: Akademische Verlagsanstalt, 1914], 95.

the architects of the sixteenth century would not have been forced to take this into account. Incorporated into the provisionary choir, [it] stood until torn down in 1585. With Julius II's ascension to the papal throne (1503), the issue of the new building arrived at its decisive moment. The expansion of the Papal States ensured a position of territorial power that no pope before him had had. The flow of money from the north was substantial, and the self-confidence of this pope was not inferior to that of any emperor. Bramante, who came from the circle of Leonardo, and who added an allround artistic education to the former's inventive faculties, had been in Rome for four years by then. And as Leonardo had been indecisive about entering papal service, without competitors Bramante determined the architectural fate of Rome. The elements of his style are partly Umbrian and partly Northern Italian; the Tuscan receded for the time being. It is not clear whether Bramante began with a project for a longitudinal church.<sup>59</sup> It is possible that at the outset he was only occupied with adding a new choir to the existing nave. The crossing and the choir could then take the form of a trilobe structure. Moreover, suggestions were made by Leonardo. The dome, which was already planned over the crossing, was augmented in scale [and] the Tempietto functioned as a guide for its formal language. Furthermore, this building project intersected with that of a burial chapel [project] for the Della Rovere family, which was to be added as a centralised structure to St Peter's, and which was intended to house Julius II's tomb.<sup>60</sup> Bramante's plan for a centralised ground plan with a dome comes forth from this cluster of ideas and projects [249], and was in open conflict with the requirements of Christian church building, as it aimed at consecrating the objectively beautiful with the transcendental (ill. 142). The eternal had entered an alliance with the classical, but with so many adversaries it was bound to encounter serious problems.

<sup>59</sup> [Heinrich von] Geymüller, [*Les projets primitifs pour la Basilique de Saint-Pierre de Rome par Bramante, Raphael Sanzio, Fra Giocondo, les Sangallo, etc.*, Paris: Baudry, 1875, 2 vols] (the original designs) and Gottschewski (Vasari, *Vite*, vol. 7, 27) assume that the plans for a centralised building of 1505 was preceded by a project for a longitudinal building. This assumption suggests itself as it proceeds from the existing longitudinal building. There are neither ground plans nor other sources on this first stage [of the project].

<sup>60</sup> Vasari, *Vite*, vol. 4 (*Vita di Giuliano da Sangallo*), 282. Nothing is known of the mentioned designs. Four plans for a centralised building which F. Burger (*[Geschichte des] Florentinischen Grabmals [von den ältesten Zeiten bis Michelangelo*, Strassbourg: Heitz & Mündel, 1904], 314) claimed to be for the Julius Chapel, have been identified by Dagobert Frey as studies for San Giovanni dei Fiorentini (*Michelangelo-Studien*, IV, 68 f). The papal chapel therefore becomes the prototype for the church of the Apostle. Through the extension of this plan, the tomb for Julius becomes homeless. It could not be placed under the dome of St Peter's, where it belonged according to its meaning; and this space would have been too vast a context for a figurative [work]. The monument was not suitable for placement in one of the transept arms. [249] The tomb for Julius II mainly failed because of these issues of its location, and it is installed now as a wall tomb in San Pietro in Vincoli. – Obviously, the circular buildings left and right of the provisionary choir on the ground plan of Antonio da Sangallo have to be interpreted as burial chapels (ill. 146). Later, this project was abandoned. Paul III claims the pillar of Saint Veronica for his tomb ([Ferdinand] Gregorovius, *Die Grabdenkmäler der Päpste [Marksteine der Geschichte des Papsttums*, Leipzig: Brockhaus, 1911], 3rd edition, 69f). It was only Urban VIII who had it relocated to the western choir, and during [the papacy of] Alexander VII the project for a centrally located burial chapel reappears again [Paul Fréart de] Chantelou, [*Tagebuch des Herrn von Chantelou über die Reise des Cavaliere Bernini nach Frankreich*, Hans Rose, ed, Munich: Bruckmann 1919], 219). But as it could not be realised by then, the Santa Maria Maggiore and the Lateran were chosen as burial sites.

Whether the scaling up of the project was based on secular ambition, or the conviction that through the greatest exertion of monumental will the realm of heaven could be reached directly, cannot be determined. In any case, Bramante expressed his intention to place the Pantheon on top of the Temple of Peace.<sup>61</sup> Such a concept does not survive any comparison with the purity of classical ideas. It was alien to antiquity to put one building on top of another; on the other hand, it expressed precisely the spiritual complexity of this more recent era, that had piled up two [250] diverse ideologies, the Christian and the pagan, one on top of the other. Bramante's concept is mainly a spatial one, but it suffered from a certain discrepancy: the dome and the hall remained disconnected. He would have succeeded even less in bringing the exterior into harmony with the interior, for the treatment of which there were no classical examples. The [exterior] remained the child of sorrow; we need to admit that from what we can deduce from medals and prints it is remarkably ugly (ill. 143). The translation of the space into mass fails completely. But it is significant that the Temple of Peace was a longitudinal building, which would be developed into a cruciform [plan] in order to become a centralised building. Therefore, we are not dealing here with an innocent game of square pedestals with a circular upper part, as at the Consolazione at Todi, but with spaces with notably different concepts of movement [*Bewegungsinhalt*] that have been grouped together. Maybe the conflict in the ground plan of the building, that during its century-long architectural history never found a solution, was caused by unfamiliarity with this building type. The centralised plan was abandoned, regained and given up again. I am inclined to blame these fluctuations only to a very limited extent on the stylistic volition of the Baroque, as one cannot claim that the Renaissance would have been unsatisfied with the longitudinal building, or that the Baroque would have abhorred the centralised plan as a whole. These two types coexisted, and both succumbed to transformation during the Baroque. The longitudinal plan is the stable type; a comparison of the Gesù with the Sant'Andrea at Mantua makes clear how little the Baroque had changed the forms of the preceding century.<sup>62</sup> The centralised building has been subjected to greater changes: from an articulated centralised building, it develops into an unarticulated one, which is to say, into a coherent spatial vessel. It is Michelangelo who creates the new centralised concept in his designs for San Giovanni dei Fiorentini.<sup>63</sup> The round churches by Bernini, and his predilection for the Pantheon, which he admired not so much for its refined Augustean vestibule than for the total effect of space in the Hadrianic dome, can be explained by the same taste for spatial totality. [251] I return to the question of how the specific change of plan in the construction of St Peter's is related to the general shift towards Baroque spatial concepts, and how this worked out.

Before the start of building works, the central point from which the mighty circle of the dome's perimeter was to be drawn, had to be determined. From the outset its position

<sup>61</sup> [Giorgio] Vasari, [*Die Lebensbeschreibungen der berühmtesten Architekten, Bildhauer und Maler*, Adolf] Gottschewski, ed, Strassbourg: Heitz, 1904-1917, vol. 7:1, 28, note. With the 'Temple of Peace' the Basilica of Constantine is meant.

<sup>62</sup> [Jacob] Burckhardt, *Geschichte der Renaissance in Italien*, [Stuttgart: Kröner, 1922], 152 and 154.

<sup>63</sup> The archduke of Tuscany still required a centralised building for the Florentine national church in 1559, even when the bays of the longitudinal nave had already been erected. (Frey, *Michelangelo-Studien*, ch. 4, 76f) A fundamental preference for a longitudinal church had not been presented by then. It was only the [design for] the Gesù that brought about the turn towards the longitudinal building, while we have to take into account that all the churches that are connected to monastic complexes preferred the longitudinal space.

was not certain; the tomb of Saint Peter had been shifted, as mentioned before, to an odd position because of Rossellino's crossing. Then Bramante proposed to relocate the tomb of Saint Peter, and to orientate the facade of the church towards the south, so that the obelisk of Caligula would adorn the centre of the atrium. We are informed that the pope rejected this request; the church of St Peter could not orientate itself towards a pagan monument, but to the tomb of the Apostle, and this ought to remain where it was.<sup>64</sup> This account has been interpreted [to mean] that it was planned to move the tomb of the Apostle to the exact centre of the space under the dome.<sup>65</sup> But much more was at stake. Until 1585, the obelisk of Caligula, that stood at the southern side of the church at the height of the first bay of Maderno's nave, which is to say, in front of the present Cappella del Coro, was formerly considered to be immovable. This location is [252] indicated in the modern pavement of the Via della Sagrestia by means of a commemorative stone, and furthermore this point is in line with the western wing of the Belvedere.<sup>66</sup> Therefore Bramante's proposal meant that the dome would be erected over a completely different spot, almost 70 metres to the east. In this way the church would have dug into the mass of the hill much less, and it would have been easier to connect it to the buildings of the Vatican. Perhaps the church and the palace were even meant to be arranged along an axis.<sup>67</sup> Nevertheless, this relocation of the church necessitated the demolition of the Sistine Chapel, which Julius II would never have allowed out of reverence for his uncle. The outcome of negotiations was that Rossellino's crossing was maintained as the centre point for the dome. The tomb of the Apostle remained in its old location and was protected for the duration of building works by a temporary sanctuary.<sup>68</sup> Therefore a distance of 7 metres existed between the tomb and the [pavement directly under the] centre of the dome. As is well known, for this reason Lorenzo Bernini's tabernacle does not stand in the middle of the space. Also the relation of the church to the palace remained defective. The extension of St Peter's by Maderno was not just as a minimum meant to eradicate this problem, but we will come back to this later. [It is] very revealing that the reorientation of the church towards the south was taken into consideration, because there were no access ramps. The present situation makes it difficult to understand such a measure, but in the Renaissance the situation was different, and it was judged in different way. The old Vatican wall and the Benediction Loggia of Paul II were situated between the church and the city; and both had to be maintained (ill. 129). No space would have been available in front of [the church]. On the other hand, towards the south, where only insignificant

<sup>64</sup> Contemporary account by Egidio da Viterbo, Biblioteca Angelica, Cod. C.8, 19f. 245; this is discussed and transcribed in Pastor, *Geschichte der Päpste*, vol.3, 773 and 931f – [and in] Steinmann, *Die Sixtinische Kapelle*, vol.2, 53 – [and] Vasari-Gottschewski, vol. 7, 31 and note 36.

<sup>65</sup> The western apse, the definitive form and location of which had not yet been decided upon, was not yet taken into account as a site for burial.

<sup>66</sup> The original location has been documented in a drawing by Van Heemskerck; [see Hermann] Egger, *Römische Veduten [Handzeichnungen aus dem XV. - XVIII. Jahrhundert]*, Vienna: Wolfrum, 1911-1931, 2 vols, vol. 1], ill. 30.

<sup>67</sup> A similar concept was applied to the church and Hotel des Invalides in Paris.

<sup>68</sup> [This is] depicted by Heemskerck in a drawing: [see] Egger, *Römische Veduten [sic]* ill. 26. In 1506, payments were made for the encasing of the sanctuary. Karl Frey, *Zur Baugeschichte des St. Peter. Mitteilungen aus der Reverendissima Fabbrica di S. Pietro*, Berlin: Grote, 1911 (Jahrbuch der preuß. Kunstsammlungen, vol.31, Beiheft, 43). The hewn stone pieces were peperino, the rest was made of plaster. The sanctuary was only finished after the death of Bramante by Baldassare Peruzzi. See Vasari, *Vite* vol.4, 163.

buildings were standing, a spacious atrium could have been constructed, and access to this area from the Borgo Vecchio would have been from the side. The fact that the church would have been isolated from its surroundings, and would have presented itself as an unalterable object on a platform framed on all sides [253] conforms to the Renaissance taste for the enclosed courtyard complex. Until the end of the sixteenth century, such a courtyard-like arrangement was taken into consideration (ill. 159). It was only after giving up the centralised plan that attention was directed towards a Baroque forecourt; the question of the Benediction Loggia is not unrelated to this change. As long as preservation of the old loggia was expected, the architects of St Peter's did not have to worry about this requisite, which was naturally small, and not very acute because of its tendency towards arched architecture. Only Antonio da Sangallo considered tearing down the old ring of walls, and from that moment how the Benediction Loggia could be incorporated into the church facade became an issue. [254] How Michelangelo resisted the motif of the loggia, how he wanted to suppress this, and how Maderno's facade is principally dedicated to the reintroduction of the space of the loggia must be investigated.

The measure of the dome's diameter, which provided the scale for all the later parts, was no less important than fixing its centre. There was no binding scale for its span.<sup>69</sup> At the start, 200 palmi (44,68 meters) were foreseen.<sup>70</sup> Later, they limited this to 186 palmi (41.55 meters), still colossal dimensions, which incorporated in its size the inner aisles of the old basilica (fig. 144). It was conceived like the dome of the Pantheon, the diameter of which (42,70 meters) was almost equalled, [but] which, statically, was based on completely different foundations. Rossellino's supposed dome over the crossing had a diameter of 103 palmi (23 meters) and with these new dimensions, which doubtlessly were forced upon the old building, there lay a danger that was not to be underestimated for the success of the entire undertaking. Not only because the limitations of technical capabilities were transgressed, but because such a richly articulated design as Bramante's centralised church only reluctantly allowed the use of colossal masses. The basilica traditionally resolved audacious architectural issues on the basis of a primitive and straight layout of walls and equally primitive statics. They could be endlessly enlarged as long as a system for the position of the roof beams could be found. In this respect, it was an unheard-of audacity - not to say a mistake - to apply the dimensions of the plan of one of the largest basilicas in the world, in increased, rather than decreased size for a vaulted centralised building, for which the richly articulated walls required an unimaginable amount of stone work, and the statics of which necessitated the utmost in technical precautions. Indeed, the large dimensions are not conducive to the artistic impression of this design because the disappearance of perspective occurs so strongly in some instances that the impression of size evaporates and the formal cohesion of the forms cannot be optically perceived, but only reconstructed intellectually. Vasari stated that if such wonderful architecture had been executed in more

<sup>69</sup> Dagobert Frey, ['Ein unbekannter Entwurf Giuliano da Sangallos für die Peterskirche in Rom'], *Miscellanea Francesco Ehrle [scritti di storia e paleografia]*, Rome[or rather Vatican City: Bibliotheca Apostolica Vaticana], 1924 vol.1, 438f.

<sup>70</sup> [Heinrich von] Geymüller, *Les Du Cerceau. [leur vie et leur oeuvre d'après de nouvelles recherches]*, Paris: Rouam, 1887], 18. With this size, the space of the dome would have developed itself – comparable to Florence – from the equilateral octagon. This consideration indeed seems to have been determining for the measurements. One side of this octagon is indicated in the Helena-pier the plan in Geymüller 9 (fig. 144); it cuts through the centre of the winding stairwell.

modest dimensions, [255] nobody would have been compelled to enlarge it.<sup>71</sup> Now, however, a reduction became necessary, and this was so masterfully done by Michelangelo that the building is now of smaller size, but has a much more impressive effect.<sup>72</sup> Already in the earliest phases of the new construction, the dimensions of the dome had a negative impact on the form of the crossing piers (see fig. 145), because the 100 palmi (24.60 meters) width of the transepts remained the same, and the more the inscribed circle was widened, the more the space surrounded by the pillars approached that of an equilateral octagon. The piers were thus given huge facings, and it was unclear how this defect would be resolved by means of decoration. Bramante had faced the other walls with a system of colossal pilasters that coincided with the triumphal arch architecture of the arcades.<sup>73</sup> This was not a new concept. Alberti had [256] applied this in a similar manner in Sant'Andrea in Mantua. But it was not suitable for the definition of corners. We have to accept that in these piers especially, that constitute the best-preserved parts of Bramante's original project, no trace of eurhythmics can be discerned. The medallions in the spandrels have assumed a similarly threatening shapelessness, but as regards the Baroque building, this constituted an advantage, because the manner in which the elementary mass expresses itself in the piers of the crossing is a real Baroque effect. But how ought the facing walls be adorned? Bramante intended a colossal niche with a crowning slab.<sup>74</sup> Sangallo retained this solution, even though it had become clear that he could not excavate the niches for their entire depth (fig. 152). Michelangelo planned two austere niches without profiles above one another and, significantly, he planned the upper as the largest. He thus ignored the division into storeys that was indicated by the abutment of the arcades (fig. 153). According to Ferrabosco, these niches were to be decorated with shells, slabs and a crowning baldachin. This was the situation that Bernini found himself in and which he covered over with his well-known ostentatious decoration.

Originally Bramante had determined the height of the side walls at 27 meters to the point of the entablature, this would have had an active proportion to the width of the nave (24.60 meter). This was altered by the later insertion of the pavement.

It would be erroneous to continue to attribute to Bramante's original designs a higher grade of finish than that which has been handed down to us. Even the most careful reconstruction would contradict the actual historical situation. Then, in general, the church was a cathedral and the building enterprise remained that of a workshop, so that no individual artist could aspire to complete the work to the point of unalterability. He would satisfy himself with leading the project and fulfilling the expectations of his time. Completion fell to others and making detailed plans for the future that could not be overseen would have been a wasted effort. During the Middle Ages, they built with a devout optimism that their successors would somehow be able to finish what they had started. [257].

<sup>71</sup> [Vasari, *Le Vite*], Life of Bramante, vol. 4, 163, and Vasari-Gottschewski, vol 8, 30.

<sup>72</sup> [Vasari, *Le Vite*], Life of Michelangelo, vol. 7, 220 f.

<sup>73</sup> Geymüller's supposition [in *Les projets primitifs*] that Bramante started with multi-storey orders and only came to a colossal order in the course of the project, cannot be proven for the piers of the crossing. Only the inner wall of the tribune shows this kind of development.

<sup>74</sup> The decoration with columns as it is indicated in the plan of Geymüller [*Les projets primitifs*] 9, could not have been realised because of its colossal dimensions, and it was not even started. See the perspectival cross-section of Baldassare Peruzzi, Geymüller, [*Les projets primitifs*] fig. 2 and text figure 19. Frey, *Bramante-Studien*, 28 and fig. III.

These buildings are often patchwork; one would expect from the Renaissance a more conscious pursuit of a formal programme. For this reason Geymüller assumed that the building appeared in its completed form before Bramante's internal eye. But this seems not to have been the case. His way of working was fragmented, and this was one of the paradoxical issues in which the Renaissance cathedral would become entangled: that the classical will of the architect was exposed to muddying by his successors. This deficiency was strongly felt and a remedy was sought. In the Fabbrica of St Peter's a system had emerged that could not have been conceived during the Middle Ages; that of publishing the crucial designs as woodcuts and engravings, and thereby securing them for the future. Bramante, however, had not yet made use of this; his ideas are predominantly known through his ground plans. Serlio's section of the dome is authentic, rather late evidence (published in 1537) about the interior, and our knowledge of the exterior is based on very inaccurate documents (medals and prints after medals). Only from Antonio da Sangallo's project onwards are we able to follow the building history of St Peter's through a complete series of engravings.

Of all the preserved ground plans, only the drawing on parchment kept in the Uffizi (Geymüller, ill. 3) can claim Bramante's authorship, and this happens to be an idealised concept. The building could not have been realised according to this plan.<sup>75</sup> The pillars of the dome are too weak, the transverse arches too narrow, the pairs of pilasters are relatively close, and the transepts consist of [only] two bays (fig. 142). Onto this delicate structure, which is closest to Venetian [architecture], the massive dome never could have rested. For this reason, Bramante reinforced the pillars and introduced a reduction in the sequence of bays: in his plan, the transepts consist of only one bay framed by broad transverse arches. The ground plan resulting from this would have been beautiful, no doubt, but in the calculation of statics, one part remained unresolved, because the shortening of the transepts produced the unusual motif of the ambulatory. This has a medieval origin, but has little advantage for the interior construction, [258] and an outright disintegrating effect on the exterior design. I can only interpret this as a makeshift solution. Clearly, the static line was oriented so obliquely that it threatened to protrude from the stone construction itself. The ambulatory offered the necessary abutments. For this practical reason, the ambulatories remained unquestioned until 1546. Only Michelangelo rejected the static calculations and renounced the ambulatories.

Thus Bramante's centralised plan lost its palpability. Our interest is therefore more directed towards the circumstances [of this development]: this is related to the involvement of Giuliano da Sangallo in the project and Bramante's own renunciation of the centralised plan, which is to say, the development of the first longitudinal plan which had been the dominant idea between 1510 and 1521, during the High Renaissance. Already before the arrival of Bramante in Rome, Giuliano had had an influential position in the building project for St Peter's, and since he belonged to the committee that had to decide on the location of Julius' tomb, it can be assumed that he also presented plans for St Peter's. Dagobert Frey recently associated designs for a centralised church that can be found in the Albertina, with

<sup>75</sup> Dagobert Frey has recently pointed this out (*Bramante-Studien*, ch. 1, 8f). The monumental quality of this sheet has been overestimated by former Renaissance scholars; the chances of realizing this design are judged too optimistically in most studies.

Giuliano's interventions.<sup>76</sup> Indeed, these designs perfectly complement Bramante's project: the treatment contains important systematic indications. In these, Frey recognises a confrontation between the Florentine bodily feeling [*Körpergefühl*] and the northern Italian preference for spatial forms that Bramante represents. The Florentine constructs spaces from cells distributed according to a pattern; Bramante starts from a total space and organises it by subdividing it (p. 446f). This is similar to what Paul Frankl called spatial composition by means of adding or dividing.<sup>77</sup> This comparison teaches us that Florentine architecture would not have produced a classical [style] without the influence of Lombard spatial aesthetics, and that vice versa, Bramante's unstable, somewhat shallow preference for spaces, surely needed consolidation by means of Florentine practicality. It was only the melding of the two types that created the *Ultima maniera*. It was doubtlessly a conducive moment for the rebuilding of St Peter's [259] that Bramante had begun from general concepts. In contrast, in Rome Giuliano did not progress beyond Florentine Quattrocento detailing, [and] it was not possible to realise his project. Frey proposed, however, that Giuliano had a prevailing influence on the first plans for a longitudinal church (p. 445).

When [we] consider that Bramante's centralised plan only existed as vague contours, and the Florentine alternative plans had the advantage of being functional, it seems less strange that Bramante would have abolished the centralised plan in the last years of his life and started on a longitudinal church. Until today, no conclusive proof has been found to suggest the correctness of this assumption.<sup>78</sup> In any case, with Raphael we certainly encounter plans for a longitudinal church. The choir by Rossellino has been covered by a polygonal architectural wall, doubtlessly with the aim of maintaining it as the choir [for the new church].<sup>79</sup> Not only the concept of the centralised plan, but also the triconch plan has been abandoned [and] the subsidiary domes have disappeared. The form of the transept apses has been maintained, however. Raphael starts with the foundation of the southern apse; he will hardly have changed anything in this. We are told, though, that he did design ground plans and had a model built prior to his formal nomination [as architect of St Peter's] in the summer of 1514.<sup>80</sup> These probably were related to the longitudinal plan; these

<sup>76</sup> Dagobert Frey, 'Ein unbekannter Entwurf Giuliano da Sangallo für die Peterskirche in Rom', *Miscellanea Francesco Ehrle, Scritti di storia e Paleografia*, Rome: [Bibliotheca Apostolica Vaticana], 1924, vol.1,2, 432 ff. He published two ground plans, one section and one design for a facade. [See Hermann Egger, *Kritisches Verzeichnis der stadtrömischen Architektur-Zeichnungen [der] Albertina*, Vienna: Schroll, 1925], Rome XXX, 789-91.

<sup>77</sup> Paul Frankl, *Die Entwicklungsphasen der neueren Baukunst*, Leipzig: Teubner, 1914, 23ff., ch. 1, 'Entwicklungsphasen der Raumform'.

<sup>78</sup> In particular, it needs to be shown whether the pillars of the nave on the Geymüller plan no. 9 (fig. 144) are really of the form intended by Bramante. Dagobert Frey in his *Bramante Studien* 11f considers this correct. This would therefore confirm Onofrio Panvinio's account on the [longitudinal] extension of the church by Bramante (*De Vaticana Basilica*, see [Jacob] Burckhardt, *Geschichte der Renaissance, [in Italien]*, Esslingen: Neff, 1912], 5th edition, 10 and 124). The verdict on this issue is determined by the attribution of the plan in question to Francesco da Sangallo or not. To me, the section of the longitudinal church (Geymüller, [*Les projets primitifs*], ill. 25, fig. 3) mentioned above (p. 90) seems to originate in the 1520s.

<sup>79</sup> Egger, *Römische Veduten*, fig. 40. Dagobert Frey, *Miscellanea Francesco Ehrle*, 433. The envelopment originates with Bramante.

<sup>80</sup> See Karl Frey, 'Regesten' in [*Zur Baugeschichte des St. Peter*], *Jahrbuch der preussischen Kunstsammlungen*, vol. 31 Beiheft, 52, for this ground plan. The model is attested to in a letter by

experiments were intended to answer the question whether subsidiary [spatial] centres should be created by organising the bays in a certain rhythm, or whether they should be arranged by the addition of uniform elements; and whether the character of the nave and four aisles should be preserved or whether the latter should be converted into two aisles. The forgery of Serlio's plan (Lib. III, p. 37) should be ignored when judging Raphael's aims [260] as it is compiled from long outdated parts; the wrong pillars for the dome do not come from Bramante but from his provisional, ideal project, and because of that [Serlio's plan] adopts a wrong design for the walls, and ambulatories that are too narrow. The level of completion during Raphael's time as architect is, however, excellently illustrated in Geymüller's plan in ill. 35 fig.4, which presumably was drawn by Antonio da Sangallo after plans by his uncle Giuliano (ill. 146). The pressing issue of the moment was the addition of the apse, which created not insignificant problems. To the right, an extra bay has been inserted for that reason; to the left, a third pilaster is added to the pillar, coupled with the other two. This motif of coupling pilasters, which in these dimensions has a Baroque effect, can hardly be expected in a building from the High Renaissance; here it was conditioned by practical necessity and was maintained in the present system of the walls as a peculiar memory of Raphael's time [as architect of the church].

In order to understand the sequence of building work at St Peter's after Bramante's death, one has to imagine that the position of master architect was for life.<sup>81</sup> This decision partially accords with the ecclesiastical filling of offices, and it can partly be explained by the almost inconceivable responsibility that weighed on the chief architect. This enormous building, that exceeds in its dimensions the largest cathedrals of the Middle Ages, held a comparable relation to the small Renaissance city [of Rome] as had been the case [of cathedrals] in medieval cities. The overwhelming size would have been perceived even more strongly had St Peter's been located closer to the centre [of the city]. During times of brisk architectural activity, half the city would have been dependent upon this building project, and when construction halted it led to the emigration of inhabitants. The building of a cathedral was therefore almost a regulatory instrument, like medieval economic institutions that passed on the funds of the Church to private individuals. But while Gothic masons were supported by the whole [population] and therefore only expressed the common opinion, the architect [261] of St Peter's carried the entire responsibility on his own. He was personally liable for the artistic and technical results and was often put in the position of having to impose his higher judgement on the population and even his patron. Now we just have to imagine how much stability, but also how much individual fortuitousness, was brought to a building project by the continuous presence of an architect. Naturally, pontificates alternated much more rapidly than the duration of the office of the architect. Coeval to the ecclesiastical pontificates there existed therefore an architectural pontificate, which followed a different rhythm, and its result was that not every Pope, and consequently not every stylistic fashion,

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Raphael to Castiglione, [see] [Giovanni Gaetano] Bottari, *Lettere pittoriche* [which in fact should be the *Raccolta di lettere sulla pittura, scultura ed architettura scritte da' più celebri personaggi dei secoli XV, XVI, e XVII*, Milan 1822-1825, 8 vols], vol.1, 116. This can be found in German in Guhl-Rosenberg, 95.

<sup>81</sup> Originally, this was only a customary right; it was only in the contract with Michelangelo that this was formally arranged. From the time of Raphael, the Vatican and other papal building projects were subordinate to another institution that regularly interfered with the stonemason's lodge of St Peter's. It was only Maderno who combined both competences, just as his successor Bernini who acted almost as a general manager of all building projects in Rome.

had an impact upon the development of St Peter's. Changes in plan could only be introduced by those popes [262] during whose papacy the main architect died, and it depended on chance whether this event took place during the reign of a pope with artistic judgement. In general, changes in the office of master architect led to heavy conflict, sometimes even growing into a change in system [as] in all stages of its development a group existed that opposed the power of the highest architectural authority, which developed frenetic activity in times of crisis. The strongest conflict we know about arose in conjunction with Michelangelo's inheritance; I will come back to this later.

After Bramante's death, the new appointment to the position was achieved tranquilly: Bramante himself was responsible for choosing Raphael, which we cannot deem particularly fortunate. He proposed that he succeed him, even though Peruzzi was available, an architect who might not have had an especially developed sense of taste, but on the whole showed a greater sense for monumentality and a deeper understanding of the requirements of the immanent Baroque style. Peruzzi's merits for the project were only officially recognised one year prior to his death, when he was given equal rights alongside Antonio Sangallo, the master architect.<sup>82</sup> One has the distinct impression that Antonio owes the grandeur of his designs at least partially to Peruzzi's genius. The Sienese Peruzzi thought less as a cabinet-maker than Sangallo and more from an optical conception – he remained superior to the Florentine architect until the end.

With the appointment of Raphael they ventured into the unknown, and it seems there was an awareness of this as his merits were formally overstated while, notwithstanding this, he was flanked by two experienced specialists: Fra Giocondo as *magister* and Giuliano da Sangallo as administrator and coadjutor.<sup>83</sup> The former died in 1515, and in the same year the latter returned to Florence and died in 1516. Raphael gained a free hand, even though one cannot see any new application of energy in the building process. When Bramante died, [263] the four pillars of the dome and the related four arches of the crossing had been constructed; furthermore, the four pillars abutting the transept had been completed to three quarters of their height and, strangely enough, Bramante had already started work on the decoration (ill. 149). Onto the brick arches of the crossing he had moulded the splendid coffers we can still admire today, and through this he had advanced the rest of the building so far that the decorated parts towered in the air like a ruin.<sup>84</sup> Under Raphael's supervision the first arcades of the southern transept were vaulted; apart from this, St Peter's did not represent for him a tectonic problem but a decorative one. Without taking the fragmentary state of the construction into account, he pursued his plan to produce

<sup>82</sup> Peruzzi died on the 5th of January 1536; see Karl Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol. 31, Beiheft, 92 and vol.33, Beiheft, 11.

<sup>83</sup> The brief of Raphael's appointment of August 1, 1514 has been published by [Giovanni Gaetano] Bottari, *Lettere pittoriche* vol. VI 2; [it can be found] in German in Guhl-Rosenberg, *Künstlerbriefe* vol.1, 96. See Pastor, *Geschichte der Päpste* vol. 4, 544, footnote, for the appointment of Fra Giocondo. More on the supposed activity of Raphael as supervisor of antiquities in Julius Vogel, *Bramante and Raphael[:ein Beitrag zur Geschichte der Renaissance in Rom]*, Leipzig[: Klinkhardt & Biermann], 1910 76ff. Giuliano da Sangallo had been appointed as coadjutor during Bramante's life; the deed of appointment is of January 1, 1514; see Dag. Frey, *Miscellanea Ehrle*, p. 442.

<sup>84</sup> The ornaments were obviously weather resistant. Vasari deemed this moulding with travertine stucco as an invention of Bramante ([*Vite*,] vol.4, 160 and 162); elsewhere he credited Giuliano da Sangallo with this same invention ([*Vite*,] vol.4, 291). The arches themselves were not made by casting but in brick.

in St Peter's extravagant effects of splendour: the Vatican loggias translated into the gargantuan! In certain places marble cornices had been applied already.<sup>85</sup> Indeed, the niches in the contra-pillars, the so-called 40 palm niches, had similar decoration to the niches in the garden hall of the Villa Madama. The boundary between sacred and profane architecture here become unclear. Nothing has remained of this decoration, however: it was sacrificed to the construction of Michelangelo's spiral staircases; [Raphael's] decorative concept only influenced incrustation of the seventeenth century as a mere idea.

First of all, there was little reason to take up the issue of external architecture as in any case the exterior walls would not be erected for a long time. There is no clue whatsoever how Raphael had himself imagined the exterior. There are, however, so-called quick sketches regarding the exterior construction that doubtless date from Raphael's time as architect: one external view of the choir (fig. 147) and a sketch of the facade that Geymüller attributes to Baldassare Peruzzi (fig. 148). The view of the choir cannot be linked to any of the preserved ground plans.<sup>86</sup> The corner towers and subsidiary domes, that already conflicted awkwardly in Bramante's ideal project, have been represented as diminished in height, without however opening up sources of light for the ground floor spaces. It was therefore proposed to apply the staggered arrangement of the ambulatories to the entire design in order to enjoy the advantage of clerestory windows and the clear visibility [264] of the cruciform layout. The whole clearly declares that the Romanesque stylistic elements Bramante had introduced from Lombardy had not been vanquished, but instead appear more clearly. These proposals [incited] the dissatisfaction of his successors; under Sangallo [there was] a complete reorganisation of spatial relations.

In conjunction with the nave project, during Raphael's time there must have been much discussion about the issue of the facade; but we do not have a proper facade [design] by him. The sketch illustrated here concerns a centralised building of which the front apse has a square conclusion. For this reason [it has been] attributed to Peruzzi. The dimensions of the ground plan and the relatively small height led to unattractively wide proportions for the facade. The corner towers have been reduced to ressaults, clearly in order to cede to the subsidiary domes the mediation towards the central dome. This comes close to Michelangelo's later exterior design. One has to observe, though, that the Peruzzi facade originated at the same time as [265] the facade of San Lorenzo in Florence; and also in this case, [Michelangelo's design] had been preceded by projects of Giuliano da Sangallo. This [project] would have meant the introduction of the Baroque in Rome.

After Raphael's death, for a second time Leo X conferred the post, a privilege no other pope ever had. Peruzzi was passed over a second time, and Leo chose Antonio da Sangallo, who had been Raphael's coadjutor in the building of St Peter's following his uncle Giuliano, thanks to the recommendation of the Farnese family.<sup>87</sup> It is well known that the Medici were indebted to the Sangallo family; the significance of this event can be found in the fact that following the Lombard and the Urbinate beginnings of the building, now the Florentine tradition gained the upper hand. This did not exert a favourable cast on the

<sup>85</sup> *Memoriale* of A. da Sangallo, article 10 – see Vasari, [Vite], vol. 5, 477.

<sup>86</sup> Dagobert Frey attributes this drawing to Sallustio Peruzzi; I think this attribution is unlikely for reasons of chronology.

<sup>87</sup> Deed of appointment of December 1, 1516. [See] K. Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol.31, Beiheft, 46 and 56.

construction of St Peter's; that the feeling for the sublime was not in the Florentines' blood can clearly be perceived. During Sangallo's time as architect, construction evolved from a hypothetical status to a process with trustworthy sources. We have a *memoriale* by Sangallo, evidently a [266] draft of a letter, in which he criticises the earlier architectural design.<sup>88</sup> Furthermore, there are Michelangelo's opinions regarding the work of his predecessors.<sup>89</sup> Thirdly, the four wonderful prints by Antonio Labacco, as already mentioned, are the first etchings of an architectural project ever printed.<sup>90</sup> Finally, there [is] the wooden scale model, which is preserved in the museum of St Peter's.<sup>91</sup> Sangallo remained in service for 25 years, but proceeded little with the project. Michelangelo did not accuse him of delaying the construction on purpose without a reason. In the present building it is almost impossible to indicate a single stone that was laid on his orders. As is evident from Heemskerck's view of 1535, nothing worth mentioning had been undertaken on the project following the death of Raphael (fig. 149). War, plagues, a lack of money and religious schism made the interruption appear understandable. Even after the election of Paul III, work only got going again slowly. First, the financial reform of the Papal States had to be implemented. Instead of foreign resources, now mainly internal and Italian money was used for the project. In 1535 the vault of the southern transept was undertaken.<sup>92</sup> Only from 1538 onwards, contemporary with the construction of the model, did payments and deliveries of material indicate a marked increase in building activities.<sup>93</sup> [267] The full, fleshy rosettes in travertine stucco that cover the passages to the spaces with the subsidiary domes still remind one of Sangallo's activity in the present day church;<sup>94</sup> so too does the ground floor of the inner walls of the apse, for the completion of which Michelangelo had applied parts made by Sangallo. Up until this time, no coherent form had been reached for the interior walls; maybe it is Sangallo's greatest achievement that he had created order. Instead of the dwarf gallery of his uncle Giuliano, which endangered the load bearing capacity of the walls, he erected two strong supports on either side, of which the front was covered with the colossal pilasters of the

<sup>88</sup> Vasari, [*Vite*,] vol. 5, 476 f, commentary on the Vita of Antonio da Sangallo. [See also] Geymüller, [*Les projets primitifs*], 293f, who dates the letter too early (to 1514/15 – by that time, Antonio did not have any influence on the project). [Kosta] Jovanovic, [*Forschungen über den Bau der Peterskirche zu Rom*, Vienna: Braumüller, 1877] assumes that it was written after the death of Raphael, but also this is too early. For good reason, Karl Frey has dated the draft to 1534/35, at the start of the Farnese pontificate (see 'Regesten', *Jahrbuch der preussischen Kunstsammlungen* vol.33, Beiheft, 29).

<sup>89</sup> Vasari, [*Vite*], vol.7, 218, Vita of Michelangelo. See also his criticism in a letter to Messer Bartolomeo (not Ammanati for sure), [in] Bottari, *Lettere pittoriche*, vol. 4, 40 [and] Guhl-Rosenberg, [*Künstlerbriefe*], 160f.

<sup>90</sup> [These are] four sheets, occasionally bound into the *Speculum Romanae Magnificentiae* of Lafrery; see Chr. Huelsen, ['Das Speculum Romanae'], *Festschrift Olschki*, 168. Facade [is] no. 144 (Salamanca excudit, 1548); lateral view no. 145; longitudinal section no. 146. Also the ground plan, without the address of the publisher, which is not mentioned in Huelsen (figs. 150, 152, 156).

<sup>91</sup> The payments for the model start in 1539; the work was probably nearly finished by 1541. It was only completely finished after the death of Antonio in 1546, by Labacco, who produced the above mentioned prints after this model. See Karl Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol.30, Beiheft, 29.

<sup>92</sup> Pollak [in Frey], 'Regesten zur Baugeschichte von St. Peter' in *Jahrbuch der preussischen Kunstsammlungen* vol.36, Beiheft, 86. This vault is only completed in 1546, of course excluding the vault in the apse. K. Frey, 'Regesten' in *op.cit.* vol.33, Beiheft p. 82.

<sup>93</sup> Karl Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol.33, Beiheft, 20.

<sup>94</sup> Executed 1545-47; [see] Karl Frey, 'Regesten', *op.cit.* vol.33, Beiheft, 82-84.

main decorative system (figs. 150 and 152). In between he placed three niches, each of which is framed as an aedicule providing entrances to the ambulatories by means of small doors.<sup>95</sup> With these [changes] the three single storeys of orders had finally been eliminated from the decorative scheme for the interior [and] the issue of the interior walls had been resolved. The practical effects of Sangallo's interventions were small. [268] This notwithstanding, some art-historically strange processes occurred in the planning of the building during his term of office.

First of all, he returns in his ground plan to the Greek cross and proposes a compromise with the longitudinal plan in which the centralised building is given its own facade that contains the benediction loggia, and which would be flanked by towers.<sup>96</sup> The building in front of this would be attached to the main body by means of an open vestibule (fig. 152). Of course, the structural unity of the building would be lost; as with an insect, the head seems to move independently from the torso. This anomaly can only be explained by the fact [269] that the old benediction loggia was also only loosely connected to the church, which is to say, it was inserted as a wall fencing the church off from the city. It was an artistic excuse that would result in enormous costs, but which was permitted so as to realise at least the spatial concept of a centralised church.

Under Sangallo's direction, the exterior design of St Peter's began to take palpable form. We leave the phase of rapid sketches and find complete projects for the exterior that were deemed authoritative and feasible for a long time. With this step, problems were introduced that had either been considered only marginally or not at all until that moment: static issues, questions of lighting, the division into storeys, the foundations and roofing, all of which could only be decided upon in concert with the decorative system of the interior. They had started with the core of the building, and had now arrived at its periphery, and thus began searching for decorative schemes for the walls. This kind of procedure is inconceivable for the architectural feelings of a northerner as in Northern [Europe where] the external walls are erected first [270] so that the construction site is covered and the finished parts are protected against the weather. In southern [Europe] they made no haste to do this. Even during antiquity it had been usual to leave vaulted buildings without roof-trusses. Brief gushes of rain could not damage the masses of stone and soon dried. For the same reason, the question of drainage was not urgent. In Paris, Bernini expressed himself in the same vein when he said that it was not unbecoming when it rained on the shells of buildings as it strengthened the binding of the mortar. In this context it is thus less astonishing that the construction site of St Peter's remained standing in the open air for thirty years, and that the external walls were only begun forty years after laying the first stone. Northern visitors to Rome certainly reported that the building was a ruin of which nothing would come. The Italians did not think otherwise; Condivi confirms that at certain moments the possibility that the church of St Peter's would be finished was openly doubted ([probably Ascanio Condivi, *La vita di Michelangelo Buonarroti*, Hermann Pemsel trad., Munich: Beck 1898], 53, 18).

<sup>95</sup> As these entrances had turned out to be too small, Sangallo wanted to pierce the abutting pillars with broader passages. At this occasion it was also decided to wall up the 40 palm niches, presumably for static reasons. The second article in the *memoriale* clearly applies to this new design of the walls of the apse.

<sup>96</sup> Article 1 of the *memoriale* necessitated the reorganisation of the ground plan. Vasari, [*Vite*], vol. 5, 477. Since 1534, the choir by Rossellino was again considered as provisional.

With respect to the exterior [design] Sangallo found an unwelcome legacy in the old outline of Bramante's ground plan. It was hardly possible with Renaissance means to cover the round apses, which protruded as segmental arches from the square plan. With his austere, Florentine forms, it was especially impossible to succeed in this. [271] Moreover, since Bramante's time there was a striking disproportion between the enormous surface of the ground plan and the relatively small interior space. In order to bring the exterior and the interior back into harmony, single-pitch roofs would have to be used, but these contrasted with the Renaissance sense of form. Neither was there a preference for the cruciform plan in the sense of the above-mentioned drawing of the choir (fig. 147), but they wanted to create a cube in concomitance with the square form of the ground plan. There was therefore no alternative left than to erect around the building a colossal, multi-storey backdrop, which would have devoured immense sums and, notwithstanding this, would not only have had an immaterial effect, but also would have rendered unsatisfactory the interior by blocking the access of light. Sangallo solved this problem in the following way. Ancient theatres in Rome offered the most exquisite examples of how to design curving walls. Their division into storeys appeared to be suitable for coping with significant architectural masses (fig. 154). The multiple-element system of the apse-walls was designed analogously to these theatres, and therefore in itself emanates true Roman grandeur. Also from these theatres originates the maxim, which was only refuted by Michelangelo, that on the exterior, even in the largest proportions, only orders with the height of a single storey could be applied.<sup>97</sup> [272] But what could not be derived from this source was the strange attic between the main storeys. This originated from the facade, where the pretentious central arch necessitated the insertion of a half-storey (fig. 157). Therefore, this attic runs from the front to the back, whereas the rest of the decorative system of the walls runs from the back to the front, where it turns two-dimensional and is introduced in the style of Florentine intarsia-artists. Thus, the concept is neither uniform nor creative, but it is a plaiting of singular thoughts in which the texture is too obvious. In the context of the origins of this decorative scheme, one can ask from where these facade arches themselves came, as they had not appeared previously in Sangallo's index of forms.

During the pontificates of the two Medici popes, the most important facade design of Rome was that of San Giovanni dei Fiorentini, for which there were great expectations (fig. 156). There Jacopo Sansovino, true master of the architecture of arches, had inserted three impressive blind arches flanking the entry portals and, in accordance with the basilical outline, had increased the central arch in order to make it dominate and consequently its projection prompted the introduction of an attic.<sup>98</sup> This does not appear, however, without tectonic justification: the double gradation of the aisle roofs and the side chapels provides an internal justification, something lacking in the facade of St Peter's. There, the plan to demolish the old benediction loggia and include this space in the facade, which was so important for ecclesiastic politics, meant that the arch motif became indispensable. But Sangallo only adopted these forms from San Giovanni in a superficial way; he superimposes two arches of the same size one above the other, therefore invalidating both, and consequently missing exactly that which might have resulted in a monumental effect: the

<sup>97</sup> I am inclined to link article 3 of the *memoriale* to this issue.

<sup>98</sup> Dagobert Frey attributed the facade design to A. da Sangallo: *Michelangelo-Studien* ch. 4, 72f. I do not think that the arguments suffice in order to refute Vasari's account of Sansovino's victory in the competition for San Giovanni. See Vasari, [*Vite*] vol. 7, 498.

undisputed superiority of the central motif, to which, in another context, concessions had been made without any kind of hesitation. It is understandable that the Baroque bitterly criticised this unmeditated assimilation of forms.

It cannot be assumed that the execution [of Sangallo's plans] would have put to rest these faults. But the thorough engagement with the facade did lead to an important subsidiary result: when they had become used to seeing the church building [273] in conjunction with the forecourt, they discovered that the floor arranged by Bramante was too low. When St Peter's square would be laid out, it would be impossible to let the terrain slope upwards and insert a flight of steps in front of the facade. For this reason Sangallo dared to raise the floor of the church 16 palmi (3.57 metres).<sup>99</sup> This, however, had a negative impact on the proportions of the space. The width of 24,60 metres corresponded now with 23,43 metres for the height up to the cornice. The high pedestals on which Bramante had placed the order disappeared and, with them, the last traces of Quattrocento grace that Bramante had sustained in Rome. The [pedestals] no longer agreed with the concept of form in the mature Renaissance. The formal impetus to do away with the pedestals was certainly not so strong that the installation of the floor would have been undertaken solely for this reason.<sup>100</sup> Even the form of the dome pillars was changed into an un-classical shape. Nevertheless, we have to thank Sangallo for his daring venture, as not only Michelangelo profited from this new situation but, even in the seventeenth century, Maderno's facade design, and Bernini's design of the square, were enhanced by this situation of upwards-sloping scenography.

The exact moment when Sangallo conceived these architectural concepts has not been ascertained. Perhaps it was after 1521, but more likely it happened only after 1534. Now it might be said that in a period of stylistic change, one would notice the difference of thirteen years, but this is not the case. The style changes almost imperceptibly, and Sangallo was not at all willing to overthrow an architectural concept once he had formulated it. His creativity was especially sterile in the context of ecclesiastical architecture. In any case, as master architect of St Peter's he did not dare to cross the threshold of a new style. His project is not of the mature Renaissance but a degenerated Renaissance. As a result, there was a radical change in system when Michelangelo began his term in office. Renaissance and Baroque, which normally remain peacefully apart, stand as irreconcilable oppositions in the two projects for St Peter's. [274] In the final result of St Peter's, it was a fortunate circumstance, if not the salvation of the entire project, that Antonio da Sangallo left life's stage at the moment when the construction of the external walls of the southern transept began, that is to say, at the last moment when major changes could be introduced without significant demolitions. Moreover, it was good fortune that Giulio Romano, who had been called from Mantua to the office of master architect, died shortly before his departure for Rome.<sup>101</sup> We believe he would have been capable of major reforms in the building of St Peter's and the cancellation of many unnecessary subdivisions, but on the other hand he would have suggested some bizarre elements. Whether he would have mastered the inadequate proportions of the whole, and whether he would have completely cancelled out his own preference for decoration is to be

<sup>99</sup> This proportion is not measured on the building itself, but from a drawing in the Uffizi. See K. Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol. 30, Beiheft, 167.

<sup>100</sup> K. Frey, *op.cit.* calls this stylistic pedantry. Sangallo was certainly not immune to that; but in this case, practical reasons seem to have made the difference.

<sup>101</sup> [Hermann] Dollmayer, ['Raffaels Werkstatt'], *Jahrbuch [der Kunsthistorischen Sammlungen] des Allerhöchsten Kaiserhauses* vol. 16, 1895, 231-363. Giulio died on the 1st of November 1546.

doubted, however. But who could possibly have matched Michelangelo as master architect of St Peter's, called in to replace Giulio and working the miracle of filling the building with an atmospheric quality forty years after the first stone was laid, something that was not envisaged in the original plans [?] [275] It is Michelangelo's merit that he extinguished the spirit of boundless individuality, which from the outset of the project contradicted the sacral idea. Still Sangallo's project was given its impetus, as was his own character, with a certain boastful mania, so that the project of St Peter's took second place to the more profound spiritual needs of the era, and seemed to protract itself as the less accomplished inheritance of the past, or even as a curse, into the Baroque. It would only have been a question of time until the appreciation of this profanely oriented project would have evaporated. The situation was fundamentally changed by Michelangelo's intervention. His building not only fulfils the requirements of [276] profounder religiosity, which can only take effect through collectivity, but he also placed himself at the head of the [reform] movement. He dictates to the Western world the concept of what a modern cathedral should look like: not a monument to self-assertion, but one of self-negation for a man who was usually called the divine because of the force of his creativity. It was Michelangelo's idea to interlace into the building his tragic sense of guilt, which is perhaps the most consecrated gift ever offered by a mortal man to God. The way in which Paul III called upon him does not sound like an order, but more like recruitment. Michelangelo took upon himself the direction of the project to honour God, without recompense, and only in order to put a stop to those scoundrels who had extended the project for selfish reasons.<sup>102</sup> The start of his term was the first of January 1547; but even earlier, in December 1546, Michelangelo had started work on a new model.<sup>103</sup> Vasari's report that it was finished within fourteen days could only allude to a preliminary terracotta model; Michelangelo was occupied for at least half a year with the wooden model executed by Melegghino. This represented the building as a whole and obviously included the essential changes on the interior and exterior in such a way that they remained authoritative even after his death. This [model] has not survived; we only know about it from the prints made by Stefano Dupercac in the year 1568, of which the longitudinal section and the lateral view could not have been made without using the 1547 model.<sup>104</sup> The decree nominating Michelangelo in 1546 has been lost; we only have the certificate of appointment of 1549, in which Paul III refers to the model.<sup>105</sup> Michelangelo's authority is expanded; the contract is explicitly for life, [277] and places him beyond the jurisdiction of other [papal] building authorities. Paul III certainly knew whom he was dealing with. Although he owed his own rise to power to the unscrupulous era of Alexander VI, he knew how to weigh the ethical standards of other people, and to fertilise those characteristics of which he himself could not

<sup>102</sup> Vasari, [*Vite*], vol. 7, 220. This account is not devoid of rhetorical embellishment; Michelangelo indeed did not receive payment from the building ledger as he was paid directly by the papal authorities. See Karl Frey, 'Regesten', vol.30, Beiheft, 170f for his salary. That which he bequeathed was primarily the financial participation as master builder in the deliveries of chalk and stone, to which Sangallo owed his wealth.

<sup>103</sup> Payments [regarding this] are from the 3rd of December 1546 to the 5th of August 1547.

<sup>104</sup> Geymüller and Thode already pointed out this relation [between the model and the prints]. More recently, Dagobert Frey (*Michelangelo-Studien*, 109 ff) and J.R. Alker tried to produce evidence for this, the latter mainly from the proportions in the prints.

<sup>105</sup> [Ernst] Steinmann and [Heinrich] Pogatscher, ['Dokumente und Forschungen zu Michelangelo'], *Repertorium für Kunstwissenschaft* vol. 29, 1906, 400 ff [and] Karl Frey, 'Regesten' in *Jahrbuch der preussischen Kunstsammlungen* vol. 30, Beiheft, 171.

boast to the same extent. We can observe the same mechanism with his creation of cardinals, of whom everyone knew they far exceeded the pope in austerity of manners. These rare qualities were required as measures in order to secure the St Peter's project for eighteen years, and they saved it during the conflicts of the Counter Reformation, rendering it independent from changing pontificates.

It is more than modesty when, at the start of his term, Michelangelo declared that architecture was not his field. In reality, his decisions were inspired by a deep and very specific architectural wisdom, the abundance of which also extended to [278] technical problems, and which at each point of the building shows his education in craftsmanship. His first condition was that Sangallo's project was abandoned.<sup>106</sup> The dishonest relation between the interior and the exterior was what exasperated him most in this plan. He adjusted it in two ways: he reduced almost by half the surface of the ground plan.<sup>107</sup> The ambulatories, corner towers and the spaces under the secondary domes were cancelled, so that now the interior and exterior walls coincided, whereas formerly they were separated by a ring of subsidiary spaces. From this moment onwards, every piece of exterior wall contained a clear indication of the proportions of the space that it contains. Secondly, Michelangelo adopts for the exterior wall - with only minor changes in size - the [decorative] system of the interior wall, especially the arrangement of the colossal order, [279] so that now the decoration of the outside presages exactly what the interior will contain, or it reconfirms what one has beheld inside.<sup>108</sup> Not since Gothic architecture had this idea of coherence been taken so seriously. There is a marked increase in suggestive impact that depends on the clarity of its coherence. The passage of time of over forty years, that lies between the design of the interior and that of the exterior, seem to have been bridged completely. The exterior had so strong an impact on the interior that even Bramante's forms have been interpreted as those of a Baroque church. This singular result was only possible because in general in Baroque ecclesiastical architecture the system of interior walls deviated little from Renaissance norms. The motif of the triumphal arch was still applied, [280] even though in different proportions and rhythm, but fundamentally only as variations on the same theme. On the other hand, an entirely new arrangement was required for the exterior in order to arrive at complete forms that therefore approximate those of the interior. The concepts from which Michelangelo began were fundamentally simple; but their execution and adjustment to the existing elements encountered the greatest difficulties.

At the start of his term it was not easy for Michelangelo to convince the pope of the appropriateness of his changes to the plan, because the southern transept walls had to be torn down, for which important sums of money had been assigned under Sangallo's direction. The Heemskerck view and the fresco by Vasari in the Cancelleria (Sala dei Cento Giorni, dated 1546), where the building site is represented in conjunction with the family

<sup>106</sup> K. Frey, 'Regesten', *op.cit.*, vol.33 Beiheft, 90.

<sup>107</sup> Vasari, [*Vite*], vol. 7, 220: 'Ritirava San Pietro a minor forma ma si bene a maggior grandezza.' The surface was reduced from 24,200 square meters to 14,500. Vasari-Gottschewski, vol. 7, 30.

<sup>108</sup> [Heinrich von] Geymüller, 'Michelangelo als Architekt' in *Toscana-werk* [intending: *Die Architektur der Renaissance in Toscana*, Munich: Bruckmann 1904,] vol. 7, 38 [and] Burckhardt, *Geschichte der Renaissance*, 5th edition, p102. The exterior order is 1,5 module higher as the interior one, with Duperac merely half a module (fig. 153).

escutcheon of the Farnese, illustrate the current situation.<sup>109</sup> Accordingly, they had only just started building the lower row of blind windows. It is hard to estimate what elements had been sculpted and were ready to be inserted by that time; major losses were unavoidable. On the other hand, the important savings resulting from Michelangelo's reductions would only take effect in the later stages of the building process, when proceeding with the execution of the upper storeys. It was only there that Sangallo's design would have led to irresolvable complications. But all these were practical issues the pope was not readily familiar with. It is possible that a letter by Michelangelo to a Messer Bartolomeo is related to these negotiations, in which he asks him to convince the pope of the necessity of these architectural measures.<sup>110</sup> Furthermore, Michelangelo promises to utilise the existing stone. Fortunately, the changes affected a location that the public had little sight of, and therefore little opposition was to be reckoned with. Thus the pope conceded, and the plinth as erected by Sangallo was extended to the exterior wall of the transept.<sup>111</sup> The plinth indeed shows the typical [281] Sangallo profile, derived from the base of a column with a curved inverted cavetto that can also be found at the Porta S. Spirito (see above, p. 46). The reinforcement of the apse wall by means of doubling [its width] also appeared desirable from the point of view of statics after the reduction in width [of the entire plan]. From a spatial perspective, the ambulatories were never missed; they had been makeshift from the very start. The cancellation of the spaces at the corners had more impact. The chapels of the subsidiary domed spaces had been needed for liturgical and funeral functions, and the same goes for the ground floor spaces under the corner towers in which the sacristies had been planned. These subsidiary spaces were entirely eliminated by Michelangelo's reductions. The space of the dome, the crossing and the areas under the subsidiary domes (the last have been united into a square ambulatory) interlock into a triad of architectural concepts that function as a unity, and as a result constitute a transitional type between a unified and an articulated centralised building [that was] never repeated. As happens so often, the most perfect artistic achievement does not result from the purity of the [architectural] type, but from the cross-breeding of heterogeneous forces (and the same goes for the dome, see p. 294). But this was an artistic effect of *l'art pour l'art*, which necessarily had to come into conflict with the increasing complexity of the liturgy. The formal result was, in any case, that the ground plan was altered in a Baroque way. The building previously presented itself in the full width of its square ground plan, and [the visitor] would traverse this along the main axis. This was the Renaissance concept. But now, the building seemed to be oriented diagonally: one would enter from the corner and cross it diagonally. This solution might be deemed accidental; that one would perceive the nascent and not the immediately revealed form as beautiful surely was in the Baroque vein. But this created enormous problems for the facade, as only now did it become clear that the centralised building had no need of a facade, while the new style very much required the effect of a facade. From that point on, the facade was drawn out of

<sup>109</sup> [For Heemskerck see] Egger, *Römische Veduten*, ill. 32. The attribution of the drawing to Heemskerck seems doubtful to me, as it reflects the situation around 1540 at the earliest (the abutting pillars have been constructed up to the cornice). The anonymous veduta in Egger, ill. 35, shows the vault as finished and also the demolition of Sangallo's walls.

<sup>110</sup> G[aetano]. Milanesi, *Lettere di Michelangelo*, Florence: [Le Monnier] 1875, 535; Guhl-Rosenberg, *Künstlerbriefe*, 160 nr. 73. The supposition that the recipient of the letter was Ammanati has already proven to be wrong by Guhl.

<sup>111</sup> Illustrated in Geymüller, *Urspr. Entwürfe* [is *Les projets primitifs*] ill. 51, see also Alker, dissertation.

the covering of the front arm of the Greek cross. While earlier on this extended along the entire width of the plot, now it only comprised the width between the dome pillars; this is transformed into a monumental portal. The [architectural] theme was completely altered and it is logical that a rhythmic concentration of the forms would be introduced in order to achieve the conceived amount of Baroque effect within the limited width.

As already mentioned, [282] Michelangelo had invoked the colossal order of the interior for decorating the building as a whole, and therefore he is credited as being the inventor of this system. This is erroneous, as the feature was older, and moreover already had been used for exteriors (Sant' Andrea in Mantua, facade). It is only true that, on the basis of knowledge about late antique buildings, the Renaissance had been biased in favour of the individual storey, which was never abandoned in sacred architecture. Sangallo especially took no advice whatsoever on this point. In contrast, it was an act of creativity to win back the colossal order and liberate it from the other elements of the triumphal arch motif. This happens first with the project for the Capitoline buildings (1546), [but] it fell to St Peter's to fill the colossal order with sacral spirit. It was [deployed] in a rhythmic manner and in this way was introduced as one of the means of expressing Christian ecclesiastical architecture. But if the rhythm of the columns indeed was crucial for the sacred mood, then the fundamental and important question arises at what point in this building rhythmic movement found its impetus. This has not really been dealt with in the literature, and partly it has not been answered satisfactorily. The unpublished dissertation by J.R. Alker contains the best [analysis] of the later stages of St Peter's: he assumes that the motif of the coupled pilasters was initiated at the rear end of the building and in particular at the oblique corners, of which there are six between the apse and the subsidiary domes.<sup>112</sup> In these corners, a clear encounter between the curved and angular forms, which was required in the Renaissance, could not be achieved. The southern and the northern abutting pillars were already standing and for static reasons could not be diminished in size. Moreover, Michelangelo deemed spiral stairs necessary, for mules to carry the building materials upward; thus the project became independent of rope-pulling, and larger loads could be managed each time. The rapid advancement that the project made under Michelangelo's direction can partially be attributed to these stairs. Michelangelo fitted them into the existing 40 palm-niches that had been decorated by Raphael. For the exterior decoration the simplest form was the diagonal, tangential to the staircase. It might be that this covering of the joints coincided with Michelangelo's taste for forms; also in the static sense, the reinforcement of the corners was desirable, [283] if not really necessary.<sup>113</sup> For the rest, these diagonals were a stopgap of truly disputable artistic merit (fig. 155), as they make one lose one's sense of orientation while walking around the building, as they themselves are not directed towards the centre of the dome. And neither am I convinced that the pairs of pilasters on these particular parts of the wall are especially harmoniously arranged. To the contrary: next to these pilasters a piece of

<sup>112</sup> J.R. Alker, *Michelangelo's Portalfassade von St. Peter*, unpublished dissertation of the Technische Hochschule Kassel, 1922.

<sup>113</sup> In the lower parts of the building, the static calculations far exceed what is effectively necessary. The building was not designed with an eye to economy in statics, which is to say, the largest possible reduction in the use of materials in the Gothic manner. That the corner abutments were not crucial becomes clear from the fact that the completed dome stood for sixteen years without the two eastern abutting pillars. The static weaknesses of the building lie elsewhere, especially in the drum, see below, 299.

unarticulated wall mass juts out, raw wall, which has not been formally mastered in a Baroque way. Certainly, the articulation of the wall still had to be begun at this location; but nevertheless I do not think it possible that Michelangelo developed the whole from this particular detail, and extracted the facade from the rear part and from the technical supports of one of the most idealistic buildings of the entire history of architecture. The facade is, rather, the place of idealism. However the rest of the wall scheme, which has received much negative criticism, can be explained by the fact that the rhythmic architecture of the façade, with three-dimensional columns, has been transferred to the rear parts and diminished into pilasters, despite not having been designed for this in the first place.<sup>114</sup> As the facade [design by Michelangelo] had not been executed, only the accompaniment to the lost main motif has been preserved. The fact that the construction of the facade was still a long time off, and the details had never been really worked out, does not contradict this interpretation of the genesis [of the decorative scheme of the exterior]. I consider convincing Alker's assumption that on the 1547 model the inside facade wall was not moulded but only painted. This was obviously the reason why, in the 1560s, when the facade ought to have been decided upon, there was no longer an authoritative design. But the order of the columns and their rhythmic sequence was established. In this lies the impetus for the concept of the entire wall scheme. The reconstruction of [Michelangelo's] facade serves to illustrate these correlations, which I have undertaken with help from Mr. Paul Gedon (fig. 158). This coincides in crucial points with [284] Alker's reconstruction. However, in formal analysis I do arrive at different results.

In the years 1546/47, Michelangelo had a wooden model made of his project for St Peter's. After this, his intentions for the building only changed in insignificant details. But immediately after his death the pursuance of his plans was greatly endangered by Pirro Ligorio's intrigues, so that Michelangelo's friends Vasari, Vignola, Cavalieri and others, deemed it necessary to ensure the authority of his designs by publishing prints of them.<sup>115</sup> Of course the model of 1547 was used for this purpose. The results are three engravings by Stefano Dupérac: plan, lateral view and section.<sup>116</sup> The facade was not engraved, as [285] obviously there were no authentic documents available.<sup>117</sup> A subsequent artistic document regarding the design for the facade is the entirely forged fresco in the Galleria di Pio IV in the

<sup>114</sup> The most severe judgement on the decorative scheme of the walls can be found in Garnier, *Gazette des beaux arts* 1876 [unclear reference]. These opinions have been collected by Alker, *op.cit.*

<sup>115</sup> Dagobert Frey, *Michelangelostudien* ch. 5, 109 ff.

<sup>116</sup> Made in 1568; around 1570 handed over to the publishing house of Lafreri. See Huelsen, 'Das Speculum Romanae Magnificentiae', *Festschrift L. Olschki*, 121 ff. 1: Orthographia Partis exterioris etc. Huelsen *op.cit.*, 161 nr 93, [M.] Robert-Dumesnil [*Le peintre-graveur*, Leipzig: Barth, 1843-1876] vol. 8, 103. 2: Orthographia Partis interioris etc. Huelsen nr. 94; Robert-Dumesnil nr. 51. 3: Pianta del detto tempio, Huelsen nr. 95; Robert-Dumesnil nr. 52. A fourth sheet, executed in the year of Michelangelo's death by Luchinus has the exterior wall scheme as executed with an unfinished attic as its subject: 'Dissegno della parte di detto tempio ch'ora è finita'. Huelsen nr. 96.

<sup>117</sup> His own drawings that without any doubt contained designs for the facade were burnt by Michelangelo (report by Vasari about his inheritance, [*Vite*], vol. 7, 267). There was merely one ground plan of St Peter's, which Dupérac doubtlessly used as basis for his print; furthermore there was a study for a window, but otherwise nothing related to the building. Gaye III, CXXII [and] [Aurelio] Gotti, [*Vita di Michelangelo Buonarroti narrata con l'aiuto di nuovi documenti da Aurelio Gotti*, Florence: Tipografia della Gazzetta d'Italia, 1875], 2, 148.

Vatican (fig. 159). This dates to the same time as the decoration of the Vatican Library.<sup>118</sup> There, a second fresco that depicts the erection of the obelisk refers back to this first fresco.<sup>119</sup> Furthermore [there is] a print with the same subject by Giovanni Guerra da Modena.<sup>120</sup> In addition, a coin with an image dating from the beginning [286] of Paul V's pontificate is the last record before the project was given up.<sup>121</sup> The print by Guerra was further used by Frezza in Bonanni's illustrated volume.<sup>122</sup> The reconstructions from the nineteenth century mainly take the fresco in the Galleria di Pio IV as their basis (for example Canina and Cockerell 1857, Letarouilly 1882 etc.). Only when Dagobert Frey had pointed out the relative reliability of the prints by Duperac did it seem worthwhile to hark back to these first records. The three prints enabled a reconstruction of the missing print of the facade with an almost source-like exactness. The scheme was given in the lateral view and the ground plan; a record of the portals can be found in the side entrance in the lateral view.<sup>123</sup> The form of roofing over the doors and windows can be deduced from the alternating sequence that can be observed in the scheme of the rear walls (fig. 161). The height of the central pediment could be copied from Duperac; the filling of the lateral bays with the three-storeyed system of niches, in itself ugly, is accounted for in the two Vatican frescoes; and this can be explained partially in analogy to the lateral bays of the internal decorative system, and partially from the already mentioned diagonal corner fillings, which is to say, from the windows of the spiral staircases.<sup>124</sup> The missing print by Duperac can therefore be considered provided, but serious doubts remain with respect to the relation of this reconstruction to the real form of the building as it ought to have turned out according to Michelangelo's will, because Duperac, notwithstanding his otherwise exact rendering, had reduced the proportions of the height. That he had found this deviation from the design, as executed in the wooden model, can be doubted. In any case, the proportional height of the dome is diminished with respect to the executed building.<sup>125</sup> [287] In the reconstruction of the facade the order that agrees with Duperac's proportions produces a more squashed impression than would have been the case in reality. So, in order to advance towards Michelangelo's project, the reconstruction should be redrawn according to the available proportions of the executed parts. The last step would then be to make a perspective of the sketch gained in this way. The impact of the perspectival vanishing point is so strong in these heightened dimensions that it threatens to disturb the effective proportions by means of annoying optical distortions. It is especially doubtful if the so-called Duperac dome would have maintained

<sup>118</sup> Attributed by Alker to Paris Nogari, executed around 1587, and mentioned by Mutius Pansa, *Della libreria Vaticana*, [Rome: Giovanni Martinelli], 1590, 116.

<sup>119</sup> A detail of this is illustrated in Corrado Ricci, *Baukunst [und dekorative Plastik] der Hoch- und Spätrenaissance [in Italien]*, Stuttgart[: Hoffmann] 1923, cover image.

<sup>120</sup> Published in Barth. Grassius 1587 (ill. 160), often bound into one volume with the *Speculum* by Lafreri.

<sup>121</sup> Illustrated by Dagobert Frey, *Michelangelostudien*, 119 ill.45.

<sup>122</sup> Bonanni, *Historia Templi Vaticani*, fig.19.

<sup>123</sup> The colossal main portal in the two Vatican frescoes would have been practically impossible to realise and would have been ill-fitting in this place (Alker, *op.cit.*) This was introduced in this context by the arbitrariness of the veduta-painters.

<sup>124</sup> Illustrated by Dagobert Frey, *Michelangelostudien*, 119 fig. 45.

<sup>125</sup> With Duperac, the relation of width to height is 1 to 2,28; in the building as realised the width in proportion to the inner dome is 1 to 2.81. If we detract the camber of the dome of 6.3 meters, this leads to a proportion of 1 to 2.66.

itself in perspectival view. One should therefore either choose the Duperac cupola or the heightened dome for this perspectival sketch. In this context I have to abstain from the realisation of these four drafts, which could provide a good artistic impression only of Michelangelo's project.

In addition it remains doubtful whether the rhythmic scheme of the columned vestibule, which we only know in plan form, was also expressed in [288] the cornice by way of crossettes. The basic concept of the facade is that of an ancient portico, as it can be observed at the Pantheon, being one of the most noble remains from imperial times. Strangely enough, the Renaissance had not lapsed into the revival of this ancient temple form. It was only Michelangelo who dressed its strong pathos in a Christian guise. The zealots of the Counter Reformation were not happy to discover that the dedication "Templum Divi Petri", which originated in the Renaissance and stuck to the building, was reinforced by the application of a pagan architectural element – still the artistic effect of this deed could not be prevented. Although it was never executed, the portico of St Peter's became an archetype for any solemn portico that was extended in front of many a Baroque church; the Neoclassical period even ascribed profane functions to this form.

In order to revet the facade of St Peter's following the scheme of the Pantheon, it would have been logical to erect a portico with at least six columns and to crown this with a single broad pediment. We even have some slight evidence for the presumption that a similar concept had originated in Sangallo's workshop.<sup>126</sup> But Michelangelo shied away from this form; partly it seemed to him to be too ponderous and too pagan, and partly it corresponded with his concepts of architectural honesty that the portico should not be wider than the corresponding nave. He therefore constructed it with four columns and flanked it on either side with three, which are positioned at the side entrances, as facade architecture in the form of ancient triumphal arches. The airiness and the spiritual effect were secured in this way, but in comparison with the enormous torso [of the church itself], the portico had become too weak. It therefore had to be supported by rhythmic elements and I presume that this could only have been achieved by means of the effective motif of crossettes in the cornice above the side portals, which I have included in the reconstruction.<sup>127</sup> As soon as crossettes are applied to the cornices, two of the applied columns become optically related to the central group while the rest function as pairs at the corners. [289] The recession had to extend the full depth of the columns, as the attic was not projected over these but behind them (see also the lateral view, fig. 161). The crossettes are also required for the rhythm of the intercolumniations. According to the plan by Duperac, the following rhythmic sequence appears (measures in centimeters):

9 | 13 | 7,5 | 7,5 | 12 | 7,5 | 7,5 | 13 | 9

Thus, the central interval is smaller than that of the side portals (12 : 13) and the lateral intervals of the centre are smaller than those at the corners (7,5 : 9). This very well thought-out rhythm, which was applied with the greatest economy in width, cannot have been coincidental. The principle of metric sequence ought to be overcome here. And thus, this rhythmic principle would have appeared on the facade in the motif of coupled columns,

<sup>126</sup> [There is] an anonymous pen drawing in the British Museum for a statue of Paul III holding the model of the church in his hands; published by E. Steinmann, *Die Sixtinische Kapelle* vol.II, 482.

<sup>127</sup> This alternating is documented in the brass medal of 1609. See p. 286 note 1 [=121].

more specifically at its corners, and consequently this would have been applied as coupled pilasters on the other walls.<sup>128</sup> There [these pilasters] would have had to deal with the curved shape of the apses with which they naturally would have conflicted. The cornice had to yield to a curve, and it recedes in the main bays, while it does not do so over the supporting elements. This measure, which appeared so naturally on the facade, has a consciously bizarre effect in the rear parts of the building, but is surely not meant as such because Michelangelo intended to balance the inevitable misshapeness of the static structure with decorative elements. Partially these [misshapen forms] have been mastered, partially they are excused by the painterly motif of the window coffers, the effect of which had already been tried in the project for the Capitoline (see above, p. 201 and 211); furthermore, the pilaster strips [lesenes] [visually] reinforce the architectural structure, and [finally it is mastered by] the artful forms of the windows and niches that, without being sacral, still result in a particularly solemn effect. Sangallo had introduced this development with the uppermost row of windows in the Palazzo Farnese, [and] this enjoyed a glamorous reprise in the Capitoline palaces and in St Peter's. But on the whole, the scheme of the [exterior] walls repeats itself too often; it is too violent to be seen so often in a sequence, especially since its justification by means of the main facade is lacking. It encompasses the building with detailed execution in massive travertine. In the mature [290] Baroque, there are no examples of this kind of procedure; later, only the facade is decorated in travertine and the lateral walls are left unarticulated, not only in longitudinal churches but even with centralised ones (see above, p. 99f).

Michelangelo surely intended to begin immediately with the execution of the facade; but there were insurmountable obstacles against this. To the east of the construction site, the remains of the Constantinian basilica were still standing and these could not be demolished before the new building was vaulted and given over to liturgical use. Therefore, all energy was directed to finishing the choir; in 1557 the external walls of the southern and northern apses had advanced so far that the vaulting of the half domes could be initiated.<sup>129</sup> On the western side, the provisional choir still existed, while in the centre gaped the enormous space of the dome. It was there they had to proceed, with the advantage that the construction site had shrunk to a small part of its original size, while the increasing height and the issues of statics complicated the work. Only now the second part of the double construction, as Bramante had conceived it, was begun. Both the drawings by Michelangelo and the large model of the dome provide clarity about how, from 1557 onwards, they concentrated on this issue.<sup>130</sup> In the meantime, though, they could only think of constructing the drum, but this

<sup>128</sup> The intention to cover also the corners of the building with coupled columns [instead of pilasters] was obviously not considered in the execution; but this is handed down to us in two plans in the Uffizi; [see] Geymüller, *Urspr. Entwürfe* [meaning *Les projets primitifs*] ill. 45.

<sup>129</sup> In 1557, there are reports on the complications with the vault of the southern apse's half-dome (Vasari, [*Vite*] vol. 7, 246). That the form of the abutting pillars was changed at this moment, as has been supposed by Alker, I consider impossible. According to Alker's measurements, the space between the pilasters on the abutting pillars would have been 1.36 meters wider than on the pillars under the dome. Indeed, I was not able to ascertain this deviation in the transept; it only exists in the chevet and can there be related to the irregularities [that followed from] the addition of the western choir in 1585.

<sup>130</sup> The preparations for the model probably go back to 1556; the model was executed between November 1558 to May 1561. K. Frey, 'Regesten' *op.cit.*, vol. 30, Beiheft, 171-180. The Michelangelo drawings Frey nr. 168-170 and 208 are related to the construction of the dome; apart from that,

was to have contained the required abutments, so they already had to decide about the form of the dome and its static proportions at this moment. This calculation was at least solved up to the point that later on only simplifications could be introduced into the static system.

#### [291] THE CONSTRUCTION OF THE DOME

In the history of the dome of St Peter's the issue of Renaissance versus Baroque condenses itself to four monuments: the dome by Bramante, that of Sangallo, the so-called Duperac dome and the cupola as executed. The model of the dome of 1558-1561, already discussed, which today can be found in the museum of St Peter's, inserts itself between the latter two. There is hardly an architectural challenge in which the nature of a change in style has expressed itself so clearly as in this one especially.

The intention of Bramante to raise the Pantheon up in the air was not only impracticable, it was also debatable in an artistic sense, as no building needed the nearness of the earth as much as the Pantheon. And in no other building is the impression of boundless and pagan-like power embodied in the colossal width of its external walls that counterbalance the moulded dome and its span of 43 metres. The force of the walls obviously determines the lighting; as no window openings could be broken through the side walls, the only source of light is the top opening, a means of lighting of wonderful primitiveness that, as far as I know, has never been repeated. So, in the building of St Peter's, the Pantheon form would have led to defective lighting, apart from static problems. But it was not meant to be such a literal copy; the pagan archetype was meant to be spiritualised. This was ironic as eastern Romans and northern Italians had dealt with the issue of the dome for centuries, only to find that their experiences were now ignored altogether. Bramante was familiar with the drum and dome type in Venice and Lombardy, but this was not adequate for his roman goals. Here, he aimed more for a combination of the drum and dome with the Pantheon (ill. 162). In the drum, no windows were meant to be visible and therefore it was faced both outside and inside with a colonnade, so that these windows would appear only as intercolumnia or slits. One finds parallels to the lowered position of the interior colonnade with respect to the exterior in Gothic wall schemes.<sup>131</sup> Whether the external tambour would have been able to carry the load, and balance the lateral forces of the dome, must be strongly doubted. The shell of the dome is solid, curved both inside and out with segmental arches and has been drawn from the idea of rotation – which determines its Renaissance character. The Florentine dome [292] was considered a Gothic object, as it had been given a double shell and drawn within a regular octagon. That Bramante intended to interpret the form of rotation in its purest sense can be gauged from the fact that he left the inside of the dome's shell without coffering; Geymüller erroneously drew coffers in his reconstruction of the cupola. Raphael's small dome in St. Eligio dei Orefici provides us with an idea of how such a spheric dome would have worked.<sup>132</sup> It contains something Venetian and, in our eyes, unclassical. One could imagine the flat surface covered with golden mosaics. Indeed, the High Renaissance found its way back to the segmented dome (Capella Chigi in S. Maria del Popolo).

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[Friedrich von] Marquard, *Handzeichnungen Michelangelos im Museum Teyler zu Haarlem*, [Munich: Bruckmann] ill. VIX [sic] and XVII.

<sup>131</sup> The interior order is placed 10 palmi deeper than the exterior one; moreover, it is 4 palmi lower. For the entry of light, a relatively small zone of 38 to 40 palmi remains.

<sup>132</sup> Corrado Ricci, *Baukunst in der Hoch- und Spätrenaissance*, fig. 25.

Sangallo would not have been satisfied with Bramante's dome, as it would only have an effect as a dominant element when set over a richly structured and relatively low building. Sangallo concentrated the architectural mass on a single cube, obtaining a reasonably unified spatial effect in which the squashed dome would no longer assert itself. Moreover, the facade required the dome to rise higher (fig. 152). It is therefore artificially heightened. On the interior, the drum does maintain the form of a low colonnade in which the intervals alternatively are open, closed, or provided with a blind niche. The shell now takes on the form of a beehive that obviously was meant to be drowned out by coarse coffers. On the outside, Sangallo sought more effective counterbalances (fig. 157) as it was a solid dome that was probably meant to be executed as a moulded vault. So he draws two arcades one above the other, of which the upper one does not provide any light for the interior. This is the traditional motif of the Colosseum, now turned into a banal form, which also played a certain role in the revetment of the walls of the apses. In any case, the austere stacking up of cornices, the most impressive aspect of Bramante's design, has been effaced by the arches. That the cupola has a flat dome on the outside while the inside is stilted is part of the dishonesty of Sangallo's project, which we have observed elsewhere. On the other hand, in the Baroque sense it was an improvement that 32 ribs were applied to the dome. The concept of the sphere is suppressed in favour of vertical elements [creating] tension. The inordinately large lantern is still determined by the concept of the sphere however; here, Bramante's horizontal cornices and slit-like apertures have been used.

[293] In the context of Michelangelo's project for the dome, we have proceeded to the subject of the forms as executed; and almost imperceptibly we have come to the Baroque. Seen from Bramante's perspective it was the greatest concession that [294] Gothic forms could be created when Michelangelo drew the dome with a double shell and in the form of a ribbed cupola in its determinant parts – something which could not have come out of a spheric concept, but which is more comparable to a stretched tent roof. In the dome, where the Baroque dissonances of the lower structure had to be resolved, there is therefore a clear demarcation between the load-bearing and the space-enveloping parts, between the stable structure and the airy filling, which had been a Gothic principle and which was extraneous to the Baroque.<sup>133</sup> In deciding about these issues, Michelangelo harks back to the example of the cupola of the Florentine Duomo. But this approximation of medieval architectural forms remains conditional: Michelangelo's dome is compiled from classical elements. Between the 32 segments of Sangallo's dome and the octagon of the Florentine [Duomo], Michelangelo chooses the midway solution of sixteen sides. The tension of the ribs can be sensed without the loss of the hemispherical form (at least in the original version as handed down through Duperac's print). Michelangelo's dome stands on the borderline between the Renaissance and Baroque, similar to the transition between the Middle Ages and Renaissance that the Florentine cupola represents. Here we consequently find the case that the forces of two different and contrary periods do not intersect in a Mannerist way, but the synthesis of two world views facilitates a monumental epitome.

The same is valid for Michelangelo's dome project as for the rest of the building, namely that from the planning phase in 1547 up to the death of the master no changes, or only insignificant ones were made to it (fig. 163). We are informed in a letter from

<sup>133</sup> See above, p. 55. This approach using Gothic principles significantly appears in a constructional issue; where the Baroque operates in a decorative and non-structural way, he [=Michelangelo] chooses another relation between frame and filling. 'The fillings should spill over'.

Michelangelo to his nephew in Florence that he obtained the measurements of the height of the lantern of the Florentine dome in 1547.<sup>134</sup> This procedure conjures up the question of whether Michelangelo had at that moment decided to follow the Florentine example more closely and, for example, intended to crown the building with a Gothic lantern, as also appears in the drawings around 1560. It is possible that the model of the dome of 1558 deviated from the original project and that Duperac in his print of 1568 had based himself on this newer model. [295] I do not see any urgent reason for such a complication in the issue of the dome, as the measurements of the Florentine lantern only concerns the definition of the proportions that, as experience teaches us, had such a positive artistic effect in Florence. Michelangelo took the forms from quite another source; from the outset, they arose in the version documented by Duperac from the approximation of the Sangallo lantern to the new scheme of the walls. Hence the model of the dome of 1558 constituted only an extrapolated detail of the entire model of 1547.<sup>135</sup> In this case, the designs for Gothic lanterns can then be interpreted only as studies, or at the most as alternative designs, that would have coincided with a different concept for the drum.

In the preceding projects, from Bramante to Sangallo, the drum of the dome had been designed in such a way that the colonnades constitute the main motif while the windows were hidden and did not contribute to the effect of the building as a whole. Michelangelo turned this relation on its head: he reintroduces the motif of the window and designs these openings with that wonderful seriousness that window forms normally do not condescend to.<sup>136</sup> The load-bearing elements have been combined into groups that adopt the motif of coupling from the lower part of the building. At the same time, the drum is given a more favourable relation to the cupola, and regulation of the proportions was introduced where it had been lacking: the inner and outer parts of the drum are given the same height and are positioned at the same level (fig. 164). Even in this difficult zone, the inner and outer construction ought to stand in unequivocal relation. On the same basis, the two attic zones start on the inside and outside; but here an alteration is introduced because the internal attic has only half the height of the external one. This difference prolongs itself in the division of the two shells of the dome.<sup>137</sup>

[296] It is Alker's great merit to have reached the conclusion that Vasari's description of the cupola (*Vita of Michelangelo*, 1568) was based on the Duperac prints, and therefore to have opened up the question on the dome centres which had been inherited from Vasari. Vasari discusses four dome profiles, of which two constitute the inner shell, and two are for the outer shell. The inner shell was constructed entirely with round arches, but these arches do not form full half-circles but segmental arches. The starting point for this system is in C,

<sup>134</sup> Dag. Frey, *Michelangelostudien*, 108, ch. 5. The master builder of the Florentine Duomo was expected to take these measurements.

<sup>135</sup> In the present model, only the drum and the interior shell of the dome originated in Michelangelo's time; the exterior shell dates probably to after 1585. According to a notice from Sackur (*Zentralblatt für Bauverwaltung* 1921) Alker had discovered an original model of Michelangelo's lantern. No conclusive judgement can be made about the development of this element of the church before the publication of this monument. More on the style of the lantern on 298 f and 307 f, below.

<sup>136</sup> Often windows were used in traditional drums (planned at the Consolazione in Todi, executed in S. Biagio in Montepulciano). The profane window with pediment was, in this context, a new invention by Michelangelo.

<sup>137</sup> This internal attic is almost 10 palmi lower than the external one; this is the same difference as between the start of the two dome shells.

from where the curvature of the inner shell is drawn (fig. 164). [This point C] is situated on the upper edge of the balustrade that runs around the cornice of the drum.<sup>138</sup> It is surprising that such an unstable point was selected as the pivot for such a massive construction. In reality, this point was not freely chosen, but was deduced by means of subtraction: it is located at the halfway point of the external attic and below the base of the corresponding [inner] dome. The result of this is that the arch of the dome is given the form of a segmental arch, which is to say, starts with an acute angle, and only in the zone of the attic rises at right angles. This curve belongs to the system of the Duperac dome. In the interior this might not have had many consequences, but on the exterior this motif is crucial, as it determines the effect of the silhouette as a whole. [297] According to Vasari's description, this [outer shell] was also arrived at from a round arch and equally reduced to a segmental arch. Its centre lies at point A, at the upper edge of the interior attic; and this point also was determined by means of subtraction. It is located at the halfway point of the height of the exterior attic and below the base of the corresponding [exterior] dome. This establishes the fact that the outer arch of the dome starts at an acute angle and only within the zone of the attic resolves itself into half a circle. This way of constructing the dome was an indispensable aesthetic necessity; had a full half circle been placed over the attic, the whole [dome] would have had a stilted and therefore ill-formed effect. The fourth arch of the dome is the one that constitutes the inner side of the external shell. Vasari offers a strange account of this: it had been drawn as a pointed arch, from point B, also located at the upper edge of the interior attic, not in its centre but 2,5 palmi (0,56 m.) away from the centre. [298] This pointed arch would not have been visible; it only served the practical aim of introducing a tapering of the outer shell of the dome at the point where it meets the round outer arch.<sup>139</sup> For the procedure of raising the cupola, it is not unimportant to know that they had already tried to construct the pointed arch from the same base line by means of moving the centre laterally.

Michelangelo envisioned the structure of the inner shell of the dome as being constructed out of travertine.<sup>140</sup> It is hard to imagine, though, how the robust profiles in stone could have been attached to the spheric brick surfaces. Maybe he had travertine stucco in mind. A report on the construction of the cupola that was obviously written shortly after Michelangelo's death deals with the issue of materials.<sup>141</sup> According to this report, the dome ought to be constructed entirely out of brick, except the frames that, whether in brick or in travertine, in all cases would lead to enormous costs and negatively influence its stability. Thus these frames had to be plastered in gesso, as indeed was done later. In Michelangelo's project the colouristic effect would have been limited to white and golden yellow; I will come back to the mosaic decoration later. Finally we can say that Michelangelo would not have spurned constructing his lantern similarly to that of Sangallo. Of course he stretched it slightly and instead of a simple colonnade, here he again introduces coupled columns. As an architectural type, however, it remains close to that of the Renaissance. It has the same form as those already considered a family staple by Giuliano da Sangallo.<sup>142</sup> Michelangelo obviously intended to continue with tranquil forms after having solved the disharmonious

<sup>138</sup> The balustrade has not been executed as such; it was replaced by a thin iron railing.

<sup>139</sup> Duperac did not notice this peculiarity; it might be concluded from this that the print was made after the model of 1547 in which this contrivance had not yet been applied.

<sup>140</sup> Vasari, [*Vite*] vol. 7, 255; see also below, p. 309f.

<sup>141</sup> K. Frey, 'Regesten', *op.cit.*, 151f, document no. 18a.

<sup>142</sup> Dag. Frey, *Miscellanea Francesco Ehrle* vol.1,2, 432ff, ill. 2 and 3.

situation [of the lower half of the building]. In this respect the lantern constitutes the absolute opposite to the Florentine, the specific principle of which consisted in broadening a very slim turret into a lantern by means of abutting piers. I therefore interpret Michelangelo's sketch-designs [for a lantern] resembling the Florentine example, only as proposals for the case of a similarly Florentine concept of the dome. The conclusion [299] of the lantern follows tapering by means of scrolls that similarly reminds us of Sangallo, and a metal-like spire that is based on a sphere. This was the project; how did the execution go?

Once they had started building the drum, the static issues could no longer remain unresolved. It is not a foregone conclusion that a beautifully drawn dome is also plausible as a construction, nor that a correctly constructed cupola at the same time has to be beautiful. More often, aesthetic and static requirements stand as opposite forces to one another. But not always. In the Gothic period for example, they dissolve into one another. With the building of the dome of St Peter's, however, the solution between the two aspects was only arrived in the very last hour, and this was not entirely satisfactory.

Seen from a static perspective, the Duperac dome is a pretentious construction. The ribs are shaped as segmental arches that do not arrive at their basis in a complete right angle, resulting in a strong lateral thrust. Whether the building would stand or not, depended on the force of the drum to balance this [lateral thrust], but this had been diminished in its material weight by the window openings, that could not have been made smaller without aesthetic infringement. More was therefore expected of the abutting walls than they could fulfill without offering up their natural grace. Indeed, the abutting elements were insufficient without further measures.

In matters of statics Michelangelo had little experience; he will therefore have consulted specialists, and doubtlessly they will have tried to convince him of the impossibility of his project. Only in this way can it be explained how Michelangelo toyed with the thought of inserting round windows in the drum following the Florentine example. Without any doubt, these would have had less effect on the mass of the wall, but in every other respect it would have been unbearable to see the energetic form of the tambour hampered by the restful forms of the oculi. A second proposal went in the direction of placing colossal statues 4 meters high on the abutting walls; their weight would have significantly heightened the load-bearing force of these abutments. They would therefore have fulfilled the same function as the pinnacles of Gothic cathedrals. This thought was not new, however; already at Florence cathedral they had considered strengthening the vaults by placing colossal statues on the cornice.<sup>143</sup> This fantastic project was never executed, but a fresco in the Capella degli Spagnuoli, that Michelangelo must have been familiar with, illustrates the planned sculptural decoration. Such figures set in front of the attic [300] of St Peter's dome would have been a truly dubious artistic addition. There are views of the building in which the transition from drum to dome seems hard and direct. Figures might have softened the situation, but on the other hand they would have ruined the austerity of the architectonic structure.<sup>144</sup> From other viewpoints, the natural perspective introduces a blurring of the forms so that one does not miss these figures directly. In any case, this project

<sup>143</sup> Burckhardt, *Geschichte der Renaissance*, 5th edition par. 19; references to documents in Gaye, *Carteggio [inedito]* vol. 2, 454f and 466.

<sup>144</sup> In his reconstruction of St Peter's Alker included not only at the dome but also in front of the lower attic rich ornamentation in the form of figurative sculpture ([Friedrich] Ostendorf, *Sechs Bücher vom Bauen [enthalten eine Theorie des architektonischen Entwerfens]*, Berlin[: Ernst] 1920, 3 vols, vol.3).

was abandoned for financial reasons. A third proposal, probably by Michelangelo himself, was realised: in each abutting pier two iron rails were walled in and connected with each other by means of diagonal junctions.<sup>145</sup> Only through these interventions is the dome standing, because an iron construction is eminently stronger than one made of brick, such that even the addition of few iron elements suffices to call forth the appearance of static improbability. Without any doubt, Michelangelo perceived a charm in this artifice, as it agrees with the spirit of the Baroque to veil the true situation and to create an illusion as if the form continually has to recreate itself anew.<sup>146</sup> This sublime form is the same as what we have called the motif of struggle in another context. In other buildings by Michelangelo we find similar [characteristics]. For example, in the Capitoline palaces the stretched architraves have also been made capable of carrying their load by means of iron bars. Still, this kind of artwork presupposes a beholder whose eye is susceptible to such correlations.

In St Peter's dome these iron rails have proven their worth; of course they have the disadvantage that strains are caused by earthquakes. [301]. In the present situation the abutments show critical cracks and the rumour that the dome is endangered will not disappear.<sup>147</sup> Although I am of the opinion that the iron rails will serve their function for quite some time, when new problems arise a comprehensive solution could only be reached by executing the planned colossal figures in order to weigh down the abutting piers, granting the material weight of stone its own rights as opposed to the iron construction.

When Michelangelo died the building had arrived at the level of the attic on all sides. Half of the lower attic ([the one belonging to] the building itself) had already been erected by Guidetto Guidetti, and for the upper one (of the dome) the stones had been prepared. On the whole, an enormous architectural achievement was concentrated in the eighteen years of Michelangelo's term in office. A fierce discussion arose over his inheritance.<sup>148</sup> Vignola, who had been appointed coadjutor in the building workshop in 1552, continued the work, [although] no official certificate of appointment can be found. The pope obviously planned to entrust Pirro Ligorio, the head builder of the Vatican Palace, with this highest office. When building works were slowing down, the rumour spread that Pirro Ligorio intended to introduce changes to Michelangelo's project. This news was interpreted as if the ground plan

<sup>145</sup> The exact location of the rails can be seen in the dome model in the museum if in the section the first abutting pier to the right is opened. This construction of rails seem to me to have been the first reason why the model was executed in such a large format and why it was kept so carefully, as in the building itself the rails are completely walled in and for later master builders it must have been of the utmost importance to know where these rails were located so as not to cause great problems by wrong interventions.

<sup>146</sup> 'Baroque architecture, behind the scenes full of technical artifice, makes one forget that human creation lies in technical conditions. It gives its works the exuberance of creation which is not limited by technical requirements. [Wilhelm] Hausenstein, [*Vom*] *Geist des Barock*, Munich: Piper], 6th edition, 13.

<sup>147</sup> I have not had access to the most recent controversies on this issue between the American architect Hafner and Swartwout; Victor L. S. Hafner, 'Comparative notes on the Dome of St. Peter's and the original model by Michelangelo', *Journal of the American Institute of Architects*, December 1922[: 386-388]; idem, 'A Response. In reference to the criticism written by Mr. Egerton Swartwout' in *The American Architect [and the Architectural Review]* of January 1923 upon my article [of which the title is unknown] in the *Journal of the American Institute of Architects*, in idem, 1923. The same, *The Dome of St. Peter's Cathedral in Rome*, Rome, manuscript of 1924.

<sup>148</sup> Vasari, [*Vite*] vol. 7, 245, 257 and 266.

of the Greek cross had already been under discussion at that time and that the addition of a nave was being considered (Alker). It is more likely that this debate concerned the construction of the dome. I would like to connect these events to the two reports published by Karl Frey.<sup>149</sup> These were probably written in 1566 and indeed demonstrate strong differences within the workshop. The first is severely factual [and] was produced by a specialist who was close to Michelangelo, possibly Vignola. It proposes a number of technical simplifications; with respect to the forms (ordine), the master builders [302] ought to be committed to the authoritative design (in other words that by Michelangelo). For the rest, the report refers to a construction drawing that has not been preserved. The second report could very well come from Ligorio, considering its tone and contents; it ought to be regarded as a counter-expertise. Without any static knowledge, and with reference to academic and historical arguments, the author maintains that Pius IV (who died on December 10, 1565) entrusted him with the vaulting of the dome. This means that filling the post was still undecided upon at the time of death of [this] pope. Furthermore, the memorial bases itself on the expertise of Fra Guiglielmo (della Porta, died 1577) who belonged to Michelangelo's school and who was familiar with the issues. The author requests a return to the architecture of arches and to a simple, solid shell, in other words, to the type proposed in Sangallo's project. The intervention against Ligorio of Michelangelo's friends (see above, p. 284) opposed any alteration to the dome. It was only through the formal dismissal of Ligorio and his move to Ferrara that Vignola gained a free hand in the building workshop.<sup>150</sup> But little happened in a practical sense as Pius V was not interested in the project. Vignola completed the attics and put up the two subsidiary domes at the front, [which are] enchanting and airy structures that have been robbed of their effect by the construction of the longitudinal [nave]. I doubt whether their execution diverges so radically from what Michelangelo had in mind, as Willich assumed; the way in which they were handed down in Duperac's print can hardly have concurred with Michelangelo's concept. Maybe they were not included in the model from which Duperac worked, or maybe Vignola did not make the authoritative sections available to the printmaker. In any case, the subsidiary domes in Duperac's prints were not left untouched by his wretched French taste. After the death of Vignola in 1573, a period of increased building activity would be expected, especially since the enterprising Buoncompagni pope had risen to power the year before. He appointed the properly educated, but little experienced, Giacomo della Porta, who took up Michelangelo's legacy nine years after the master's death. But the financial resources had almost dried up and, apart from that, the principal architect was either too profane in his tastes, or else too little interested in technical issues, to press the pope to build the dome. Therefore, thirteen years passed without any visible progress. Only Sixtus V had the energy to decide and enough means [303] to order the execution of the enormous construction. In 1585, immediately following the beginning of his pontificate, he had the old, provisional west choir demolished, and in the unbelievably short time span of only three years, the western choir, which constituted an indispensable requisite for the completion of the dome, was erected. Immediately after the completion of the choir, the cupola was started.<sup>151</sup> As Giacomo

<sup>149</sup> Karl Frey, 'Regesten', *Jahrbuch der preussischen Kunstsammlungen*, vol. 33, 151-153, no. 18a and 18b.

<sup>150</sup> [Hans] Willich, [*Giacomo Barozzi da*] *Vignola*, [Strassbourg: Heitz, 1906], 130f; Alessi had not accepted this position; Ligorio's discharge was dated 31 October 1567.

<sup>151</sup> J[ohannes].A.F. Orbaan, 'Zur Baugeschichte der Peterskuppel', *Jahrbuch der preussischen Kunstsammlungen*, 1914 Beiheft [which seems to be a mistake] and 38, 1917 Beiheft, 189-207.

della Porta did not have real technical knowledge, he was flanked by Domenico Fontana, who probably was the driving force. The dome was closed in 22 months, in its familiar raised silhouette, and the question arises whether the master himself or the executive [304] architects should be credited with the full merit of the formal results of the dome. This question is always put as one of quality; who else except Michelangelo could have invented the unsurpassable harmony of the dome's silhouette[?] In my view, the issue of the dome has been slanted too much in the direction of individuals; the task was not of such a character that it left much space for personal [creativity]. Actually, the silhouette of the dome has not been [artistically] conceived, but is the result of a whole complex of architectural conditions. The incomparable aesthetics of the building is not found in the way the arches have been profiled but in the way the centres of the domes, the position of which is decisive for the starting point and the ascent of the shell, have been determined. In this central question, the dome as executed conforms to the constructional method of the Duperac dome. Only in this particular way can the building as realised be considered as being by Michelangelo.

The supposition that Michelangelo was the designer of the dome as realised was partially based on the model of 1558, the exterior shell of which shows the raised form, and it was partially based on the assertion that Duperac falsified the measurements in his prints.<sup>152</sup> Dagobert Frey was the first to critically investigate the model and its history (*Michelangelostudien* ch. 5 p. 94ff). His opinion that the exterior shell of the dome was only added in the eighteenth century cannot be upheld, though. In contrast, Alker suggested that the shell in question was made shortly after the beginning of the Peretti pontificate in 1585.<sup>153</sup> As the Duperac dome is, in addition, confirmed as original by Vasari's description, there remains only one weak argument that Michelangelo indeed considered heightening the dome: the drawing in the Teylers Museum in Haarlem.<sup>154</sup> In the discussion of static problems, such a solution just had to appear some time or other, as a steep dome is more easily abutted than a flat one. [305] The steep silhouette could therefore still be ascribed to Michelangelo if the Teylers drawing indeed contained the authoritative contour. This is not the case, however; it is an unartful outline drawn with little consistency, in which nothing of the ideal qualities of the form as executed can be found; it should be considered only a sketchy reminder for further detailing. With this, Michelangelo's authorship [of this drawing] has been shown to be groundless. Alker does leave open the possibility that the exterior shell might have been made in the years 1561-1564, but I consider it impossible that Vasari in his description of the dome in 1568, which originates in the building workshop itself, left unmentioned such an important detail. It is an entirely different question if the raising of the dome was in Michelangelo's spirit. I would like to believe that this can be answered positively; when the perspectival alignment, and the overlappings that the dome would have been subjected to, are taken into account, the cupola in Duperac's design would

<sup>152</sup> Letarouilly and Garnier contested the attribution [of the dome] to Michelangelo while other researchers affirmed it, most recently [Albert E.] Brinkmann, 'Das Kuppelmodell für San Pietro in Rom', *Repertorium für Kunstwissenschaft* 43, [1922], 92, where the invention of the exterior shell of the model (after 1585) is conceded.

<sup>153</sup> H.R. Alker, 'Das Michelangelomodell zur Kuppel von St. Peter in Rom' in *Repertorium für Kunstwissenschaft* 43, [1922], 98. This is discussed more in depth in his dissertation. There is an announcement of the results of his research by [Ernst] Sackur, [title unknown] *Zentralblatt der Bauverwaltung* vol. 41, Berlin 1921, 301f.

<sup>154</sup> F. von Marquard, *Die Handzeichnungen Michelangelo's im Teylermuseum in Haarlem*, Munich 1901 fig. XVI and XVII.

indeed appear to be squeezed, and the ageing Michelangelo was already taking the perspective view from afar so thoroughly into account that he did not close himself off from this argument. Furthermore, the drum had already struck such an energetic rhythm that it cannot have been unwelcome to him that the dome would have continued this, completing the spiritualisation of the form. It certainly cannot be said that Michelangelo's concept had been ruined, but the change was indeed fundamental. For it does not concern only the few meters that have been added, but rather a contrast between different types of domes, of which the first is constructed with segments of a circle while the second is made with pointed arches. The ascent of the calotte has such a winged effect that the drum stands under it as an earthbound form. In the Duperac dome, this relation would have been reversed. But the victory of the vertical [line] is [the result of] a building process that reflects the general mood of the end of the century: the triumph of the Counter Reformation spirit.

The factual process of the heightening of the dome should be imagined as follows. First, the model of 1558 is given a new external shell in the years 1585-1586; the bases of the outer ribs were already decorated with the Peretti family coat of arms. This addition cannot have served the cause of recalculating the static structure, as it had already been determined by the drum and the most important static issue, namely the relation between the exterior and the interior shell; this was left [306] out of consideration in this model [as] the interior shell maintained its old form and was not related whatsoever with the statics of the external shell. [In other words], the experiment only concerned the aesthetic result of the profile. For the rest, the static calculation of the steeper dome promised to be so much more favourable that changes in the abutment were not necessary. The new centres were much more crucial for the artistic effect. The curvature itself, that is said to contain so many secrets, is of a pure geometric nature; a child could draw this. Its secret lies elsewhere.

As has been explained above, Michelangelo attached great value to the acute angle of the base of the ribs, which he stuck to even notwithstanding static requirements (see above, p. 299). The danger existed that in raising [the dome], the centres would be located higher up and therefore the dome would be stilted. Erroneously, Ferrabosco included it this way, and all others who believed in the correctness of his section, especially Durm, have arrived at erroneous conclusions. The specific genius of the dome lies in the fact that as Michelangelo intended it, the acute angle of the base of the ribs was maintained notwithstanding the raising of the dome, and the steep form is arrived at solely through the pointing of the arches. The centres of these arches remained on the old base, namely at half the height of the exterior attic and so still below the base of the dome. All other [changes] were achieved by the lateral movement of these centres. This is fundamentally a paradoxical measure; the image of heaviness is maintained while, notwithstanding this, it is trumped by the expression of spiritual liberation. But in the end, this is the paradox of the Baroque spirit.

It remains to be determined how much the new domes' centres have been shifted off axis. One could say that this was precisely enough that the slenderness of the pointed arches agreed with the idealism of the period; but there is no lack of exact relations. As the entire construction was based on the Duperac dome it would be logical to develop the raised [form] from this model. If we take the distance between the base line a-b and the upper edge of the lower attic in Duperac, and if we draw a circle using this radius from the base of the dome, this arch will intersect with the base a-b at point D. This constitutes the centre of the new outline for the pointed dome. If we reverse this circle and draw a circle with point D as its centre, these [two] curves will match exactly the outline of the dome. [307] But as there is no exact section of the dome, the correctness of these proportions cannot be proven, only

approached. For example, if we project this system of lines onto a photographic image of the dome in Magni's *Barocco a Roma*, which comes close to an orthogonal view of it, the pointed arches as constructed conform precisely with the actual outline of the dome (fig. 166). This result was only arrived at in the building at the very last moment; the exterior shell of the model has not yet achieved the final slenderness of a truly pointed arch silhouette. This [exterior] shell would have fallen two metres short of the vertex of the dome as realised, had it been constructed according to the model.<sup>155</sup> Indeed, the shell of the model does have a more spheric effect; only in the precise, geometrical and technical execution did the much admired purity of the pointed arch appear, which could not have been copied in any other dome in the world with a comparable amount of idealism.

After the completion of the dome, Sixtus V ordered the execution of the lantern, [308] which was constructed in brick in order to make it less weighty; it was also to be painted the warm yellow-ochre of country villas.<sup>156</sup> The pope did not see its conclusion. Fortunately, there was not much left to do in the building for the Aldobrandini pope; the most important technician, in the figure of Domenico Fontana, had left Rome and the era of neo-Humanism that began with Clement VIII was anyhow adverse to the concept of large undertakings. They stuck to decorative projects that were cheaper and more entertaining. They maintained Michelangelo's drawing of the lantern and at the same time they had the courtesy to adapt it to the altered situation. The proportions were slightly stretched and the transitions were made milder and more elegant. Candlesticks were used for the vertical conclusion instead of crowning volutes. But nothing is as indicative of the mature phase of this style as the [309] changes introduced to the apex (fig. 167). It is stretched and curved in the form of a pear, its base is an elastic bead and covered with ribs. So even here, where the building is transformed into metal and therefore the form of the sphere has prolonged itself, the principle of ribs and the bracing of a tent triumphs. The conclusion at the top is also animated: two ribs each roll together in the form of a volute, while two others disappear; and so it continues full of variations. The sixteen ribs are reduced to four scrolls so that at the top again the number four and the form of the sphere, from which the entire building was constructed, are placed next to one another.

The decoration of the dome interior was less fortunate (fig. 168). Here, the coffers of the shell had to extend themselves, so that Michelangelo's heavy decoration of the frames – a fugue of squares and circles – had to be toned down. These [coffers] were turned into rich and pleasing rectangles [310], and the understanding that plastic means would not suffice to dominate these surfaces led to the use of gold mosaics from which the figures of apostles and saints shine forth.<sup>157</sup> It certainly was not in conformity with the idea of the whole, to soften the palpable walls of this singular vessel by means of the glow of transparent stones. Moreover, in Italy the application of mosaic always carried with it the dubious association that it led to renouncing native fresco technique, this age-old fertile soil of the classic.

<sup>155</sup> Sackur, *op.cit.*, 302.

<sup>156</sup> The exact indications in Orbaan, 'Zur Baugeschichte der Peterskuppe' in *Jahrbuch der preussische Kunstsammlungen* 1917.

<sup>157</sup> The cartoons [for these mosaics] were designed by Giuseppe Cesari d'Arpino, they were executed by Zucchi, Roselli, Sabatini and others. [See Ullrich Thieme,] *Allgemeines Künstlerlexikon*, [Leipzig: Seemann 1907-1950] vol. 6, 310 and Regesten: O. Pollak, 'Ausgewählte Akten zur Geschichte der Peterskirche' in *Jahrbuch der preussische Kunstsammlungen* vol.36, [1915], Beiheft, 21 and Dag. Frey, *Michelangelostudien*, 124, ch.5.

Notwithstanding this, we have to be grateful to Cavaliere d'Arpino that his mosaics have adapted themselves willingly to the tectonic structure of the dome and that none of these Baroque giants with the brush, for example the younger Zuccaro or Lanfranco, dared to disfigure the shell of the whole with painted glorifications. Seen from this perspective, one readily comes to terms with the fact that a certain elegance pours from the dome into the seriousness of the building, even though the way in which figures and colours mingle with the architecture announce the approaching culture of painted decoration, which for the entire Baroque spoils the taste for true architectural effects: we are now [entering] the era of the Carracci.

### **Nave and facade**

Sixtus V's ambition was directed towards the completion of St Peter's, and to obtain a singular title of honour for the plebeian Peretti name. Even before the dome had been begun, he directed his attention to the issue of the facade, the solution for which might have been the crowning point of his life's work. The general opinion was that he would succeed in this. Therefore it is not surprising that a chronicle with images of the Pope's famous deeds anticipated the fact, and recorded the facade of St Peter's as already finished. The occasion for this was the erection of the obelisk, which was meant to be an inaugural gift for the facade and which offered many possibilities for visualising the expected effect of the front of the building (ill. 160). The caption of the print by Guerra, which belongs to a cycle of monumental undertakings, expresses both hope and confidence that the completion of the facade was expected during the same pontificate (1587). We are still dealing here with [311] Michelangelo's facade, and one could conclude from this that changes were not yet considered by then. But it has not escaped Alker's scrutiny that there were already doubts about the desirability of this facade in the print's caption. There, in small italics that might have been added only in later editions of the print, can the following suggestive words be found: "huic et alia commodior forma addi posset". These can only mean that influential figures were at that point arguing for a change in the facade. None other than the unscrupulous and talentless Domenico Fontana himself undermined Michelangelo's project, just as Ligorio had done before him. Fontana's own works tell us what he meant with 'different and more convenient'. He pursues the addition of the nave, and for the facade requires the complete breaking up of the rhythmic scheme – this might be the most surprising [concept] that the fading early Baroque can offer as a formal proposal.

The extension of the church had long been considered, but only by clerics. The construction of the subsidiary domes made clear that these aims were foreign to Vignola, as they could only really function in a centralised building.<sup>158</sup> Exactly when Fontana developed his project for the extension has not been ascertained, [but] he effectively gained influence over the building workshop only from 1585 onwards, and it can hardly be assumed that he was involved in designs for St Peter's before that moment. Until that point, the issue of extending was not yet ready to be expressed. It is only partially true that in the last quarter of the sixteenth century the attention to a centralised building had waned: in the circle of Michelangelo's students this never really disappeared (S. Giovanni dei Fiorentini, the design of which was worked on by Giacomo della Porta. The execution of this centralised church was renounced because of the existing bays for the nave. Furthermore, there is S. Maria Scala Coeli, etcetera). Only Julius II's allegorical and imperial concept to express in the building of

<sup>158</sup> Hans Willich, *Vignola*, 131

St Peter's the centre of a solar system, around which all other Christian churches would rotate as minor stars, had been extinguished. Following the beginning of the Reformation, this universal concept was mingled with bitterness. It was only with the pontificate of Urban VIII that it resurfaces. On the other hand, through the Counter Reformation study of scholastic literature, the symbolic Medieval representation of the church as the body of the Crucified [Christ] [312] was given additional nourishment.<sup>159</sup> I only mention this as a spiritual fluidum, as these concepts never possessed the power to produce a change in ecclesiastical architectural types in the real world. Indeed, until the 1580s St Peter's was presented as a centralised building; only under Sixtus V was the requirement formulated that the new building should cover the entire plot of old St Peter's; and for that reason, it should be given an extension. But even this I cannot accept as the reason; it was a mere slogan or catchphrase habitually issued by large ecclesiastical or state organisations, which had to be simple in order to pass by word of mouth. In reality, they did not reason in this narrow-minded way, especially since the image of the sacred was no longer connected to the fragment of the old church's building. It concerned much more concrete things: they needed space, much space. Even if the building had been laid out in large dimensions, this did not necessarily mean that its spaces were also functional. The popes considered it their privilege to be buried in St Peter's; the liturgy had increased in pomp and complexity; the music, with its display of musicians and instruments, had become a crucial element of the rituals. The entire planning of the space has been discussed in Bonanni.<sup>160</sup> A choir chapel should be added, a baptismal chapel, a sacramental chapel, sacristies and a benediction hall, which ought to be inserted into the facade block of the building, and which should function as a papal throne-room for festive occasions such as canonisations and benedictions. Two additional issues are connected with this functional program: linking the church to the Vatican, and the benediction loggia, which leads back to the problem of the facade.

The link between the church and the palace had been lost with the plans for the centralised church; but it never had been very practical, as the tomb of Peter was located too far to the west. Pope Julius had not consented to relocating it; so when they developed a centralised building around the relics, a direct connection to the palace could no longer be maintained. The Sistine Chapel sat in between, and from its [313] western end only a primitive corridor led to the church. As soon as they inserted a nave, the Sistine chapel could be circumvented on the eastern side, and indeed they constructed there the heavily trafficked connecting halls, the Sala Regia and the Cappella Paolina, which offered a direct route into the benediction hall. This last had its own history. We have seen that Sangallo was the first to insert this concept into the program of the facade of St Peter's, clothing it with incredible pretension. But Michelangelo was not inclined to stoop to this. The artistic concept of the colonnaded portico was so important for him that he ignored the considerations of state representation that could be connected to the loggia. He proposed to have no hall whatsoever in the facade, as architecture with windows would necessarily conflict with the architecture of columns. [He] merely [proposed] to excavate a loggia out of the wall of the

<sup>159</sup> J. Von Schlosser, *Materialien zur Quellenkunde [der Kunstgeschichte]*, Vienna: Hölder, 1914-1920, 10 vols] vol. 4, 36.

<sup>160</sup> Filippo Bonanni, *Historia Templi Vaticani*, Rome 1696, 103. Here, the spaces are indicated as following: 1. Sacarium pro Canonicis, Beneficiatis et Clericis. 2. Sacellum Sanctissimae Eucharistiae. 3. Sacellum Fontis Baptisimatis. 4. Sacellum pro Poenitentiaris. 5. Odaeum. 6. Contrasacellum, at the start planned as Secretarium.

facade, an empty space, which would have its entry and exit through corridors in the walls (fig. 153). With this the requirements of the clerics would have been fulfilled to the letter; also the dimensions of the space were quite sufficient in order to provide a dignified background for the blessing pope; but from the square [in front of the church] his presence could not be made out in the shadow under the portico, especially if we take into account the blinding southern [light]. The crowd scene [would have] lost its imposing [effect] and in the loggia no larger ceremony with ecclesiastical officials surrounding the person of the pope could have been developed. The processions from the Vatican to the loggia and back would have been devoid of solemnity. When the juridical meaning of the bull 'In coena domini', which was read out every year from the loggia, and which was safeguarded so avidly in the Counter Reformation debate, is taken into account, then one can understand how Michelangelo's austere artistic views would have to cede to these powers. The extension was inevitable – it needed to be 'comfortable'.

The first project for the extension that we encounter in this late phase of the building history is a ground plan by Domenico Fontana in the collection of drawings in the Uffizi.<sup>161</sup> A nave with two aisles was to be erected with the same width as that of the dome pillars; this would have worked in conjunction with the centralised building as a kind of vestibule (fig. 169). While passing through the building, the visitor would have experienced the Baroque attraction of coming into being, as the dome would have revealed itself step by step [314] (see above, p. 90). Michelangelo's facade is at first maintained; according to Fontana's plan it was to be placed in front of the nave even though it would have lost part of its artistic qualities. Only in the volume of prints that Fontana dedicated to his papal patron do we find an etching in which he very unartistically sets out his opinion regarding the new version of the facade.<sup>162</sup> [315] He was convinced that the rhythmic scheme was too tense, the plastic modelling too strong, and the intercolumniations too narrow. [316] In the design for the façade, he did not understand the motif of struggle at all, nor did he seem to adopt the ideal of verticality, which he himself had helped to its victory in the construction of the dome. He omits one bay on both sides and thereby reduced the ten-column front to one with eight. He organised the intercolumnia in such a way that they coincided straightforwardly with the side entrances as given. Admittedly, the print in Fontana's volume is wrong in its proportions, and this is even more the case with Bonanni's depiction; the position from which he criticised Michelangelo was wrong and, whatever he had brought to pass, it certainly would not have harmonised with the scheme of the apse walls. Fortunately, the realisation of the projects for the extension and the facade were reserved for his nephew Carlo Maderno, an artist of a much higher standing.

<sup>161</sup> Illustrated in Bonanni, *Historia Templi Vaticani* fig. 27, 103; discussed in Alker's dissertation.

<sup>162</sup> (Domenico Fontana), *Della trasportatione dell'obelisco Vaticano e delle fabbriche di N.S.P. Sisto V fatte dal Cavaliere Domenico Fontana*. Roma[: Domenico Basa], 1590, libr. 1 tav. 35. 'Chiesa di San Pietro nel modo che starà quando sarà finita'. This print should not be regarded as a design; the church constitutes the background for the newly erected obelisk. But the nine axes of Michelangelo's facade have been reduced to seven. If the width of the facade would have remained the same, this could not have been executed as the side portals would have been displaced by columns. We do not have designs for the facade by Fontana; but engravers of the 17th century, first Andrea Vaccaro and later Frezza, [316] interpreted the print by Fontana as a design and used it in a more or less distorted way. Bonanni-Frezza (*op.cit.* fig. 20) widen the front with half a bay at both sides (fig. 117); they reckon with the width of Maderno's facade.

Giacomo della Porta's longevity was not conducive to the completion of St Peter's. Even though his oeuvre was very large, under his direction anything important was only done at St Peter's when he was forced to by circumstance. During Sixtus V's pontificate he stood back behind Domenico Fontana; only from 1590 onwards, when Fontana had fled Rome, do we find him reinstated to his full authority as chief building master. But he had neither the force to carry on Michelangelo's austere project over many objections, nor sufficient imagination to himself answer the demands of the younger age. It was outright illicit to remove him from his position and, moreover, it was not unwelcome to the Aldobrandini pope as stagnation in the building process for St Peter's would make more funds available for his other artistic plans. Giacomo died in 1604 [and] Clement VIII hesitated to fill the post anew, as it was well-known that the new architect ought to be adequate for the gigantic task of the facade. Negotiations continued until the ascension of Paul V to the papal throne, and it was this pope who took the unusual decision to make the nomination of the building master dependent on a competition for the facade. It has to be admitted that the most deserving [candidate] was indeed chosen. Carlo Maderno was undoubtedly the greatest talent during an age that was not much attuned to monumental architecture.<sup>163</sup> This had already become clear [317] in his artistic development prior to his appointment. As Domenico Fontana's nephew, he originally belonged to the group opposing [Michelangelo]. Whether it was through his familiarity with his uncle's weaknesses, or through his own artistic inclination, which made him acknowledge the superiority of the Roman tradition, in any case by his own impulse he became an advocate of Michelangelo's ideas. It is wrong to stigmatise him as Michelangelo's adversary because of the extension of St Peter's, that he was requested to do by his patrons. His conception of forms, his sense of rhythm and his taste for ornament in many ways complete what had been begun by Michelangelo. The fact that this had been executed with less attention to his [Michelangelo's] problematics should be blamed on Maderno's era rather than on him personally. Even Giacomo della Porta in some cases interpreted Michelangelo's architectural concepts as decorative elements. Maderno professes a discreet effect of magnificence that is still governed by rhythmic accents, and he transforms the plastic ensemble into a [flat] image that is a result of a painterly style that even Michelangelo could not have avoided. That this kind of design carried within it the danger of decorative shallowness did not trouble the creators of this style. It was for the moment the appropriate expression of the reconciliation between this world and the conditions for its existence.

In the first place, Maderno ensured the completion of the spatial programme in the broadest sense (fig. 170). He placed two elongated chapels in front of the spaces under the subsidiary domes; two spaces that are so large that each one of them could function as the principal church of a city. The exterior is deformed in an awful way by these chapels,

<sup>163</sup> Apart from Fontana, also Flaminio Ponzio, Giovanni Fontana, Domenico Fontana, Girolamo Rainaldi, Nicolò Branconi, Ottavio Torriani, Giov. Antonio Dosio, Ludovico Cigoli, Vincenzo della Greca and others took part in the competition. In 1606 the remains of the old basilica were torn down, and on the 1st of May 1607 the new construction was started. See [Johannes].A.F. Orbaan, *Der Abbruch von Alt-St. Peter 1605-1615*, Berlin[: Grote] 1919. On May 30 1613, the pope received a volume with prints that dealt with the new building, with an accompanying text that lists the spatial requirements that Maderna took into account (taken from this source by Bonanni, *op.cit.*). At the end of 1614 the facade was completed, with the exception of the towers. The dedication of the entire building only took place after the completion of the interior decoration, on November 18, 1626.

however. In order to decorate these additions, the given scheme of the walls had to be spoiled, and above these [chapels] useless space remains [in the form of] shafts that are masked on the outside by fake facades. The lucid relation between inside and outside which Michelangelo had created was ruined by this. But the chapels serve the interior [318] as a focus of interest independent of the dome, and at the same time the eye finds repose there. In general, the Baroque did not desire such subsidiary centres, but in a building of such dimensions the accentuation of the humanly measurable is perceived as comforting. Indeed, most visitors to St Peter's stop at these spaces, where choirs and masses incite devotion [in a way] that is lacking in the rest of the building. But how should the building be continued? To continue the basilical nave on a narrow plan as Fontana had intended seemed ill-suited after the accentuation of the transverse axis. Maybe recessed altar spaces were needed to flank the nave, and from a static viewpoint abutting the transverse thrust of the vault of the nave by means of chapels was certainly required. In any case, Maderno took the fateful decision to position the exterior walls of the nave extension in the middle of the large chapels [of the centralised plan]. This measure was beneficial for the interior, but for the design of the facade its effect was disastrous. It was one of the outcomes of Michelangelo's ground plan that the facade was treated as a portico, as an idealised portal, the artistic vivacity of which resulted from the plastic relations of, and clear contrast between, the main building and the front building. [But] the facade of a basilical nave was another issue; it needed to be a display, and to cover the whole [construction] (fig. 172). As soon as they began to abstract from the material and to divert the view of the main part of the building, a complication was introduced that had already loomed menacingly in the background of Bramante's project: the facade was too wide, whereas in Michelangelo's design it had remained too narrow-chested. In between these two extremes Maderno's work represents a synthesis in which the final merging of the elements has not succeeded, possibly because this was unattainable.

The scheme for the facade had to be expanded on either side with half a bay in order to harmonise with Maderno's exterior walls for the basilical nave; these semi-bays had to remain blind as the portals could not be shifted from their former axes. If they had left it at these additions, the overall proportions of the facade would still have been balanced; but its angles would have overlapped the subsidiary domes by half, and in general it would have impeded a felicitous image of the rear parts of the building. For this reason they adopted radical means by taking up again the project for facade towers; the result of this decision was truly dubious. [319] Indeed, towers would have forcefully raised the entire building up into the air, but these were not intended to be added on top of the facade, but rather placed next to it in order to fulfill the intended aim of frontal covering. Moreover, Italian ideas of external towers play a role in this that are unfamiliar to northerners. In any case, Maderno extended the facade with two square bays, which functioned as the basis of the towers, and at the same time are the entrances to the Vatican complex.<sup>164</sup> As a result, the stumpiness of the proportions [of the facade] increased even further, so that Michelangelo's orders [320], which were in any case too low with respect to those of the interior decorative scheme, were given an impossible task.

The project for the towers, in the execution of which, as is well known, Bernini was involved, failed because of technical difficulties (1644). The gateways were not stable enough

<sup>164</sup> The towers only served the latter of these two functions in an ideal way; in reality the visitors to the Vatican collections are invited to go through a passage of low height in order to get to the Via delle Fondamenta.

as a foundation for Bernini's multi-storey colonnaded superstructure. His adversaries were able to advance their claim that the southern tower had to be torn down; only Alexander VII decided to complete the facade, the disproportions of which we still have not grown accustomed to (1657). At that moment Bernini had enough influence to stabilise the foundations and to enforce the construction of the towers. But how would these towers have helped when the centre of the facade remained in its old, squashed form? In the projects for the square, the plan appears to heighten the middle and to compose the facade according to the basilical section, as with other cathedrals.<sup>165</sup> But in the meantime, the vertical urge of the Baroque had turned into its opposite; the horizontal disposition was considered ideal and this reverse of formal concepts was exploited by Bernini for Maderno's facade. As I see it, the purpose of the colonnade was not to make the facade appear higher through optical illusion, but it is meant to interpret the width of the facade as a spiritually controlled form by means of the vicinity of something even broader. The facade is therefore contained within a composition drawn extremely horizontally, which retroactively provided the vertical building of the dome with its dominant position, a stage effect that notwithstanding its dazzling beauty seems to make unjust use of Michelangelo's austere architectural forms.

But above all, the rhythm of the former colonnade had been lost. The central portico has been widened somewhat and is now pierced by three portals instead of one. Two further intervals are deleted – which is certainly the least damaging – so that the columns are set closer together. But then the rhythm turns insipid; three more down-graded bays – the relation between which had not been ordered artistically but merely to adapt to inclement circumstances – follow in consecutive recession. The motif of the corner has been lost, and with it also the coupled columns that were to provide the key to the whole decorative scheme of the walls up to the dome itself. This omission of formal command is matched by a surplus of decorative beauty [321] which had never before been used in proportions of this size and which could not fail to have an effect on beholders who experience a building predominantly through the senses. One has to keep in mind the significance of these proportions and that the foundations of the [decorative] scheme had been determined much earlier, [in order to see] what imposition it meant to provide the facade with some kind of human livability, in which the spatial program's requirements finally had to result. The coronation hall in the upper storey was not oriented in depth as Sangallo had done, but on the transverse axis in accordance with the mature taste of the period; on the ground floor the motif of the vestibule is introduced as accompanying this [coronation] hall. We can try to imagine what this implies architectonically: full columns have to be turned into pilasters; the motif of the colossal order has to submit to a division into storeys, the classical portico had to endure the modern motif of the window, which was an issue that no Renaissance architect, not even Palladio, could have solved in a satisfactory way. Moreover, the paradox of the upper storey consisting of a closed wall, [while] the lower storey had to open in the form of a loggia. And all these profane elements not only conflicted with the classical pathos, but also with [322] the principles of Christian ecclesiastical architecture. A cathedral should appear to be uninhabitable and single-storeyed. Now, the profane forms of the windows, which had been maintained throughout the Renaissance in Italy, did not provide sufficient religious momentum. Michelangelo's windows only have a sacral effect to the extent that they have no glass panes; the deep shadowed recesses of the windows, that open up like shafts, express a slight horror more than a feeling of comfort (fig. 155) This all changed in the facade; the

<sup>165</sup> 'Fraschetti, *Il Bernini*', 309-311; see above, 220 and fig. 51.

windows of the coronation hall were meant to be closed and the balconies, which are less fortunate as architectural motifs, had to serve the benediction loggia. Therefore, the upper storey adopts the character of a residential facade, of which the small patterned, windowed doors even possess a certain elegance. Henceforth, they count as an expression of sovereignty and find their further development in representational buildings of worldly powers with divine right, in the garden facade of the residence at Versailles.

In conclusion, in contrast to the many unfavourable remarks from which the facade cannot be spared, some highly positive results of Maderno's efforts must be pointed out, especially in comparison with the facade of the Lateran by Alessandro Galilei, which is often unjustly preferred to St Peter's as being formally purer architecture. It has to be admitted that Maderno maintained its grandness, the best of Michelangelo's concept. He [maintained] just that amount that could be saved in the given situation, and in any case he kept more than the other participants in the competition planned to. Even when they are not full columns, they have been conceived by Michelangelo, and therefore the most beautiful that have been made since Antiquity. It is **his** rhythm, even though slightly distorted, which still holds the centre together; it is **his** discrete low pediment that is set against the attic, and it finally is **his** attic that has been adapted to the worse order of bays, and which has been overloaded with ugly decorative details. Finally, it belongs to those traits of piety that we have to credit Maderno that he used not only the forms of Michelangelo's windows but also derived the openings of the vestibule from one of the most ardent architectural concepts of the master: the architrave and pilasters of the Capitoline palaces. A danger existed in the state of affairs of the construction whereby the motif of the arches, which Michelangelo had avoided and even condemned, would be adapted for the facade. Michelangelo had created an example at the Capitoline palace of how vestibules without the arch motif could be combined with a closed upper storey. [323] Of even more importance in St Peter's facade was that the columns are not cleaved apart by arches but accompanied by simple horizontals. The still immensely high marble pilasters produce favourable proportions for the colossal whole. The architrave and the balconies excuse one another and the mezzanine openings that illuminate the vaults of the vestibule lighten the mass of the wall at exactly that point where the meeting of the two storeys threatens to become too harsh. Maderno only used arches in the subsidiary intervals and finally also in the towers where they find their justification in the concept of the portal. I do not know whether we have to thank the Lateran facade that it raised the arches to the upper storey and filled them with insensible rethoric [and] with half a colossality that can only exert its effect to the detriment of the support structure. Here, the further development of Baroque forms into neoclassical ones is announced, something which took place in Rome under extraordinary circumstances. It lies beyond the theme of the book to describe this development.

#### [324] **Conclusion**

Critical research regarding the early Baroque is still in its infancy; a significant increase in factual knowledge can only be expected from renewed criticism of the sources and principally from the study of drawings. Both had been done by late-nineteenth century scholars of the Renaissance according to ideological perspectives that clouded the facts. The broad foundation that Geymüller provided ought to be renewed, and stone by stone made capable of bearing weight. The material therefore can only be dealt with by the greatest possible attention to factual detail. For the study of architectural drawings, in particular, we have had a suitable method because of the fundamental studies by Dagobert Frey, to whom

often reference has been made in the text. Alas, only the smallest part of Alker's valuable study of the facade and dome of St Peter's, which is based on that by Frey, has been published. It exists only in a manuscript version of his dissertation, that he allowed me to consult, for which I am greatly indebted. Because of the provisional state of this work, page references cannot be given, but I believe I have faithfully set out Alker's important contribution in solving ongoing questions by citing his work.

In contrast to this fragmented situation, theoretical research on the Baroque shows a continuous and internally logical development. It is in the first place thanks to the first edition of this book that conceptual thinking about stylistic change has taken a path that still seems to be the most practicable today and has, at the very least, provided the starting point for all similarly oriented efforts. In two other books, *Klassische Kunst* of 1899 and the *Grundbegriffe* of 1915, Wölfflin himself expanded upon that which this book contains as a seed: the two historical periods again stand opposite one another in full spiritual array. Here the limitation to architectural works has been eliminated, as had the restriction to Rome; and the concept of the painterly [Malerisch] which Wölfflin initially did not want to credit with its full impact (see above, p. 28, 8) has become the nodal point of the whole system. What other scholars had to add to this was merely complementary. First, Alois Riegl formulated the opposition between the tactile and optical [325] formation of art that, in my view, connected the conceptual too closely to individual artistic disciplines. Surely stylistic change involves changes in development and at the same time the estimation of each discipline; but, in the end, Raphael was not a sculptor and Bernini did not paint. In the case of the former, one has to fall back upon line as a mediator of the tactile, and in the latter case upon the painterly semblance radiating from sculpture, so that in practice being superior one returns to Wölfflin's concepts. It is even more significant that Riegl, by means of this opposition, was drawn to another issue, namely that of the artistic way of thinking. The tactically creative [artist] moves of his own initiative toward the object to be shaped. The optical appearance, on the other hand, comes toward us and expects to be taken in by the susceptible subject. In other words, an opposition between the object-oriented and the subjective artistic concept appears. The former will interpret art as an objective quality of presence, while for the latter what is essential lies in the processing of impressions by the susceptible subject; an opposition that can be extended without damage to ideological issues and therefore to all the psychological reactions that belong to a certain period. Riegl only sketched out briefly the practical application of this train of thought for our particular field. These lecture notes were published from his *Nachlass* in 1908 with the title *Entstehung der Barockkunst in Rom*, but do not come to terms with the complexity of the subject. A continuation of Riegl's concepts in a conceptually precise way, which focuses especially on the Roman Baroque, can be found in Erwin Panofsky's article on the Scala Regia in the Vatican (in *Jahrbuch der preussischen Kunstsammlungen* vol. 40, p. 257). Here the Renaissance is distinguished from the High Baroque as an object-constructing style as opposed to a style of variegated appearance, the early Baroque being the transitory style between these two typical expressions. To me, of most significance seems to be the connexion [Panofsky makes] between formal and ideological impulses. How the spirit of the early Baroque already moves towards the expression of the subjective is discussed here, but on the other hand, the artistic means of the Renaissance only slowly condescend to variations in appearance. It is surely correct that in this case, the spirit precedes the formal means, so that the aspiring expression has to be gained temporarily from the exaggeration and distortion of traditional objective forms. Indeed, at the beginning of the seventeenth century the shift to the optical and its greater

versatility is such that the representation of entirely different things becomes psychologically imaginable. [326] Hermann Beenken unravelled the issue of subjectivism for a more extended historical period, namely the period between 1500 and 1800. He contrasted the concrete and essentially active artistic creation of the Renaissance with the essentially passive position and the higher capacity for abstraction of the late eighteenth century. This positioned the Baroque in an extended context as a transitional phenomenon (Festschrift H. Wölfflin, p. 183). Apart from these endeavours, that are founded on Riegl's, elsewhere I have tried to contribute to the issue of the Baroque in terms of its decorative character, something already indicated in the first edition of this book as a variant of the painterly [style].<sup>166</sup> The focus of this decorative development lies in the later phase of the style. Notwithstanding this, one cannot overlook the fact that the tendency to the decorative, with its specific grounding and effects, was already present in the Baroque of the late sixteenth century; it even determined the basic keynote of artistic creation to a great extent. Three new problems resulted from the essential character of decoration that have been discussed in my dissertation (*Spätbarock*, Munich 1922): the question of the relation of artistic disciplines to one another, which can be extended to the relation of the visual to the tectonic arts, and furthermore to the relation of man to image in general. To me, these relations seem to be greatly determined by sociological, and thus also ideological impulses. Secondly, there is the question of the issue of movement, which Wölfflin already recognised as a constitutional element of the Baroque style and which was converted into the subjective in Riegl's sense. We are dealing here with the opposition between objective and subjective movement. Thirdly, there is the question of value, which in my opinion will be the future of Baroque research, and indeed of systematic art history as a whole. If it were possible to condense these diverse issues into one system, then the most general perspective, namely that of value, has to be the basis of it all; as stylistic change is analogous to a change in value, therefore the history of art is the history of values. Not in the strictest sense, [that] art works or artistic periods should be compared to one another according to qualities, but rather what I have in mind is the interpretation of stylistic change on the basis of the relation of sequences of aesthetic values to ethical [ones], in the development of which continuous historical fluctuation and rearrangement can be observed. [327] Neither the artificial separation of these value scales, nor the unclear demarcation line between the two, which has become habitual in art-historical literature, are necessary for art-historical knowledge. On the contrary, the task is to discover the mutual dependence of aesthetic and ethical values. I think it is possible to interpret the entire development of art as a periodical muddying of aesthetic values with ethical ones and vice versa, and as a rejection of ethical values in favour of the true manifestation of aesthetic ideals; reversals, according to the postulate of value and according to the field to which they can extend, produce manifold effects.

This experience is confirmed when we assume that values can only be replaced by different but similarly important values. No doubt there is a soothing element in the idea that in the course of artistic development values do not become non-values, but instead these values are only rearranged, as a result of which a work of art appears to us as more or less valuable. Why would artists, notwithstanding all the objective norms of beauty and notwithstanding all the zeniths of mastery and typology, search for new ways of expression, if there were no postulates of value that were still waiting to be realised? In this proposed

<sup>166</sup> 'In the north, architecture remained more or less stuck in the painterly, indeed decorative [phase].'  
See above, 1.

development, a loss of value could not occur, only an exchange of values. Whether this train of thought can lead to a result that is similar to that of the natural sciences, [namely] that each historical period lives through the same total amount of value perception, and that the creation of [new] values can only occur by extinguishing corresponding but different values, must remain an open question. It would mean that pure ethos is only possible when all aesthetic values are renounced, and vice versa, pure beauty is only possible when all ethical points of view are annulled.

In the context of this commentary it was merely possible to make some suggestions regarding the direction in which the issues to be resolved seem to lie. For our particular theme it ought to suffice to have indicated that, fundamentally, the ethical impulse of the Counter Reformation era was responsible for the change from classical to anticlassical, for the rupture from form to expression, for the Baroque relation of artistic disciplines to one another, and finally for the relation of man to his own image, which in the second half of the sixteenth century, just like today, were blurred because of the assault of moral-transcendental forces.



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