West façade of Notre-Dame, Paris, France, ca. 1200–50
Photo Credit: Scala/Art Resource, NY
The French architect Eugène-Emmanuel Viollet-le-Duc is well known for his restoration work on Gothic monuments such as Sainte-Chappelle and Notre Dame in Paris. Yet, his legacy rests on his theoretical writings. Deeply influenced by buildings of the Middle Ages, Viollet-le-Duc championed Gothic architecture as a model for the designers of his day. However, he did not call for a Gothic revival, but rather emphasized the governing logic behind medieval architecture. In particular, Viollet-le-Duc identified the direct correlation between the form and structure of the Gothic cathedral. Ultimately, Gothic builders aspired to construct the lightest, tallest, most graceful works possible. This meant a dematerialization of the building itself, a reduction of the building’s mass in favor of vast amounts of glass. Every feature of the Gothic cathedral, from the elongated compound piers to its ribbed groin vaults, needed to function structurally. All forms, even seemingly ornamental elements, were direct manifestations of the building’s structure. According to Viollet-le-Duc, the underlying principles of this structure stem from the logic and rationality of nature, the harmony of parts, proportion, and use, evident in natural creations. Viollet-le-Duc discussed this universal principle of structural rationalism as well as other architectural theories in his ten-volume *Dictionnaire raisonné de l’architecture française du XI au XVI siècle* (literally, the *Reasoned Dictionary of French Architecture of the 11th to the 16th Centuries*, but often called the *Dictionnaire raisonné*) of 1854–69 and his two volume *Entretiens sur l’architecture (Discourses on Architecture)* of 1858–72. Viollet-le-Duc’s notion of structural rationalism was particularly influential for modern architects of the late-nineteenth and early-twentieth centuries.
style, s.m. There is style; then there are the styles. Styles enable us to distinguish different schools and epochs from one another. The styles of Greek, Roman, Byzantine, Romanesque, and Gothic architecture differ from each other in ways that make it easy to classify the monuments produced by these various types of art.

We will speak here of style only as it belongs to art understood as a conception of the human mind. Just as there is only Art in this sense, so there is only one Style. What, then, is style in this sense? It is, in a work of art, the manifestation of an ideal based on a principle.

Style can also be understood as mode; that is, to make the form of an art appropriate to its objective. In art, then, there is absolute style; there is also relative style. The first dominates the entire artistic conception of an object; the second can be modified depending upon the purpose of the object. The style appropriate for a church would not be appropriate for a private dwelling; this is relative style. Yet a house can reveal the imprint of an artistic expression (just as can a temple or a barracks) that is independent of the object itself, an imprint belonging to the artist or, more precisely, to the principle that he took as a starting point: this is style.

Style is for a work of art what blood is for the human body: it develops the work, nourishes it, gives it strength, health, and duration; it gives it, as the saying goes, the real blood that is common to all humans. Although each individual has very different

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physical and moral qualities, we must nevertheless speak of style when it is a question of the artist’s power to give body and life to works of art, even when each work of art still has its own proper character. . . .

. . . Architecture as an art is a human creation. Such is our inferiority that, in order to achieve this type of creation, we are obliged to proceed as nature proceeds in the things she creates. We are obliged to employ the same elements and the same logical method as nature; we are obliged to observe the same submission to certain natural laws and to observe the same transitions. When the first man traced in the sand with a stick a circle pivoting upon its axis, he in no way invented the circle; he merely discovered a figure already existing. All discoveries in geometry have resulted from observations, not creations. The angles opposite the vertex of a triangle did not have to wait to be discovered by somebody in order to be equal to each other.

Architecture, this most human of creations, is but an application of principles that are born outside us—principles that we appropriate by observation. Gravitational force existed before we did; we merely deduced the statics of it. Geometry, too, was already existent in the universal order; we merely took note of its laws, and applied them. The same thing is true of all aspects of the architectural art; proportions—indeed, even decoration—must arise out of the great natural order whose principles we must appropriate in the measure that human intelligence permits us to do so. It was not without reason that Vitruvius said that the architect had to be in possession of most of the knowledge of his time, and for his part he put philosophy at the head of all knowledge. Among the ancients, of course, philosophy included all of the sciences of "observation," whether in the moral order or in the physical order.

If, therefore, we succeed in acquiring some little knowledge of the great principles of the universal natural order, we will quickly realize that all creation is developed in a very logical way and, very probably, is subject to laws anterior to any creative idea.
So much is this the case that we might well claim: "In the beginning, numbers and geometry existed!" Certainly the Egyptians and, after them, the Greeks understood things that way; for them, numbers and geometric figures were sacred. We believe that the style the Egyptians and Greeks achieved—for style is never lacking in their artistic productions—was due to the religious respect they had for the principles to which universal creation itself was the first to be subject, that universal creation which itself is style \textit{par excellence}.

In questions of this order, however, we need to bring forward some simple and obvious demonstration. We are not here concerned with philosophy; we are concerned with bringing some great and fundamental principles within our grasp—simple principles, in fact. Style is able to enter into architectural work only when it operates in accordance with these fundamental principles.

There are those who appear to be persuaded that artists are simply born with the faculty to produce works with style and that all they have to do is to open themselves to a sort of inspiration of which they are not the masters. This idea would appear to be too broadly general in its sweep; it is, nevertheless, favored by the fuzzy-minded. It is not an idea, however, that ever seems to have been favored or, indeed, even admitted in those epochs that knew best how to produce the works of art that have been most noted for their style. On the contrary, in those times it was believed that the most perfect kind of artistic creation was the consequence of a profound observation of the principles on which art can and must be based. (It was, of course, also granted that artists did possess artistic faculties.)

We will leave it open to poets and painters to decide whether what we call inspiration can or cannot get along without a long and profound observation of nature. As far as architecture is concerned, however, this particular pursuit is compelled on its scientific side to observe the imperatives that rule it; it is obliged from the very first to seek the
elements and the principles on which it will be based, and then to deduce from them with an utterly rigorous logic all the consequences that follow. It happens to be the truth that we cannot pretend to proceed with a power greater than that possessed by universal creation itself, for we act at all only by the virtue of our observation of the laws of that creation. Once we have recognized that nature (however we suppose nature herself to have been inspired) has never so much as joined two single atoms together without being subject to a completely logical rule; once we have recognized that nature always proceeds with mathematical exactitude from the simple to the complex, without ever abandoning its first principles—once we have recognized these things, we will surely have to be allowed to smile broadly if we then find an architect waiting for an inspiration without first having some recourse to his reason.

... If we were to follow through and examine all the phases of creation in our world, both organic and inorganic, we would quickly find it to be the case that, in all of nature's various works, however different they may be in appearance, the same logical order proceeding from a fundamental principle is followed; this is an a priori law, and nature never deviates from it. And it is to this natural method that is owing the "style" with which all of nature's works are imbued. From the largest mountain down to the finest crystal, from the lichen to the oaks of our forests, from the polyp to human beings, everything in terrestrial creation does indeed possess style—that is to say, a perfect harmony between the results obtained and the means employed to achieve them.

This is the example that nature has provided for us, the example we must follow when, with the help of our intelligence, we presume to create anything ourselves.

What we call imagination is in reality only one aspect of our human mind. It is the part of the mind that is alive even while the body is asleep; it is through that same part of the mind that, in dreams, we see spread out before us bizarre scenes consisting of impossible facts and events that have no connection one with the other. This part
of ourselves that is imagination still does not sleep when we are awake; but we generally regulate it by means of our reason. We are not the masters of our imagination; it distracts us unceasingly and turns us away from whatever is occupying us, although it seems to escape entirely and float freely only during sleep. However, we are the masters of our reason. Our reason truly belongs to us; we nourish it and develop it. With constant exercise, we are able to make out of it an attentive “operator” for ourselves, able to regulate our actions and ensure that our accomplishments are both lively and lasting.

Thus, even while we recognize that a work of art may exist in an embryonic state in the imagination, we must also recognize that it will not develop into a true and visible work of art without the intervention of reason. It is reason that will provide the embryonic work with the necessary organs to survive, with the proper relationships between its various parts, and also with what in architecture we call its proper proportions. Style is the visible sign of the unity and harmony of all the parts that make up the whole work of art. Style originates, therefore, in an intervention of reason.

The architecture of the Egyptians, like that of the Greeks, possessed style because both architectures were derived by means of an inflexible logical progression from the principle of stability on which both were based. One cannot say the same of all the constructions of the Romans during the Roman Empire. As for the architecture of the Middle Ages, it, too, possessed style once it had abandoned the debased traditions of antiquity—that is, in the period from the twelfth to the fifteenth centuries. It possessed style because it proceeded according to the same kind of logical order that we have observed at work in nature. Thus, just as in viewing a single leaf it is possible to reconstruct the entire plant, and in viewing an animal bone, the animal itself, it is also possible to deduce the members of an architecture from the view of an architectural profile . . . Similarly, the nature of the finished construction can be derived from an architectural member . . .
... [Style] as well as the beautiful, we must insist, resides not merely in forms, but in the harmony of a form with reference to an end in view, to a result to be achieved. If a form clearly delineates an object and makes understandable the purpose for which that object was produced, then it is a beautiful form. It is for this reason that the creations of nature are always beautiful in the eyes of the observer. The correct application of a form to its object and to its use or function, and the harmony that necessarily always accompanies such a correct application, can only evoke our admiration, whether we observe it in a stately oak tree or in the smallest of insects. We will discover style in the mechanisms of the wings of a bird of prey, just as we will discover style in the curves of a body of a fish; in these cases style clearly results from mechanisms or curves so aptly designed that flight results in one case and swimming in the other. It hardly concerns us if someone points out that a bird has wings in order to be able to fly or that this bird is able to fly only because of its wings; the fact is that the wings are a perfect machine, which produces flight. This machine represents a precise expression of the function that it fulfills. We other artists need go no further than this. . . .

. . . Now, style is inherent in an architectural art when that art is practiced in accordance with a logical and harmonious order, whether in its details or as a whole; whether in its principles or in its form; nothing in such an architectural art is ever left to chance or fantasy. It is, however, nothing but fantasy that guides an artist if, for example, he provides a wall that has no need of it with an architectural order; or if he provides with a buttress a column already erected with a view toward carrying a load. It is fantasy that includes in the same building concave bays along with square bays terminating with horizontal beam members; or that inserts projecting cornices or ledges between the floors of a building where there are no roof drains; or that raises up pediments over bays opening on a wall; or that cuts into an upper story in order to make a door opening for the people or vehicles that must pass through the door; and so on. If it is not fantasy that leads to the construction of such things, so contrary to reason, then it must be what is commonly called taste. But is it a proof of good taste in
architecture not to proceed in accordance with reason? Architecture, after all, is an art that is destined to satisfy, before everything else, material needs that are perfectly well defined; and architecture is obliged to make use of materials whose qualities result from laws to which we must necessarily submit.

It is an illusion to imagine that there can be style in architectural works whose features are unexplained and unexplainable; or that there can be style where the form is nothing but the product of memory crammed with a number of different motifs taken from here or from there. It would be equally valid to say that there could be style in a literary work of which the chapters or, indeed, even the sentences were nothing but a loose collection of words borrowed from ten different authors, all writing on different subjects...

Style is the consequence of a principle pursued methodically; it is a kind of emanation from the form of the work that is not consciously sought after. Style that is sought after is really nothing else but manner. Manner becomes dated; style never does.

When an entire population of artists and artisans is strongly imbued with logical principles in accordance with which form is the consequence of the object as well as its purpose, then style will be present in the works that issue from their hands, from the most ordinary vase to the most monumental building, from the simplest household utensil to the costliest piece of furniture. We admire this unity in the best of Greek antiquity, and we find the same kind of thing again in the best of what the Middle Ages produced, though the two types of art are different because the two civilizations that produced them were different. We cannot appropriate to ourselves the style of the Greeks, because we are not Athenians. Nor can we re-create the style of our predecessors in the Middle Ages, for the simple reason that time has moved on. We can only affect the manner of the Greeks or of the artists of the Middle Ages; that is to say, we can only produce pastiches. If we cannot accomplish what they did, we can at least
proceed as they did by allowing ourselves to become penetrated with principles that are true and natural principles—just as they were imbued with true and natural principles. If we succeed in doing this, our works will possess style without our having to seek after it.