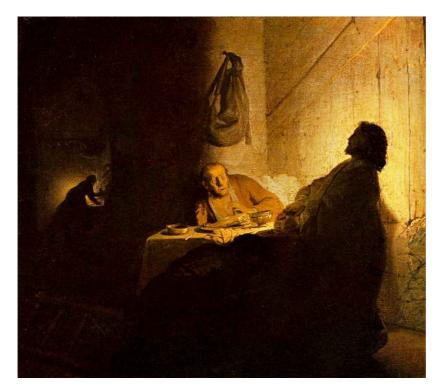
Baroque Architecture <u>C/</u> <u>Classic Architecture</u>

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Other texts in French about the same period:

- <u>6th period of art history</u> (brief presentation)
- <u>chapter 7</u> and <u>chapter 18.3</u> of the <u>Essay on Art</u> (also brief presentations)

The focus is on architecture as it developed in Italy and France in the 17th century. To introduce the recurring plastic effects of the 15th and 16th centuries, <u>we have used a painting from the corresponding period for each century</u>. We're doing the same for the 17th century, this time with Rembrandt's painting "The Emmaus Pilgrims", in its version dated around 1628 and housed in the Jacquemart-André Museum.



Rembrandt: The Emmaus Pilgrims, version in the Jacquemart-André Museum, Paris (c. 1628)

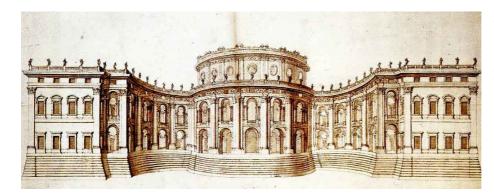
Image source: <u>https://www.wikiwand.com/fr/Les_P</u> %C3%A8lerins d'Emma%C3%BCs_(mus%C3%A9e_Jacquemart<u>_</u> <u>Andr%C3%A9</u>)

For the 15th century we saw the importance of the effect that aims to link forms while detaching them from one another, and for the 16th century it was a destabilizing effect. Other plastic effects have been overlooked to avoid complicating the analysis, but fundamentally, for each of these centuries, a single effect was sufficient to express the essential. For the 17th century, while other effects have also been overlooked, we need to consider two effects simultaneously.

We define the former as an effect that aims at make unstable our perception, i.e. one that draws us towards a perception while at the same time discouraging us from that same perception. In Rembrandt's painting, for example, the bright light shining on the table as well as around the woman in the background prepare us to examine a well-lit scene, but since both the Christ figure and the woman cooking are against the light we give up on perceiving them clearly and in detail as we had prepared.

Although distinct, there's also disappointment in the second effect which leads us to believe that we can group together the whole of what is offered to our gaze, while at the same time we have to admit the failure of this grouping. For example, we spontaneously feel that Rembrandt's painting forms an overall scene, but the difference in luminosity between the well-lit and completely dark areas is such that our gaze cannot simultaneously adapt to both situations: we are dazzled by the bright light illuminating the wall behind Christ and the pilgrim seated at the table, and we almost have to blink to examine these parts of the painting, but we have to adjust our gaze very differently to discern the details of the pilgrim kneeling before Christ and the details of Christ's face, and we have to adjust it in yet another way to examine Christ's garment and hands. It's the same, of course, for the woman in the background: we blink to avoid being dazzled by the glow that surrounds her, while we must force our gaze to scrutinize her silhouette as closely as possible to discern as many details of her volume as possible.

In Baroque Italy, concave versus convex:



Le Bernin: 1st design for the eastern entrance facade of the Louvre in Paris (1664)

Image source: https://fr.m.wikipedia.org/wiki/Fichier:Bernini-Louvre-First-Design.jpg

We begin in both France and Italy with the first project that the Italian architect Gian Lorenzo Bernini, known as Le Bernin (1598-1680), proposed in 1664 for the entrance facade of the Louvre, to the east of its square courtyard. As we shall see, this solution of a convex volume occupying the center of a concave wall was frequently used in Italy during the Baroque period.

Let's first consider the first effect we've described: the highly enveloping shape of the concave hollow of the facade leads us to feel precisely in its hollow, and it's in our body that we feel this envelopment of the material wall, but the presence of the convex central volume counters this envelopment at the very point where we feel that this envelopment should be maximal. Put another way to emphasize the instability implied by this solution: we're constantly hesitating between feeling ourselves in the hollow of a facade or in front of a facade jutting out in front of us, precisely because we're simultaneously in these two opposing situations. Rather than a large disturb hollow, we can also read that it's a question of two smaller hollows distributed around the central projection: these two lateral hollows draw us towards them with equal force, so that we constantly hesitate to let ourselves feel the envelopment that is no less attractive. If it's in our material body that we feel the

enveloping effect of the large general hollow as well as that of its two lateral hollows, it's also in our body that we feel the "face-to-face effect" produced by the material presence of the central convex volume. In contrast to these opposing effects of hollowing and protrusion generated in our bodies by the materiality of the building's volumes, our mind notices that the colossal order of columns, openings and architraves continues uninterrupted across the entire facade, whether in its recessed or protruding parts, and so we must not allow ourselves to be led into thinking of them as independent bodies of buildings as the incompatibility of the effects they generate would have us do: we must resist this perception and instead think of them as a continuous architectural front. This third aspect, like the others, leads to instability in our perception.

The second effect to consider, which follows on from the previous developments, is that the uniformity of the colossal architectural style that runs horizontally leads us to consider that the entire facade is grouped together in the same architectural continuity, but the effects of hollows and projections generated by the building's volumetry lead us to give up on its overall unity and consider instead that it's a succession of places that do nothing together.

Contrary concave and convex effects for the materiality of the masses versus the effect of continuity for the architecture of their surfaces as read by the mind, with the added obligation for us to consider these two aspects simultaneously since they are superimposed on exactly the same forms and without any margin of autonomy for one or the other: this is indeed a situation of direct conflict between the materiality of the volumes and what our mind perceives in them, a situation that extends the conflicts of a similar nature we saw in Italian architecture in previous centuries.

For the sake of completeness, let's turn to the other arrangements of this facade.

First, the two flat side wings which are slightly raised on the facade returns and continue the monumental order of the curved parts. This time, it's the compact materiality of the building as a whole that tells us they're joined with the rest of the facade, and it's our mind that notices that these architectural arrangements have no columns or pilasters to separate the bays, and so they're not joined with the rest of the facade, which comes under the second plastic effect mentioned. For the first effect which involves the instability of our perception, it's once again the equivalent importance of the left and right facade returns that must be invoked, as this layout puts them in visual competition to attract the attention of our mind, which is constantly moving from one to the other, without being able to stop on one of them in order to stabilize its perception. In passing, we notice that each of these facade returns forms a symmetrical figure although the axis of this symmetry is not particularly emphasized, and so the whole repeats the destabilizing effect seen in the previous century: an axis of symmetry at the center and an axis of symmetry to compete with it on each of its sides. We can see that this effect has not completely disappeared in the 17th century, even if it appears in a diminished form due to the absence of an asserted axis of symmetry on each of the wings, and also due to the fact that none of them is really symmetrical if we take into account the shift in plan that allows us to reach the central part and its architectural style.

Another significant feature is the recessed storey above the central projection. Its rounded shape, strictly parallel to the rounded shape of the building on which it is located, means that we can certainly group this floor with the latter. However, because of its recessed position and its different architectural style we must refrain from considering that this floor is really grouped with the architecture below it, which is the second plastic effect characteristic of the 17th century.

We now turn to other examples in which Italian Baroque architecture, in various contexts, uses the same confrontation of concave hollows and convex projections.

Between 1653 and 1667, Francesco Borromini (1599-1667) added a dome housed in a tower to Rome's Sant'Andrea delle Fratte basilica. Each of the tower's four faces is a miniature version of Bernini's original design for the Louvre. The systematic use of bricks reinforces the effect of the

entire material volume of this part of the building failing to come together: it's clear that the whole thing is compact and made of the same material, but unlike the Louvre project this time it's our mind that tells us we have to separate it into several heterogeneous parts, on the one hand the system of columns and entablatures in high relief that form its main design, on the other hand the ordinary surfaces which seem merely to fill in between the columns, while within this system of columns and entablatures there is an incompatibility of reading between the energetically convexly curved central part and the equally energetically concavely hollowed-out lateral parts.



Francesco Borromini: one of the four sections of the tower forming the exterior of the dome of the Basilica of Sant'Andrea delle Fratte in Rome (1653 to 1667)

Image source: <u>https://www.pinterest.fr/pin/509680882831564496/</u>



Guarino Guarini: the facade of the Carignan Palace in Turin, Italy (1679)

Image source: https://www.wikiwand.com/fr/Palais Carignan

In 1679, the mathematician and architect Guarino Guarini (1624-1683) built the palace for the Princes of Carignan. The street facade is largely based on the layout of Bernini's design for the Louvre, albeit more vertically and with a smoother transition between the concave and convex parts of the masonry. More brutal in its convexity, a high loggia nevertheless marks the center.

The facade of the Church of St. Charles of the Four Fountains in Rome, built between 1638 and 1667 by Francesco Borromini, features particularly intense visual conflicts: on each side, brutally concave surfaces and curves, in the center, brutally convex surfaces and curves, with even a kind of small closed oval guardhouse on the upper floor which confronts the exceptionally hollowed-out concave surface behind and above it. The lines of the architraves and cornices are tightly embedded

between the wall surfaces, themselves broken down into small portions tightly interwoven between the columns and architraves, so that the material surface effects and the linear effects that our mind follow with our eyes are constantly and violently confronted.





Francesco Borromini: Saint Charles of the Four Fountains in Rome (1638-1667). On the left, the street facade. Right, the cloister Image source: http://commons.wikimedia.org/wiki/File:San_Carlo_alle_Quattro_Fontane.jpg.and https://www.ukikwand.com/fr%C2%e89glise_Saint-Charles-aux-Quatre-Fontaines

Much quieter, the cloister of this building simply counteract its hollow form with convex panels and balconies at each of its corners, which amounts to making the convex inside the concave, and thus preventing our body from perceiving the envelopment of the hollow formed by the patio walls without our mind's attention being confronted with the presence of these counteracting convex forms.



Francesco Borromini: the Oratory of Saint Philip Neri in Rome (1637-1650)

Image source: https://www.walksinrome.com/blog/the-oratorio-dei-filippinioratory-of-st-philip-neri-by-francesco-borromini-rome Another famous facade by Francesco Borromini is that of the Oratory of Saint Philip Neri in Rome, built between 1637 and 1650. This time it features a wide, concave envelope, not very pronounced but accompanied by a recessed loggia on the top floor and, to counteract this large envelope, in its center and on the first two levels, an abruptly convex projection.

The conflict between a convex projection and a concave hollow may not only concern the building itself but also the entire surrounding neighborhood. For example, to create the facade and porch of the church of Santa Maria della Pace in Rome, the architect Pietro da Cortona (1596-1669) had a large area of the surrounding neighborhood demolished to create an enveloping hollow at the center of which emerges the cylinder of the porch, topped by a pediment with equally convex lateral surfaces. Behind this pediment and the projection of the church, the facade of its upper storey deepens to accompany the great hollow generated by the buildings surrounding the piazza. Below is a plan showing the demolished buildings and an aerial view of the current configuration.



Pietro da Cortona: facade of the church of Santa Maria della Pace in Rome. Right: plan of the demolitions carried out to shape the piazza and contemporary view from Google Maps Images sources: https://www.wikuwad.com/fr/%C3%%9glice_Sante-Marie-de-la-Paix_de_Rome_https://www.pinterest.it/pin/660129257862764145/ and Google Maps



The presence of the hollow formed by the material walls of the buildings surrounding the piazza acts on our bodie through the enveloping sensation it inevitably elicits when we stand in front of the church, and it is therefore while feeling this hollow effect that our mind reads the strong convex curve of the entablature of the porch, the convex lines of its emarchements, the curve of the pediment on the upper floor, and all the vertical columns that complete the cylindrical shape of the porch on the ground floor or that accentuate the presence of the church facade on the upper floor and the projection it forms within the hollow of the square.

Less intrusive on the public space, but nonetheless highly energetic, is the enclosure generated by the street fence of Rome's Church of Saint Andrew on the Quirinal. It was built by Bernini between 1658 and 1678. It's impossible not to feel in our body the envelopment generated by this great curved wall. Its conflict with our mind's reading of the convex curves of the porch's pediment and steps is all the more limpid in that this great hollow seems to continue behind them the circular shapes that project from its center. Secondly, the convex oval of the two-storey church to the rear also contrasts with the hollow in the enclosing wall. This time the conflict is between a concave material surface and convex material surfaces, and the envelopment achieved or suggested by these surfaces is perceived by our body while the pilasters, entablature and pediment of the facade stand

energetically between them, all are lines read by our mind and holding together the surfaces engaged in this conflict.



Bernini: street facade of the Church of Saint Andrew on the Quirinal, Rome (1658-1678)

Image source: <u>http://wikimapia.org/102484/fr/%C3%89glise-Saint-Andr</u> %C3%A9-du-Quirinal#/photo/40370



Francesco Borromini: Sant'Ivo alla Sapienza church in Rome, at the back of the Palazzo alla Sapienza courtyard (1643-1662) Images sources: https://www.welkivand.com/fr?%G3%69glite SantIvo alla Sapienza and https://www.welkivand.com/fr?%G3%69glite Sapienza

Above: interior of the dome and detail of the interior of the Sant'Ivo alla Sapienza church

Back to Francesco Borromini with the Sant'Ivo alla Sapienza church in Rome, whose high dome forms a rounded convex volume that contrasts with the rounded terminal hollow of the courtyard of the Palazzo alla Sapienza, all buildings he built between 1643 and 1662.

Unlike the previous examples the convex form here does not counteract the concave hollow at its very core, it merely proposes a contrast of forms that is played out at a distance. As it doesn't play

the role of a projection counteracting the envelopment proposed by the hollow, it's also as an enveloping form that the convex volume of the dome is read as we can imagine it continuing backwards. These two material envelopments are read by our body, but their contrasting effect is nevertheless stabilized in our perception by the continuity that can be read from one to the other by the various ball-like outgrowths that erupt from bottom to top, increasingly isolated but always attracting the attention of our mind surprised by their presence. Stabilized too by the continuity, still from bottom to top, of the vertical pilasters that our mind reads on each of these shapes. To the reading of concave and convex material surfaces, we add the reading by our mind of the various architraves, cornices and balustrades which accentuate the concavity of the curves at courtyard level and their convexity at dome level. By way of exception, the skylight above the dome itself blends concave and convex lines.

The interior of the church and its dome also contrast concave and convex forms. Their three main hollows are very assertive, contrasting with the protruding, and therefore convex, angles that terminate each of their ends: this time concave and convex forms are side by side. By contrast, the three small convex cylinder sections that alternate with the large concave hollows are each inside a large concave fold: here the convex is inside the concave to which it contrasts.

<u>In France, corners and counter-corners, the autonomy of built masses and the architecture that covers them:</u>



Louis le Vau: Collège des Quatre-Nations in Paris now the Institut de France (1662-1688)

Image source: https://www.wikiwand.com/nl/Coll %63%A8ge des Ouatre-Nations#Media/Bestand:P1030565_Paris _VII_Institut de France quai de Conti _pwkJPG

Rather than counter-curves within curves, French architects preferred to use counter-corners within corners. We cannot, however, omit mentioning the ample curved hollow of the Collège des Quatre-Nations in Paris, designed by Louis le Vau (1612- 1670) and built from 1662 to 1688. As in the Italian Baroque the center of this large concave hollow is occupied by the convex protrusion of the building's entrance, but its lack of rounded shape prevents it from coming into direct visual conflict with the concave envelope behind it. As for the dome of the college chapel, while it does offer the opportunity for a convex counter-curve, it does not enter into direct visual conflict with the great concave it is shifted in height, and because its very small relative size prevents it from being read in a balanced contrast between concave and convex form as was the case for the dome of Sant'Ivo alla Sapienza in relation to the terminal hollow of the courtyard it dominates.

This "false" Baroque layout introduces us to the difference between Italian and French architecture. In Italy we saw that concave and convex forms always came into violent visual conflict, because we couldn't feel the envelopment produced by a concave curved hollow without being thwarted in our perception by the presence of another curve echoing it, but this time convex and protruding. At the Collège des Quatre-Nations the large hollow and the projecting portico do not belong to the same register of forms since one is curved and the other orthogonal, and while the cupola is indeed curved it is far too small to compete with the large hollow in the square. Rather than a direct conflict between concave and convex forms, here we have forms that can be read separately: on the one hand, a large curved hollow, on the other, a building with an orthogonal register that occupies the center, and on the other anew, a slightly oval dome that caps the orthogonal entrance building more than it counteracts the hollow envelope that develops below.

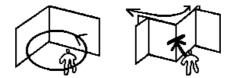
Here we find <u>the same difference as in 16th century</u>: in Italy a direct conflict between forms that we are obliged to confront in our vision, in France contrasting forms that correspond to autonomous registers that can be considered perfectly separately from one another.



Louis le Vau: entrance side of the Château de Vaux-le-Vicomte in France (1656-1661) Image source: https://www.wikiwand.com/en/Yaux

le-Vicomte

The Château de Vaux-le-Vicomte, built between 1656 and 1661, was also designed by Louis le Vau. Its entrance facade has the general shape of a large U-shaped hollow which this time only uses orthogonal forms, and the perception of envelopment it proposes is immediately contradicted by the presence of a counter-corner in each of its corners.



The protruding central body adds to these counter-corners, and the density of the projecting volumes is such that, fundamentally, the building appears to us as a continuous curtain of pleated frontage. Like Italian curves and counter-curves, the corners and counter-corners compete with each other, but orthogonality allows them to neutralize each other, giving rise to this pleated front that incorporates them and reads for itself, alternating in our perception the recessed and the protruding parts without forcing us, as in Italy, to try to read at the same time the force of the envelopment produced by a recess and the force of the contradiction generated by the form that encumbers or contrasts with it. Thus, if we wish to perceive the enveloping effect of the great hollow of Bernini's project for the Louvre, we must inevitably endure the presence of the counter-curve of his central building, and the same applies to the envelopment generated by the street enclosure of his church of Saint Andrew on the Quirinal, which we cannot feel without enduring the presence of its central

porch which acts as a counter-curve. By contrast, it's possible to focus on one of the hollows formed by the pleated facade of the Château de Vaux-le-Vicomte without being disturbed by the neighbouring presence of the protruding shapes belonging to this fold, and conversely it's possible to consider a fold forming a redent or a projecting building without being disturbed by the presence of hollows in their vicinity. Even when the concave and convex curves are shifted in height from each other, as is the case on the exterior facade of Sant'Ivo alla Sapienza, the dynamic reading of the curve effect inevitably brings them into visual confrontation, whereas, by contrast, the orthogonal register used at Vaux-le-Vicomte, much more neutral for our perception, makes it easier to grasp a hollow without grasping a solid, or vice versa. This echoes the comment made about the Collège des Quatre-Nations: in Italy the forms are in conflict with each other whereas in France each can be perceived independently.

However, this architecture generates the same effects as in Italy. Firstly the instability of our perception: we are constantly hesitating between feeling the envelopment initiated by one of the facade's hollows and feeling the opposite projection formed by one of its angles or projections. The second characteristic effect is that we feel that the entire facade comes together in the continuity of a horizontal band of folds, but at the same time, because each hollow and each indentation catches our eye for its own sake, we are also obliged to perceive this facade as a series of independent folds, i.e. not fused in continuity with one another.

These are the material masses we've essentially been considering up to now, but we must also take into account the design of the facades that our mind reads, and as much as the material masses are seen as a horizontal pleated band of stone surmounted by a horizontal pleated band of slate, the design of the architecture divides them into vertical buildings alternating with buildings cut into horizontal strips. The two end buildings are vertical, with colossal pilasters, triangular pediments and very high, pointed roofs. Also vertical is the central building, the tallest of all, with its portico of vertical columns surmounted by a triangular pediment and its high roof. Horizontal, on the other hand, are the two middle buildings, with entablatures that bisect them horizontally and border them broadly at the top. Horizontal finally are the two pieces of facade framing the central building, by their overall low height, by the curved balustrade at the end which divides them into two staggered storeys, completing the horizontal effect introduced by the lower pediment of the entrance portico, and lastly by its roof, starting low, strongly bent at the top, and whose ridge thus forms a long horizontal.

So, while the forms of architecture that our mind reads sometimes accompany the fundamentally horizontal reading of the building's material masses, in some places they introduce a frankly vertical reading, especially at the two ends which are terminated by sloping roofs, but also in the central part whose architecture participates in both this vertical effect and the horizontal effect caused by its pediment which cuts it in two and is continued by the side balustrades. This difference between the reading of material masses and the reading of architecture intended for our mind obviously generates a conflict between these two incompatible readings, but because they are radically incompatible we don't try to combine them in our perception, we treat them as autonomous readings, thus rediscovering the difference between Italian and French architecture: direct and permanent conflict of curved forms that respond to each other in Italy, in France, broad autonomy of readings.

Without repeating the developments made for the Château de Vaux-le-Vicomte, we are now considering a number of buildings using similar layouts.

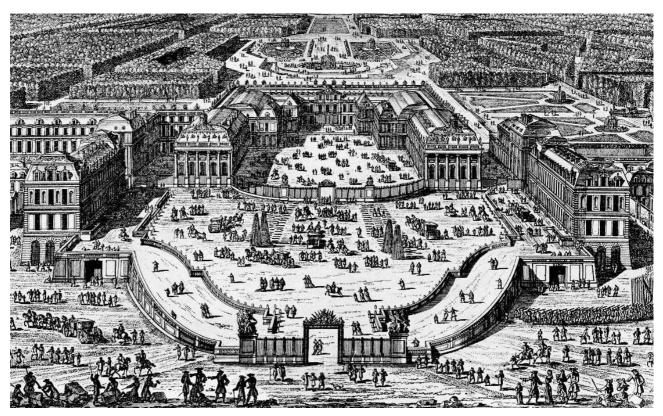
We start with the Château de Berny, transformed by François Mansart (1598-1666) between 1623 and 1625. Again a mostly orthogonal succession of recessed and solid forms can be seen, although the two sides at the back of the courtyard are occupied by oblong forms. We'll come back later to

the layout of the ground-floor gallery which introduces a linear reading that is very independent from the reading of the built masses.



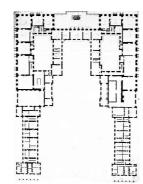
François Mansart: perspective view of the château de Berny, France (1623-1625) – destroyed in 1808 -

Image source: <u>https://www.wikiwand.com/fr/Ch</u> %C3%A2teau_de_Berny



Adam Pérelle: engraving of the entrance courtyards to the Château de Versailles, circa 1682 Image source: https://www.wikiwand.com/en/Palace_of_Versailles

Back to Louis le Vau, this time for the Château de Versailles, where he designed the first stage of the envelopment of Louis XIII's former hunting lodge (see next page). The first-floor plan he drew up around 1669 shows how he integrated the courtyard of this hunting lodge into a cascade of everlarger courtyards, generating a pleated front of ever-orthogonal redents. View Pérelle's engraving (above) shows that, some ten years later, the ministers' wings, built in 1679 and located even further forward, created another notch in this succession of redents, or, if you like, courtyards embedded in other courtyards.



Louis le Vau: design for the 1st floor of the Château de Versailles (circa 1669)

Image source: <u>https://commons.wikimedia.org/wiki/File:Versailles - plan of premier</u> %C3%A9tage of Enveloppe - Berger 1985 Fig12.jpg



Model of a re-creation of the Château de Richelieu, France (1631-1642)

Image source: https://chroniques.amisdeversailles.com/reconstitution-du-chateaude-richelieu/

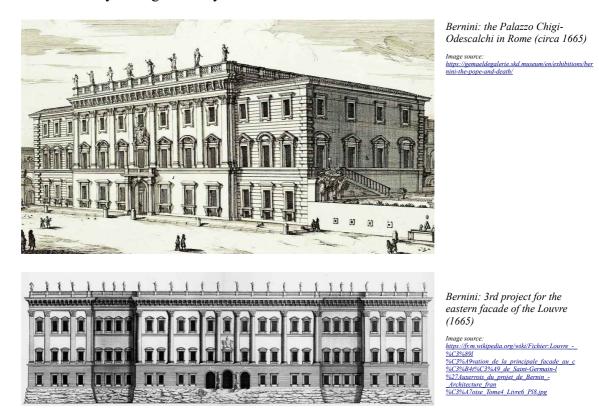
Built between 1631 and 1642 by architect Jacques Lemercier (1585-1654), it is also a waterfall of increasingly large courtyards that features the château de Richelieu. It probably served as a model for the Château de Versailles and features the previous century's arrangement of enclosed courtyards with an axial portico over the fence. This arrangement, however, is smaller than that of the Palais du Luxembourg, for example, and will be reduced to an even smaller portion at the Château de Versailles in order to serve only the essentially utilitarian function of a barrier.

After hollows and counter-hollows, then corners and counter-corners, we're now looking at the way facade surfaces and their reliefs are designed or, put another way, <u>the dialogue between ordinary</u> <u>surfaces and the architectural orders they integrate</u>.

In the previous century, Italian architecture, in response to the need to destabilize us, often resorted to the somewhat monstrous interlocking of incompatible facades, not least because they didn't seem to have the same supporting ground, as was the case, for example, with the double interlocking facade of Andrea Palladio's *Basilica of San Giorgio Maggiore* in Venice. As the destabilizing effect became secondary in the 17th century, this type of monstrous interlocking disappeared to be replaced by the interlocking of registers that are very foreign to each other but nevertheless compatible.

Often, as in the facade of the Palazzo Chigi-Odescalchi built by Bernini in Rome around 1665, or in the third project for the eastern facade of the Louvre by the same Bernini and from approximately the same date, we are dealing with the overlapping of a colossal order embracing two storeys at once and a regular facade aligning openings with pediments that may or may not differ from one storey to the next. This arrangement easily satisfies what has been described as the second recurring plastic effect of the 17th century: the two registers of the facade certainly belong together since they

coordinate perfectly, but it could just as easily be said that they have nothing to do with each other so different are they. At the Palazzo Chigi-Odescalchi, still in existence but considerably lengthened in the 18th century, the facade's side wings are slightly recessed but seem to continue the ordinary section of the main facade while being marked by horizontal stripes that differentiate them from it. In this way, the effect is repeated, suggesting that the different sections of the facade, this time out of colossal order, together form a continuous unit while at the same time suggesting that they do not form a whole since they are significantly different.



As for the other characteristic effect, that by which our reading of the building is unstable because we are drawn towards a perception while simultaneously being held back from doing so, it is generated here by the partial visual barrier formed by the colossal order in front of the current facade: we are suggested to read the continuity of this facade, but the presence of the pilasters or columns interposed in front of it forms bars that cut it into pieces cut off from one another. Another arrangement that contributes to the same effect but in a different way: all these similar windows form a series of innumerable windows between which our perception constantly hesitates, not knowing which one to direct our gaze towards since so many others solicit it with the same force. We'll look at this effect in more detail later.

There's no colossal order in the facade of Venice's Ca' Pesaro, built between 1659 and 1682 by architect Baldassare Longhena (1597-1682), but a profusion of sculptures of very uniform density that cover the common surface of the facade, in front of which, at some distance, stands a series of colonnades, singly or in pairs. Although the means used are very different, the same effects can be seen as in Bernini's facades: the facade is divided into two very different, well-separated planes, which are in harmony through their rhythms, but the columns in the foreground prevent us from reading the continuity of the surface behind, even though the regularity of the sculptures covering it encourages us to do so. And these two planes so well synchronized certainly form a whole, even though they are too different to do so.





Baldassare Longhena: details of the facade of Ca' Pesaro in Venice (1659-1682) Image source: https://de.iu/en/projects/palazzo-ca-pesar

The walls of the nave of Rome's Basilica of San Giovanni in Laterano, profoundly reworked by Francesco Borromini from 1650 onwards, are also configured in this way. Colossal pilasters punctuate the nave, almost the entire height of the church, and the walls of the nave seem to slide behind them, this time featuring horizontal lines and niches for small sentry boxes into which statues were carved in the early 18th century.



Francesco Borromini: interior of the main nave of the Basilica of San Giovanni in Laterano, Rome (from 1650)

Image source: https://vicedi.com/cathedrale-

In another way, the continuity of the wall is constantly interrupted by the rhythm of high pilasters passing in front of it: the same temptation to read its horizontal continuity thwarted by the presence of these vertical pilasters, and the same sensation that wall and pilasters form a compact whole contradicted by the radical difference in their reading directions.

To sum up, and before moving on to the French way of dealing with the relationship between the materiality of the wall and the architectural forms that cover it and which interest our mind, we've observed that in Italy this relationship has a very conflicting character for we can't consider the ordinary wall and the colonnades or pilasters on its surface separately since these colonnades and pilasters always intersect it. By contrast, in France the wall and the architectural elements built in front of it tend to form two registers of autonomous forms that evolve quite separately and can be understood quite separately from one another.

To consider the French solution, we need to take a look back at the architecture of the previous century. At both Château d'Anet and Château d'Écouen, facades avant-corps were built introducing the strong independence of pairs of superimposed colonnades from the materiality of the wall behind them. At Château d'Anet, built from 1547 onwards, the architect Philibert de l'Orme (1514-1570) was responsible for the layout of the central courtyard facade. When this part of the building was demolished, its avant-corps was dismantled and reassembled in the courtyard of the École des Beaux-Arts de Paris. At Château d'Écouen, it's not clear whether Jean Goujon (c. 1510-c. 1567) or Jean Bullant (c. 1515-c. 1578) was responsible for the entrance to the courtyard, although it only used the paired-column solution on two levels. This entrance structure was built at a fairly similar date to that of Château d'Anet.

The solution of using columns detached from the wall was not unheard of in France in the 16th century, but it was quite rare. Most often, pilasters were used, and when columns were present they tended to be attached to the wall, or even set into it. This solution of two lateral axes of symmetry, competing in our perception with the figure's main axis of symmetry which is not manifestly expressed, is more of an Italian solution, but we shall see that this arrangement, because it introduces an autonomy of the column system in relation to the wall behind them, leads to a rather French way of dealing with the relationship between wall and columns.



Left, Philibert de l'Orme: Château d'Anet in France, avant-corps of the courtyard facade (from 1547) as reassembled at the École des Beaux-Arts in Paris.

Image source: <u>https://fr.m.wikipedia.org/wiki/Fichier:Kapelle_ensba_pari</u> <u>s_02.jpg</u>

Right, Jean Goujou or Jean Bullant: Château d'Écouen in France, entrance structure (circa 1445-1550)

https://inventaire.iledefrance.fr/illustration/IVR11_1980950 0827Z

The facade of the Saint-Gervais-Saint-Protais church in Paris, built from 1616 to 1621, is directly in line with the avant-corps of the Château d'Anet, but with the columns of each pair drawn closer together and similar pairs superimposed added on each side. It is not known whether the facade was

designed by Salomon de Brosse (1565 or 1571-1626), whose usual style makes him a 16th century architect, or by Clément II Métezeau (1581-1652) who signed the contract for its construction.



Left, Salomon de Brosse or Clément II Métezeau: facade of the Saint-Gervais-Saint-Protais church in Paris (1616-1621)

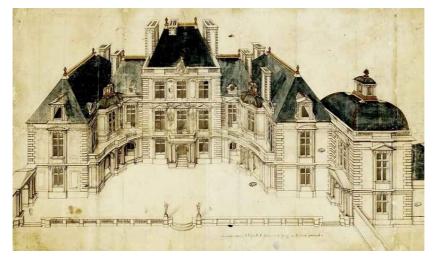
Image source: <u>https://www.wikiwand.com/fr/</u> %C3%89glise_Saint-Gervais-Saint-<u>Protais_de_Paris</u>

Right, Father François Derand: facade of Saint-Paul-Saint-Louis church in Paris (from 1634)

Image source

https://lindependantdu4e.typepad.fr/arrondissemen t_de_paris/2013/07/la-superbe-fa%C3%A7aderestaur%C3%A9e-de-l%C3%A9glise-saint-paulsaint-louis.html

Certainly from the 17th century, on the other hand, is the facade of the Saint-Paul-Saint-Louis church in Paris, built from 1634 onwards to the designs of Jesuit Father François Derand (circa 1591-1644). The pairs of colonnades are again found in the central part, but they are enriched by the presence of columns nearby, in the background due to the advancing central body.



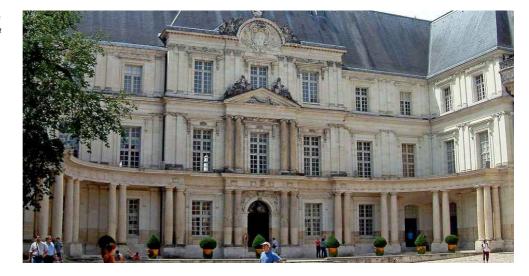
François Mansart: perspective view of the château de Berny, France (1623-1625) - destroyed in 1808 -

Image source: <u>https://www.wikiwand.com/fr/Ch</u> %C3%A2teau_de_Berny

François Mansart's facade of the now-destroyed Convent des Feuillants church, built in 1623, was largely inspired by the facade of Saint-Gervais-Saint-Protais, albeit without the first storey.

At the same time, between 1623 and 1625, he also built the Château de Berny, which has already been mentioned for the pleated layout of its main facade, made up of corners and counter-corners. What interests us now is the way in which the covered gallery above the ground floor, supported by columns and wall sections, evolves in a very autonomous way in relation to the masonry of the

building: it does not follow the orthogonal layout of its main masses as it forms a wide curve on each side, and it has an isolated projection in the central part that is not accompanied by a similar projection of the building body located behind it.



François Mansart: the Gaston d'Orléans wing of the Château de Blois, France (1635 to 1638)

Image source: https://fr.wikipedia.org/wiki/Château_de_Blois

A few years later, in the Gaston d'Orléans wing of the Château de Blois, built from 1635 to 1638, he reused the principle of a curved colonnade independent of the orthogonal masonry behind it, and further enhanced the autonomy of this arrangement from the main masonry by creating a second level of colonnades above its central part. Not only is the colonnade distant from the corners of the masonry, not only the curved shape is specific to the colonnade system, but the brutally pyramidal effect of this second level has no correspondence in the main building whose central projection is only one cornice higher than the rest of the facade.



François Mansart: entrance facade of the Château de Maisons in Maisons-Laffitte, France (1643-1650)

Image source: <u>https://www.pariszigzag.fr/sortir-</u> paris/un-spectacle-immersif-sur-la-belle-et-ala-bete-au-chateau-de-maisons-laffitte

While the colonnade of the Château de Blois allows masonry surfaces to spread out above it, in the entrance facade of the Château de Maisons, Mansart has raised the avant-corps and its colonnades significantly higher than the current mass of the building. The building, which dates from 1643 to 1650, is in the shape of a large U, which plays on pyramidal forms to great effect as the built mass of this U rises progressively, from its single-level terraced ends to its slate-covered mainly twolevel section, culminating in the projecting three-level central body. The third level is itself stepped, as the masonry of its central section rises above the balustrade and cornice of its lateral sections.

The layout of the building's material masses is easily legible: in plan, a large U, a progressive staggering of heights from its extremities towards its central axis, and a decomposition of the roofs by body of buildings with, in its axis, a massive roof higher than the others and reinforced in height by a small cupola and a pinnacle. In contrast, the lines that capture our attention are more complex and are organized in a way that is very independent of the organization of the built masses, except for the overall symmetry effect they share. Above the ground floor, horizontally linking the entire perimeter of the building, a notched frieze draws our attention above a continuous band of antiquestyle-triglyphs. Pilasters, singly or in pairs, systematically rhythm each storey of the facade, marking the corners and bordering the openings. Pedimented architecture marks both ends of the first floor and the center of the second. As for the central body of the main building, it has three successive projections: the widest corresponds to the central roof, then a three-level projection ending in the central pediment, then the projection of the entrance door, which leaves behind a column on each side to extend two of the four columns on the first floor. All this complexity, interweaving horizontal lines with vertical reliefs in progressive advances and vertical columns in different situations from one floor to the next, forms a plastic register very independent of the layout of the material masses except, as we said, that it agrees with it to share the same axis of symmetry.

The autonomy of the material stone masses from the lines of triglyphs, pilasters, columns, pediments and surface recesses that captivate our interest was already present in Mansart's earlier architecture, but at the Château de Maisons it acquires its full maturity.

As in Italy, François Mansart's architecture thus involves a dialogue between material masses and architectural design that captivates the mind, but unlike, for example, Bernini's third project for the Louvre in which the colossal orders seem to serve only to prevent the continuity of the material masses from being read, here the dialogue takes the form of a relative interplay between two autonomous entities, one taking the liberty of adopting a U-shaped layout that the other does not, while the other takes the liberty of rising higher than the first, of establishing itself in several successive steps on several staggered floors in front of a facade that presents only a fundamentally horizontal flat materiality, and of marking spectacular accents in places that the layout of the built masses does not call for, for example by establishing porticoes on an inaccessible floor that look like entrance porticoes at the final ends of the building's wings.

Although the manner is different, the plastic effects are the same in France and Italy. Here, the one who plays on the instability of our perception uses the conjunction of the two registers of form on the same axis of overall symmetry and on the U-shape of the built masses: since they so often accompany the layout of the building's material masses, we are trained to perceive all the architectural accents applied to these masses as accents highlighting their organization, but we are held back from making this reading whenever we note the autonomy of these architectural accents in relation to the layout of the built masses. As for the second effect: because they are set against the material masses we feel that the architectural orders reminiscent of Antiquity form a coherent whole with them, but because they are organized quite autonomously in relation to these masses we are unable to perceive them as a true whole.

In the convent of the Minimes in Paris, built from 1657 to 1666, Mansart gave even greater scope to the relative autonomy of massing and design of antique-style architecture, in a layout that also had an even more pronounced pyramidal aspect. As the building was demolished after the French Revolution, it is through a scale model produced at the Cité du Patrimoine et de l'Architecture that we can best get to know it.



François Mansart: model of the Minimes convent in Paris (1657-1666) demolished after the French Revolution (Cité du Patrimoine et de l'Architecture)

Image source: http://lindependantducoeurdeparis.blogspot.com/2021/04/lecouvent-des-minimes-et-ses-vestiges.html

The masses again form a U shape, but here they are combined with a floor-by-floor ascending effect, the second level being completely terraced and the volume of the summit dome completing the pyramid shape. On each of the side buildings, and on top of the cupola, small aediculae, themselves with cupolas, form a series that attracts our particular attention while sharing the pyramid effect with that produced by the volumes of the main masses. The column porticos are clearly distinguishable, their transparency contrasting with the opacity of the built masses, and also by difference they barely participate in the pyramid effect. Their lower level forms an outwardly projecting redent, in contrast to the successive hollow redents formed by the building's walls at the same level, with the center of this wall hollow recessed behind the portico and its ends corresponding to the protruding pavilions on either side of the facade.



Louis le Vau: facade overlooking gardens at Château de Vaux-le-Vicomte, France (1656-1657)

Image source: https://www.wikiwand.com/en/Vaux-le-Vicomte

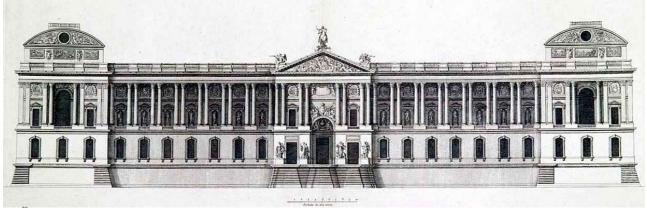
We've already looked at the entrance facade of the Château de Vaux-le-Vicomte which was designed by Louis le Vau, and we've already considered the autonomy between the pleated horizontal form of its masses and the design of its architecture combining vertical and horizontal effects.

The dome and rear facade of this château offer an even clearer autonomy between the ovoid mass of

the dome, supported by rounded facades, and the strict flat verticality of the pedimented facade that abuts it. Almost instinctively, we read this pedimented facade as a continuation of the dome's surface and that of the neighbouring rounded walls, but this perception is unstable as we immediately notice that its flat shape and the very rectilinear horizontal aspect of its portico and the bottom of its pediment do not connect at all with the mass of the building behind it, nor with its rounded masonry, nor with its domed roof. In the same way, if we are forced to admit that the building with its dome and this facade with its pediment and portico form a visual whole since they are set against each other, we must also admit that they have very alien shapes to each other, and therefore do not belong together in this aspect.

The difference between this French way of dealing with antagonistic forms and the Italian way of using curves and counter-curves whose perceptions are mutually detrimental, is once again underlined: although these are two very different registers, here we can perfectly read the architecture of the pediment and portico facade without this reading being thwarted by the presence of the oblong volumes behind it, and vice versa. These two registers are certainly very different, even incompatible, but they do not directly conflict with each other and simply constitute very autonomous registers.

We can't leave the French way of dealing with the relationship between masses and colonnades without mentioning Claude Perrault's design for the eastern facade of the Louvre, the same facade for which Bernini carried out the projects we have just considered. This solution was the subject of a great deal of negotiation involving many French architects after Bernini was ousted and construction of his third project had already begun. A view of Perrault's last project, dated 1668, is shown here. However, the attics of the side pavilions were eventually removed due to criticism.



Claude Perrault: last project of 1668 for the eastern facade of the Louvre in Paris (engraving by J. Marot) Image source: https://commons.wikimedia.org/wiki/FileEast facade of the Louvre, elevation design by Claude Perrault, engraved by Jean Marot 1676 %E2%80%93 Biblioth%C3%48

The autonomy between the materiality of the walls and the design of the colonnades and sculptures that captivate the mind is first apparent in the succession of storeys: on the basement level, a completely bare massiveness bordering the moat, then a very uniformly perforated floor, except on the entrance projection where the massive wall is this time accompanied by giant sculptures, then the floor dominated by colonnades forming a continuous horizontal frieze while the massiveness of the walls can only be seen through well-separated surfaces, fairly blind in the pedimented main front section, but much more open thanks to a large central archway at each end while the columns are mostly replaced by pilasters. On the upper floor, this autonomy can also be seen in the everchanging way in which the pairs of columns relate to the horizontal murality in front of which they stand vertically: at the ends, as already mentioned, they are essentially transformed into pilasters set against the masonry, on each of the main wings they are far in front of the masonry.

creating very deep, very high loggias, and in the central forebody they only project a short distance from the masonry.

The facade as a whole, with its three avant-corps, clearly produces the second plastic effect characteristic of the 17th century: vertically the three levels are certainly "together" due to their superimposition, but they are clearly distinguished from one another by their very great difference in opacity, whereas horizontally, if we are dealing with a continuous overall frieze, the three avant-corps projections refuse to integrate indistinctly into this continuity, notably due to the presence of the colonnade which alone offers a high degree of transparency.

The transparency of the colonnade also plays a part in the other characteristic effect: our gaze passes easily through the colonnade, but this passage does not correspond to a stable perception as it is contradicted in the forecourt areas where our gaze comes up against blind or semi-blind masonry, and equally contradicted on the two lower levels.

Another remarkable construction using the loggia effect is the open-air entrance staircase to the Hôtel Lambert in Paris, built by Louis le Vau from 1641. As this is an apartment staircase, given the Parisian climate which sometimes makes this type of arrangement very uncomfortable, it necessarily corresponds to an important desire on the part of the architect, a desire that has been overridden by successive owners who have progressively glazed this facade.



Of course, it's in relation to the rest of the facades in the entrance courtyard that the autonomy of the building containing the staircase must be appreciated, as it lends itself to the crossing of our gaze while the rest of the facades offer an opaque materiality. As with the Louvre facade, and unlike the Italian solutions, there is no direct conflict here between the opaque facades and the staircase's traversable facade: although they form a strong visual contrast, they nevertheless assert themselves completely independently of each other.

This brings us to the last characteristic feature of 17th century architecture, which is especially true of Italian Baroque. In particular it affirms the plastic effect that renders our perception unstable. We have already encountered and evoked this effect, but without examining its various aspects.



Carlo Rainaldi: the twin churches in Rome's Piazza del Popolo, the Basilica of Santa Maria di Montesanto (left, 1662-1679) and the church of Santa Maria dei Miracoli (1675-1679).



Piazza San Carlo in Turin, according to an engraving from the 1600s that presents a different view from the actual one. Image source: https://www.alamyimages.fr/italie-piemont-turin-place-myale-aujourd-hui-piaza-san-carlo de-gravure-des-annees-1600-prises-de-la-theatrum-sabaudhae-image242828305.html

The twin churches in Rome's Piazza del Popolo are a good illustration of this: almost identical, but with the bell towers on opposite sides so that they face each other, their visual weight is absolutely equivalent so that our gaze constantly hesitates to land on one or the other since they attract it with equal force. The fact that the steeples are off-axis doubles the instability of our perception: our gaze constantly floats between the perception of the pair formed by the domes and the perception of the pair formed by the steeples. Architect Carlo Rainaldi (1611-1691) was responsible for both constructions. On the left, the Basilica of Santa Maria di Montesanto, built between 1662 and 1679; on the right, the church of Santa Maria dei Miracoli, built between 1675 and 1679.

This layout has a rough equivalent in Turin's Piazza Real, today's <u>*Piazza San Carlo*</u>, as shown in an engraving from the 17th century which is more idealized than realistic. The church on the left, Santa Cristina, never received a bell tower, and its facade was not completed until the early 18th century, while the facade of the church on the right, San Carlo Borromeo, was not completed until the 19th century.



The instability of our perception, constantly swaying between two equivalent shapes, can also apply to two hollows, each as enveloping as the other, and therefore each as attractive as the other. Such is the case with the elliptical colonnade built by Bernini for St. Peter's Square in Rome between 1656 and 1667. The tension we feel to visually close this ellipse in the parts left open implies that we feel

that these two pieces of colonnade both belong to an elliptical overall shape, but their very large gap and the fact that one opens to the right while the other opens to the left also informs us that the bringing together of these two pieces on the same shape is unsuccessful, which this time corresponds to the second characteristic effect of the 17th century.

Such competition between different parts of the same form is particularly common in Italy where the instability of our perception means that there is a genuine active conflict between different parts, each of which seeks to draw our attention in a preferential way. Generally speaking, the building's material masses and the design of its architecture work together to achieve this effect while at the same time emphasizing their contrasts. This is particularly evident in the colonnade of St. Peter's Square, where the great horizontal hollows that envelop us materially are precisely the continuous lines of entablature and vertical colonnades that our mind reads, and which are extended vertically by statues that also attract our attention.



Louis le Vau: garden facade of the Château de Versailles (1668-1670) before Jules Ardouin-Mansart built the Galerie des Glaces on the central terrace - painted around 1675

Image source: https://www.wikiwand.com/en/Louis_Le_Vau

In France, the conflictual nature of this competition is mostly attenuated by the fact that the buildings are symmetrical, which integrates it into the effect of autonomy of massing and architectural design that we have discussed at length. In some cases, however, the nudity of this competition is reminiscent of what happens in Italy. This is particularly true of the garden facade of the Château de Versailles as built by Louis le Vau between 1668 and 1670. Since the Hall of Mirrors was later built by Jules Ardouin-Mansart on the site of the terrace that connected and separated the two wings of the facade, this effect has disappeared and can only be seen in paintings and engravings that depict the state of the château before Jules Ardouin-Mansart's intervention.



Above, Francesco Borromini: interior of the vault at Saint-Charles-des-Four-Fontaines in Rome (1638-1667)



Right, Martino Longhi the Younger: facade of the church of Saint Vincent and Saint Anastasius in Rome (1646 to 1650) Image source: https://www.romasegreta.it/revi/ss-vincenco-canastasio.html

Visual competition between several shapes attracting our attention simultaneously is not limited to the case of twin shapes.

For example, the vaulted ceiling of Francesco Borromini's Church of St. Charles of the Four Fountains in Rome, whose street facade we have already considered, features a highly engaging visual competition between four portions of spherical caps, each of which asserts its enveloping effect just as effectively as the other. The second characteristic effect of the 17th century is superimposed on this competition, for we feel that the central vault, together with the spherical caps on its periphery, constitutes a coherent and very compact ensemble of forms, but we also feel with equal force that it does not belong to this crown of forms that it unites and which are its own subordinates.

Another example of multiple choices we can't quite decide between: the triple colonnades with multiple pediments on the facade of the Church of St. Vincent and St. Anastasius in Rome, built between 1646 and 1650 by architect Martino Longhi the Younger (1602-1660). Overlapping each other in exactly the same place, each pair of pedimented columns on the ground and upper floors is in fierce visual competition. On the ground floor the pairs of end columns also form a competing portico, while on the upper floor the columns and pedimented frame of the opening compete with the other columned pediments in their vicinity.



Baldassare Longhena: Basilica of Santa Maria della Salute in Venice (1636-1687)

Image source: https://www.wikiwand.com/fr/Basilique_Santa_Maria_della_Salute_de_Venise

Finally, a piece of architecture that combines effects frequently used in Italy with an effect more characteristic of France: the exterior of the Basilica of Santa Maria della Salute in Venice, built from 1636 to 1687 by the architect Baldassare Longhena, whose facade of the Ca' Pesaro in Venice has already been considered.

Visual competition between the two domes surmounted by their skylights, visual competition between the swirls surmounted by statues that are repeated uniformly all around the base of the main dome, and visual competition between the pedimented volumes that form appendages all around the lower part of the church, differentiated from each other only by the slightly larger size of the one that serves as the entrance porch - all of this reflects the instability of our perception due to

visual competition between equivalent forms and refers preferentially to Italian architecture. Some of these forms have a mass effect (the swollen shape of the domes, the material protrusion of the pedimented appendages on the lower level), while others capture the attention of our mind (the winding of the swirls, the emergence of the statues perched on these swirls, the design of the architecture set against the appendages on the lower level). The remarkable thing is that these different forms belong to very autonomous registers that are not in direct conflict with each other in our perception but merely contrast with each other, which this time amounts to saying that they are arranged "à la française".

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