

The natural lighting for the interiors is obtained through large openings in the perimeter wall and the transparent, partially sun-screened roofing. This strategically regulates the view of the natural landscape and external architecture.

The outer modules of the grid are occupied by the extension of the tall blocks on the ground floor to form a support base and house the more cumbersome technical equipment. The 250-seat lecture halls are suspended between the volumes of two lateral blocks in order to leave the continuity of the slope unbroken and form a passageway below the tiered arches. The blocks which house the various departments and a whole range of teaching and research activities form the basic element in the grouping and set up a morphological referent for the university's future growth and change of layout. The final phase of [the] project, providing accommodation for 12,000 students, suggested the doubling of the departmental spaces. In this projection, a rapid link-up service would replace the bridge and would continue both to the new station with parking facilities at the mouth of the Paola tunnel and to additional parking at the Cozenza tunnel. The level part of the northern area would house the buildings and supply areas of the main regional sports centre and the laboratories of the national research centre.

At this stage in its development, the university organism would be making full use of two access systems deriving from the settlement system: the two ends of alignment would be linked by a fast, efficient urban transport system while the hill roads would continue to function as they had in the first phase. The squares would be the meeting point of the two systems.

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situate and utilise the landscape in order to know and meet the environment as a geographical totality of concrete things which are inseparable from their historical organisation.

This can only be done if we abandon the sociological or ecological or administrative notion of the environment as an imprisoned element and think of it instead as material for architecture. It should be made clear that this idea of the environment is not a system in which architecture is dissolved, but is on the contrary a load-bearing material for the architectural project, enabling new planning principles and methods to accommodate the spirit of the specific terrain.

The spirit behind these new methods is *modification*. Modification reveals an awareness of being part of a pre-existing whole, of changing one part of a system to transform the whole. Through its etymological root, *modus*, modification is linked to the concept of measure and the geometrical world of regulated things. It is modification which transforms *place* into *architecture* and establishes the original symbolic act of making contact with the earth, with the physical environment, with the idea of nature as a totality. Such a concept of the project sees architecture as a system of relations and distances, as the measurement of intervals rather than as isolated objects. Thus the specificity of the solution is closely related to differences in situation, context or environment. We do not, therefore, conceive of space as a uniform and infinite extension where no place is privileged: space is not of identical value in all directions, but rather is composed of differences, discontinuities considered as value and as experience. The organization of space, therefore, starts from the idea of *place*: the project transforms *place* into *settlement*.

The origin of architecture does not lie in the hut, in the cave or in the mythical "Adam's house in paradise". Before a support was transformed into a column, a roof into a pediment, and stone heaped upon stone, man put stone on the ground in order to recognise place in the midst of the unknown universe and thereby measure and modify it. Like every aspect of measuring, this required a radical simplicity. From this point of view, there are essentially two ways to place oneself in relation to the context. The instruments of the first way are mimetic imitation, organic assimilation and visible complexity. The second way uses measurement: distance, definition, rotation within complexity.

In the first case the problem is mirroring reality, in the second it is establishing the double. The latter mode is based on restless division: putting up a wall, building an enclosure, defining regions, producing a densely articulated interior which will correspond to the fragmentation and differences of behaviour. A simple exterior will thus appear as a measure of the larger environment's complexity. For this reason a material is not actually a thing of nature: it is more earthly and more abstract, alluding to the form of the place to things as they are combined, but also to what is beneath, to the stable geological support, to a nature which is historically transformed, to a nature which is the product of thought, and which as a result of being frequented or settled has become a shared memory.

The project, then, must be established upon the regulating tradition of style and métier. But what gives architectural truth and concreteness to this tradition is its meeting with the site, for only by perceiving the site as a specific environment can those exceptions which generate architecture emerge.

My current work explores the implications of developing an architecture of context. This has led me to confront the problem of implementing large-scale works and to examine which principles and methods would stand up to the realities of production. I have been especially concerned with work environments in industry and universities, and was involved with the important competition for the University of Calabria. The project's main proposal was to base the design of the new university on a principle of settlement. This principle is evinced by an irregular alignment and by the connection between it and the sinuous terrain of the countryside. It functions as a way of gauging the landscape and regulating and characterising a large-scale design. Alignment and discontinuity are, moreover, ancient and characteristic methods of regulating settlements in Calabria.

The project also attempts to bring about an interaction between morphological and functional systems. The first system consists of a linear succession of university departments running across the hill system to the plain of the River Crati. The blocks housing the departmental activities accommodate the varying levels of the land and are laid out on a square plan on the axis of a bridge. The second system considers the morphology of the hills, the succession of their slopes and peaks (which carry the local road system) and their relationship to the fabric of the low-tiered houses along the northern slope intended as university residences. Since the southern slopes are cultivated with olive trees, an alternating succession of residential units and natural spaces results. The university services, which are open towards the exterior, are situated at the junctures between the bridge system and the hilltop roads.

The 7m-wide upper lane of the bridge caters for public transport and goods traffic; the lower lane is for pedestrians and internal student traffic. Between the two lanes, the various installations run along a conduit with a triangular section. The tall blocks of the university departments are linked to the bridge by a narrow body of services placed perpendicular or parallel to the bridge depending on the type of cube.

The whole layout of the university is regulated by a grid of 25.20 x 25.20m extended over two modules to the two sides of the axis, forming a settlement strip 110m wide. The tall blocks vary between two and five storeys to maintain a constant height of 23.240m above sea-level and project onto the line of transverse section of the valley below. They are enclosed by load-bearing reinforced concrete walls measuring 21.60 x 25.20m at distances of 3.60m on centre. The horizontal structures are supported by metal beams with a span of 19.60m for internal linkage. These control the positioning of the structures of the floors, spaces between floors and intermediate floors. In the second type, the internal structures are also reinforced concrete, and pillars divide the interior into two different articulated spaces: on the one hand, small spaces for studies and offices; on the other, large collective spaces for laboratories, lecture halls, libraries, etc.

it is that none of the glaring blunders that architects can make has been forgotten here. ... In short, pedestals are only good for carrying statues and to make them serve any other purpose is essentially bad taste. However much it is said that pedestals have been admitted at all times, that Vitruvius and all his commentators assign to each Order its particular pedestal and that they are to be found on the most beautiful buildings of antiquity, I have my principle which I shall never give up. Any device—even if approved by great men—which is either contrary to nature or cannot be convincingly explained is a bad device and must be proscribed.

Reflective Text

VITTORIO GREGOTTI, "TERRITORY AND ARCHITECTURE."

First Published in 1985

While presenting my project for the University of Calabria, I thought again of some of the theoretical reflections I had made in *The Territory of Architecture* ten years earlier, in 1966, for they seemed relevant to many aspects of the overall layout of the Calabria project.

The theory of the materials of architecture and the pre-eminence of the figure as their organisational structure was central to *The Territory of Architecture*, but it did not resolve the specific organisational problems at Calabria. It concerned itself primarily with questions of theory and history, whether as hypotheses of the organisation of personal and group memory, or as a specific history of the discipline—the vacillations of its margins and the shifts in its centre of interests, its territory and its privileged relations with other disciplines. However, the physical spirit of history is the built environment which surrounds us, the manner of its transformation into visible things, its gathering of depths and meanings which differ not only because of what the environment appears to be, but also because of what it is structurally. The environment is rather composed of the traces of its own history. If geography is therefore the way in which the signs of history solidify and are superimposed in a form, the architectural project has the task of drawing attention to the essence of the environmental context through the transformation of form.

From 1963–64 onwards I began to put these problems at the centre of my reflections on architecture: my first opportunity to experiment with their consequences in planning was at the XIIth Triennale in Milan in 1964. Since then, I have always tried to keep the relationship between my theory and my work open, if not consistent. I have attempted, for instance, to understand what one could conclude from reflecting on the idea of landscape and nature as the sum total of all things and of their of past configurations. Nature, in this sense, is not seen as an indifferent, inscrutable force or a divine cycle of creation, but rather as a collection of material things whose reasons and relations architecture has the task of revealing. We must therefore modify, redouble, measure,

what a difference! Even valets and maidservants want to know why the pavilions are different from the rest. This vexation is aroused by the taste for true beauty, a taste that is natural to everybody. The identical architectural Order extends over the whole façade, but the main part has columns, the pavilions have pilasters; this difference alone is enough to disturb the pleasure that a more unified whole would have given. . . .

On entering the nave of the Chapel of Versailles everybody is struck by the beauty of its columns, by the picturesque vista (*apréte*) through its intercolumniations; but as soon as one approaches the apse, there is not a person who does not notice with regret the stupid interruption of the beautiful row of columns by a depressing pilaster. One can therefore, be quite certain that the use of pilasters is one of the great abuses that have found their way into architecture, and since an abuse never comes alone we have been presented with folded pilasters in corners, with curved pilasters in circular buildings, with pilasters lost in the confused interpenetration of one into the other. The pilaster is a frivolous ornament which has been put to all sorts of uses; it has even been married to a column which, it seems, is there as its inseparable companion. Has there ever been a more ridiculous match? What does the engaged column mean behind a free-standing column? Honestly, I do not know and I defy anybody to explain it. Does it make sense to unite two things which are quite incompatible? The column has its diminution, whereas the pilaster could not have any which is the reason that the latter will always look either too narrow at the bottom or too wide at the top. Whenever there is a void to be filled one fills it with a pilaster; whenever there is a fault to be covered up or a place to be embellished, one cuts out one half or one quarter of a pilaster. The ancients were not more scrupulous about this matter, at times even less particular, than the moderns, since they built colonnades where they mixed columns and pilasters. In short, the pilaster is a thing I cannot bear. This is an inborn aversion. The more I studied architecture, the more I found in its true principles the justification for my own aversion. . . .

It will be said that pilasters are used so as to avoid the excessive cost of columns. To that I answer: if the column is barred only for reasons of economy, all that is needed is a decision to suppress architectural Orders altogether. Beautiful buildings can be created without their help, but if one wants to employ the five Orders I shall never forgive cutting out the column which is their most essential part.

3. Fault: to give a swelling to the shaft at about the third of its height instead of tapering the column in the normal way. I do not believe that nature has ever produced anything that could justify this swelling. Let us do justice to our artists who a long time ago have given up spindle-shaped columns which are not to be found on any recent work. Rusticated columns are no less faulty than spindle-shaped columns. Philibert de l'Orme had a high opinion of rusticated columns and covered the Palais des Tuileries with them. His taste, however, was not sufficiently refined to make them admissible on his authority alone. This great man deserves to be highly praised and will always be counted among the great masters of architecture. We owe to him the rebirth of this beautiful art in our country, yet his work still savors of the depraved taste of the preceding

centuries. Rusticated columns are only a capricious fancy; we do not see a whole column but various drums of a different scale piled up one above the other, producing an effect which is rather mean and infinitely harsh. The beautiful Palais de Luxembourg is quite disfigured by these rusticated columns. Far worse are spiral columns. Whoever thought of them was certainly skilful because it needs much skill to make them well; but had he had judicious taste, he would surely not have taken so much care in carrying out such a foolish invention. Spiral columns are to architecture what the bandy legs of a cripple are to the human body; yet at first their peculiar appearance pleased some people who were enemies of the natural and who believed the work to be beautiful because it was difficult. Others, more eccentric still, have offered us stumps of straight columns on which they had mounted in a most miserable manner two-thirds of a spiral column; others again, prompted by the same taste but defeated by practical difficulties, wanted at least the satisfaction of twisting the flutings of straight columns. These absurdities have been reserved mainly for altars. I admire the baldachins of St. Peter's in Rome, of the Val de Grâce and of the Invalides, but I shall never forgive the great men who designed them for using twisted columns. Do not let us be deceived by false jewels: they only demonstrate the failings of a genius. Let us keep to the simple and natural; it is the only road to beauty. . . .

4. Fault: when the columns, instead of resting directly on the ground, are raised on pedestals. Since the columns are, if I may say so, the legs of a building, it is absurd to give them another pair of legs. The pedestals I am speaking of have been invented out of misfortune. If columns were found to be too short, it was decided to put them on stilts in order to make up for the lack of height. The same difficulty led to having recourse to double pedestals when a single pedestal was not sufficient. Nothing makes a building look more heavy and clumsy than these huge angular masses which serve as substructures to the columns. The colonnade of the Hôtel Soubise is unbearable because of these hideous pedestals; but if the columns were rising from the ground, it would be a charming building. Columns may rest on a massive, continuous wall, that is to say on a simple socle without base, without cornice and of medium height; and this will be done whenever a colonnade is being built and the level of the inner floor is higher than the surrounding ground. Far from criticizing this practice, I am convinced that it will always be successful. Sometimes too, when the intercolumniations are filled by a balustrade as at the bay of the Chapel of Versailles and of the Colonnade of the Louvre, each column may rest separately on a small socle. This second manner is less perfect and would even be defective if it were not justified by the necessity of having a balustrade on a colonnade which is erected on the first floor; but to place pedestals under columns at ground level is an inexcusable fault. Nearly all the altars in our churches present this ridiculous sight. Columns are needed here but they would cost too much if they were on a scale large enough to make them rest directly on the floor—hence one needs pedestals. This is the reason why the columns at the main altar of the Church of the Jesuits in the rue St. Antoine are set on two pedestals, one above the other. Only this once shall I cite this shocking work. All one can say about

hut I have just described. It is by approaching the simplicity of this first model that fundamental mistakes are avoided and true perfection is achieved. The pieces of wood set upright have given us the idea of the column, the pieces placed horizontally on top of them the idea of the entablature, the inclining pieces forming the roof the idea of the pediment. This is what all masters of art have recognized. But take note of this: never has a principle been more fertile in its effect. From now on it is easy to distinguish between the parts which are essential to the composition of an architectural Order and those which have been introduced by necessity or have been added by caprice. The parts that are essential are the cause of beauty, the parts introduced by necessity cause every license, the parts added by caprice cause every fault. This calls for an explanation; I shall try to be as clear as possible.

Let us never lose sight of our little rustic hut. I can only see columns, a ceiling or entablature and a pointed roof forming at both ends what is called a pediment. So far there is no vault, still less an arch, no pedestals, no attic, not even a door or a window. I therefore come to this conclusion: in an architectural Order only the column, the entablature and the pediment may form an essential part of its composition. If each of these parts is suitably placed and suitably formed, nothing else need be added to make the work perfect.

We still have in France a beautiful ancient monument, which in Nîmes is called the *Maison Carrée*. Everybody, *connaissance* or not, admires its beauty. Why? Because everything here accords with the true principles of architecture: a rectangle where thirty columns support an entablature and a roof—closed at both ends by a pediment—that is all; the combination is of a simplicity and a nobility which strikes everybody.

...
Let us now consider in detail the essential parts of an architectural Order.

ARTICLE I: THE COLUMN

(1) The column must be strictly perpendicular, because, being intended to support the whole load, perfect verticality gives it its greatest strength. (2) The column must be free-standing so that its origin and purpose are expressed in a natural way. (3) The column must be round because nature makes nothing square. (4) The column must be tapered from bottom to top in imitation of nature where this diminution is found in all plants. (5) The column must rest directly on the floor as the posts of the rustic hut rest directly on the ground. All these rules find their justification in our model; all deviations from this model without real necessity must, therefore, be considered as so many faults.

1. Fault: when columns, instead of standing free, are engaged in the wall. The column certainly loses much of its grace when even a small obstacle obscures its outline. I admit that circumstances frequently seem to rule out the use of free-standing columns. People want to live in closed spaces, not in open halls. Therefore, it becomes necessary to fill in the space between the columns and consequently to engage them. In this case

an engaged column will not be regarded as a fault, but as a license sanctioned by necessity. It should, however, always be remembered that any license points to an imperfection and must be used cautiously and only when it is impossible to find a better way. If, therefore, the columns have to be engaged, the degree of engagement should be as small as possible—a quarter at most or even less so that, even when constrained, they retain some quality of the freedom and ease which gives them so much grace. We must avoid getting into the awkward situation where engaged columns have to be employed. It would be best to reserve the use of columns for peristyles where they can be completely free-standing and to omit them altogether whenever necessity compels us to back them onto a wall. After all, even though we have to submit to *bienséance* why should we not disengage the column so that it can be seen in the round? Would the façade of St. Gervais not be improved if the Doric columns were free-standing like those of the upper Orders? Is there anything impossible in this? ...

To dare criticize a work which the public commonly takes for a faultless masterpiece suggests that one defers little to public opinion. However, pointing out the defects of this building gives me the right to be unsparing in my criticism of any other building without hurting anybody's pride. That is why I shall speak bluntly. After what I have said, it will be less surprising that the *connoisseurs* set so little value on the Church of the Jesuits in the rue St. Antoine. Without counting other faults, of which there are many, the effect of the three Orders of engaged columns is most disagreeable. This, as M. de Cordemoy so adroitly says, is no more than architecture in relief to which the eyes of enlightened people will never be reconciled. I have often bemoaned the craze of architects for engaged columns, but I should never have believed that it could occur to the mind of a thinking person to engage one column into the other. No fault is more unbearable, more shocking than this. Even those new to architecture will agree on this, and yet this fault is repeatedly committed on all four sides of the inner courtyard of the Louvre. Such a glaring blunder on such a magnificent work of art ranks among the degradations of the human spirit.

2. Fault: when instead of round columns pilasters are used. Pilasters are only a poor representation of columns. Their corners indicate a constraint of art and deviate noticeably from the simplicity of nature; their sharp and awkward edges hurt the eye, their surfaces, not being rounded, make the whole Order seem flat. They are not adaptable to that diminution which makes columns so attractive. Pilasters are never necessary; wherever they are used, columns could be applied just as advantageously. They must, therefore, be regarded as a bizarre innovation, in no way founded on nature or authorized by any need, which can only have been adopted out of ignorance and is still tolerated only by habit. The fashion for pilasters has triumphed everywhere: alas, where are they not to be found? Yet to realize how distasteful they are, one only needs to think of the grand effect which columns always make, an effect that is unfailingly destroyed by pilasters. Change the coupled columns of the Colonnade of the Louvre into pilasters and you take away all its beauty. Compare the two wings of this superb façade with the pavilions at both corners:

Original Text

MARC-ANTOINE LAugier, EXCERPTS FROM *AN ESSAY
ON ARCHITECTURE*.

First Published in 1753

It is the same in architecture as in all other arts: its principles are founded on simple nature, and nature's process clearly indicates its rules. Let us look at man in his primitive state without any aid or guidance other than his natural instincts. He is in need of a place to rest. On the banks of a quietly flowing brook he notices a stretch of grass; its fresh greenness is pleasing to his eyes, its tender down invites him; he is drawn there and, stretched out at leisure on this sparkling carpet, he thinks of nothing else but enjoying the gift of nature; he lacks nothing, he does not wish for anything. But soon the scorching heat of the sun forces him to look for shelter. A nearby forest draws him to its cooling shade; he runs to find a refuge in its depth, and there he is content. But suddenly mists are rising, swirling round and growing denser, until thick clouds cover the skies; soon, torrential rain pours down on this delightful forest. The savage, in his leafy shelter, does not know how to protect himself from the uncomfortable damp that penetrates everywhere; he creeps into a nearby cave and, finding it dry, he praises himself for his discovery. But soon the darkness and foul air surrounding him make his stay unbearable again. He leaves and is resolved to make good by his ingenuity the careless neglect of nature. He wants to make himself a dwelling that protects but does not bury him. Some fallen branches in the forest are the right material for his purpose; he chooses four of the strongest, raises them upright and arranges them in a square; across their top he lays four other branches; on these he hoists from two sides yet another row of branches which, inclining towards each other, meet at their highest point. He then covers this kind of roof with leaves so closely packed that neither sun nor rain can penetrate. Thus, man is housed. Admittedly, the cold and heat will make him feel uncomfortable in this house which is open on all sides but soon he will fill in the space between two posts and feel secure.

Such is the course of simple nature; by imitating the natural process, art was born. All the splendors of architecture ever conceived have been modeled on the little rustic