

Architecture and Organic Unity

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Abstract

Buildings and monuments are among the most important works of art. But the conception of the arts that emerged in the 18th century, and remained the orthodoxy in philosophy for about two centuries, either excludes architecture from the fine arts or relegates it to the intermediate or decorative arts. This essay addresses this puzzle, assesses the truth in certain formalist doctrines about architecture, and advances the view that works of art are organic unities, i.e. integrated sets of solutions to various problems, some aesthetic and others technical, mathematical, theological, political, etc.

Keywords

art, architecture, aesthetics, formalism

Resumen

Los edificios y monumentos se encuentran entre las obras de arte más importantes. Pero la concepción de las artes que surgió en el siglo XVIII y permaneció como la ortodoxia en la filosofía durante aproximadamente dos siglos excluye la arquitectura de las bellas artes, o la relega a las artes intermedias o decorativas. El presente ensayo aborda este enigma, evalúa la verdad en ciertas doctrinas formalistas sobre la arquitectura, y avanza la opinión de que las obras de arte son unidades orgánicas, es decir, conjuntos integrados de soluciones a diversos problemas, algunos estéticos y otros técnicos, matemáticos, teológicos, políticos, etc.

Palabras clave

arte, arquitectura, estética, formalismo

THERE IS A PUZZLE ABOUT ARCHITECTURE. On the one hand, buildings and monuments are among the most important works of art. In some cultures or historical periods—in Elizabethan and Jacobean England, for example—architecture was less important than poetry or drama, and of course in nomadic cultures it does not exist at all. But at other times, it is the most important medium of artistic expression—for example in Europe between the twelfth and fifteenth centuries, in Mughal India, and in America in the twentieth century, together with film. There is nothing intrinsic about buildings that makes them works of art. If the Vikings had done aesthetics, they would not have included architecture among the arts—perhaps they would have included shipbuilding instead. But there have been times in the history of every civilization when buildings have been the most important artefacts that express values in a sensuous and symbolic form, and when painting and sculpture have been subordinated to architecture.

On the other hand, the conception of the arts that emerged in the eighteenth century, and remained the orthodoxy in philosophy for about two centuries, excludes architecture from the fine arts, or relegates it to the intermediate or decorative arts. Batteux's classification is the most influential and representative eighteenth century statement of this doctrine.¹ He does not attempt to define the arts in general. But he divides them into three kinds: the mechanical arts, the fine arts, and the arts of architecture and rhetoric, which are intermediate between these two. The impact of Romanticism on the theory of art and the distinction between art and craft reinforced the idea that architecture has a marginal status among the arts, and by the end of the nineteenth century it was plausible to deny that architecture qualifies as art at all.

The most trenchant exponent of this view, Adolf Loos, excludes architecture from the arts completely. Art, Loos claims, is passionate, personal and prophetic; craft work is mundane, traditional, and governed by the practical requirements of living. A house, he claims, should be as practical as a suit of clothing. Loos thinks there are tasteful and tasteless buildings, but he does not think we should infer that architecture is an art. Taste in architec-

1. C. Batteux, *The Fine Arts Reduced to a Single Principle*, trans. J.O. Young, Oxford, 2015.

ture is simply good manners. «It is no feat to build tastefully», he says, «just as it is no feat to avoid putting a knife into one's mouth or to brush one's teeth in the morning.»²

Wittgenstein's view is very similar. He does not exclude 99% of architecture from the arts, as Loos does. But he excludes 99% of building from architecture, so the effect is the same. «Architecture», Wittgenstein claims, «is a gesture. Not every purposive movement of the human body is a gesture. Just as little as every functional building is architecture.»³ In Wittgenstein's own estimation, this rules out the Stonborough House in Vienna, which he designed for his sister Margaret. He describes the house as «the product of a decidedly sensitive ear, good manners» and as «the expression of a deep “understanding” (of a culture, etc.)», but as lacking «the “primordial” life, the *wild* life that strives to be given free rein.»⁴

Loos's most influential articles were written in the 1890s and 1900s. But the idea that the practical aims of architecture exclude it from the arts was still widespread in the second half of the twentieth century. For example, Scruton follows Loos and Wittgenstein closely:

The problem of architecture is a question of manners, not art. In no way does it resemble the problem which confronted Wagner in composing *Tristan*, or that which confronted Manet and Courbet when they endeavoured to paint the modern world as it really seems. Such artistic problems faced by people of genius demand upheavals, overthrowings, a repudiation or reworking of traditional forms. For this very reason the resulting stylistic ventures should not be taken as prescriptions by those lesser mortals whose role is simply to decorate and humanise the world.⁵

Similarly, Etienne Gilson, writing in the 1960s, claims that architecture is not a fine art on the following grounds:

Buildings can have a beauty of their own, but it is an intrinsically utilitarian beauty, in the sense that it is derived from the perfect adaptation of the means to the end... [This kind of beauty] does not belong to the fine arts any more than natural beauty does; and insofar as architecture aims at achieving it, it is not a fine art.⁶

However, this exclusion or marginalisation of architecture cannot possibly be right, because the same compositional ideas and artistic values can be pursued in architecture, sculpture and painting. For example, Michelangelo's Medici Chapel, his tomb project for Julius II, and the Sistine Chapel ceiling, are all works in which an assembly of sculptures is

2. A. Loos, 'Architecture', repr. in *The Architecture of Adolf Loos*, ed. Y. Safran and W. Wang, London, 1985, 108.

3. L. Wittgenstein, *Culture and Value*, second edition, ed. G.H. Von Wright, trans. P. Winch, Oxford, 1980, 49.

4. Wittgenstein, *Culture and Value*, *op. cit.*, 38.

5. R. Scruton, 'Architectural Principles in an Age of Nihilism', repr. in *The Classical Vernacular*, Manchester, 1994, 80.

6. E. Gilson, *Forms and Substances in the Arts*, New York, 1966, 41.

placed in an architectural frame, and it is not plausible that the first embodies fundamentally different artistic values from the other two. In reality, the puzzle is not about architecture, it is about the theory of art. How could philosophers and art theorists have found themselves committed to the strange idea that buildings are not works of art?

The following conception of art provides the answer:

Every significant work of art is a product of imagination and skill, and is designed to afford its audience pleasure, **dissociated from both theoretical and practical concerns**, because of its beauty (elegance, vitality, etc.), its formal complexity and coherence, and because of the ways in which **it expresses the artist's thoughts, feelings, values and perceptions**.

Broadly speaking, this is the conception of art that predominated from the mid-eighteenth century until the mid-twentieth century, and the elements of it that seemed to prevent buildings from qualifying as works of art, or fine art, are the two phrases in bold type. Architecture is commonly thought to differ from the other principal arts—from poetry, painting, sculpture and music—in two main ways, one of them corresponding to each of these phrases. I shall comment on them in reverse order.

First, architecture is commonly said to be less personal and more political than poetry, painting, sculpture or music. Individual architects have distinctive styles. For example, it would be impossible to confuse a house by Adolf Loos and one by Frank Lloyd Wright, or a Manhattan skyscraper by Frank Gehry and one by Jean Nouvel. But architecture is not a medium of personal expression, except in rare cases, such as the Sagrada Familia in Barcelona and the Watts Towers in LA. Incidentally, it is not a coincidence that both consist of spires. The spire is perhaps the most gestural element in the traditional repertoire of architectural forms.

Ruskin describes architecture as «the distinctively political art».⁷ This seems to be true in two ways. First, the history of architecture is coextensive with the history of the city. Architecture is the art of the *polis* par excellence. Second, architecture is an especially powerful way to project and reinforce political authority and prestige, because of the size and cost of buildings, and because they create and dominate the environment in which we live and work. Some of the ugliest buildings of the twentieth century are neo-classical monstrosities built with these purposes in mind, for example, the monument to Vittorio Emmanuele II in Rome, and the parliament building in Bucharest.

The second way in which architecture is widely thought to differ from the other principal arts is that the value of a building depends in part on how well it fulfills its function—whether it is a home, an office, a church, an airport. This has been an indispensable part of the Western conception of architecture since Vitruvius, who identifies *utilitas*, *firmitas* and *venustas*—functionality, stability and beauty—as the aims of building. Of course, other kinds of works of art have functions, for example, devotional paintings, portraits, and the music in shopping centres.

7. J. Ruskin, *The Seven Lamps of Architecture*, Mineola, NY, 1989, 2.

But it is often said that these functions are accidental or inessential to painting or music «as such», or that they do not affect our experience and evaluation of musical works and paintings «as works of art». For instance, Scruton claims that the functions of poems and military marches «do not stem from the essence of literary or musical art»:

A Pindaric ode is poetry put to a use; and poetry is connected only accidentally with such uses. [Whereas] the functional qualities of a building are of its essence, and qualify every task to which the architect addresses himself.⁸

Thus the two features that seem to distinguish architecture from the other arts are, first, that it is impersonal, and second that we cannot understand the value of a building independently of its function. Once again, Loos provides a pithy statement of these two ideas:

A house must please everyone, in contrast to a work of art, which need not please anybody. The work of art is a private matter for the artist. The house is not. A work of art is born without there being a need for it. A house meets a need ... The work of art wants to tear you out of your comfortable existence. The house is to serve comfort. The work of art is revolutionary; the house is conservative.⁹

The first idea, that architecture is impersonal, is no longer considered to be theoretically important, because it is widely understood that it does not follow from the idea that all art expresses or communicates values, thoughts, feelings and perceptions, that it expresses the values, thoughts, feelings and perceptions «of the artist», or that the work of art is a kind of personal utterance. Zola famously defined a work of art as «a corner of creation seen through a temperament».¹⁰ But art doesn't always relate to an «individual» personality or sensibility in this way. In fact, in the whole history of art it is the exception rather than the rule. But the second idea, that we cannot understand the value of a building independently of its function, is still considered as an obstacle to regarding buildings as works of art, or at least as presenting the aesthetics of architecture with its main theoretical challenge.

What exactly is the relationship between the function and the aesthetic value of a building? The dominant modern answer to this question is functionalism, by which I mean the doctrine that «the aesthetic value of a building consists in its functionality». The most frequently quoted functionalist slogan is due to Louis Sullivan, one of the pioneers of steel-frame architecture in the United States, and Frank Lloyd Wright's teacher: «Form ever follows function. This is the law. Shall we, then, daily violate this law in our art?»¹¹ When Sullivan says «This is the law», he means this is how organic structures in nature are formed, for example, an eye, a hand, or a wing. The most articulate British exponent of functionalism in the twen-

8. R. Scruton, *The Aesthetics of Architecture*, London, 1979, 5f.

9. Loos, «Architecture»... *op. cit.*, 107f.

10. E. Zola, «Mes Haines, Causeries littéraires et artistiques», *Le Salut Public*, 26 and 31 August 1865.

11. L. Sullivan, «The Tall Office Building Reconsidered», *Lippincott's Magazine*, March 1896.

tieth century was Herbert Read. In the following passage, which dates from 1941, he uses the example of a chair, but the view he expresses is supposed to apply generally to architecture and design:

We have produced a chair which is strong and comfortable, but is it a work of art? The answer, according to my philosophy of art, is Yes. If an object is made of appropriate materials to an appropriate design and perfectly fulfils its function, then we need not worry anymore about its aesthetic value: it is automatically a work of art. Fitness for function is the modern definition of the eternal quality we call beauty.¹²

This is not very precise. Read confuses, or perhaps equates, the properties of being a work of art, having aesthetic value, and being beautiful. However, it is clear that his conception of art is diametrically opposed to Loos's, because he identifies functionality and aesthetic value.

Functionalism became the dominant aesthetic doctrine in the mid-nineteenth century, and remained so for about a century, for reasons I shall explain shortly, but the general idea that beauty, or at least a particular kind of beauty, consists in functionality is not new. The earliest expression of it in Western philosophy is attributed to Socrates in Xenophon's *Memorabilia*:

Again Aristippus asked him whether he knew of anything beautiful: Yes, many things,» he replied. «All like one another?» «On the contrary, some are as unlike as they can be.» «How then can that which is unlike the beautiful be beautiful?» «The reason, of course, is that a beautiful wrestler is unlike a beautiful runner, a shield that is beautiful for defence is utterly unlike a javelin that is beautiful for throwing with speed and power.» [...] «Is a dung basket beautiful then?» «Of course, and a golden shield is ugly, if the former is well adapted and the latter badly adapted to their specific tasks.»¹³

This passage challenges, or at least qualifies, the Pythagorean idea that beauty consists in symmetry or proportion, by proposing aptness, functionality, as a criterion of beauty. And when the Pythagorean theory lost its dominant position in Western aesthetics in the eighteenth century, functionalism was endorsed by several philosophers, notably David Hume and Adam Smith. But fitness for function is not a plausible definition of beauty in general, because some things are beautiful that do not have a function, for example, the Alps and the Milky Way, and because we can sometimes perceive an object's beauty without knowing what its function is. Kant's example is a flower: we can appreciate its beauty without knowing that it is the sexual organ of a plant.

What about the idea that form follows function? In order to assess this idea properly, in its application to architecture, we need to distinguish between the function of a building as a whole and the functions of its parts. Viollet-le-Duc, the leading French Gothic Revival architect, advocated both kinds of functionalism: architecture, he wrote, «must be true in respect

12. H. Read, *To Hell With Culture*, London, 2002, 18.

13. Xenophon, *Memorabilia*, 3.8.

of the programme [functionalism in regarding the building as a whole], and true in respect of the constructive processes [functionalism regarding parts].»¹⁴ But functionalism is a more convincing doctrine applied to parts than to the whole.

I shall begin with functionalism considered as a doctrine about a building as a whole. «Being true in respect of the programme» is a plausible requirement if it simply means that a building should «be suited to» its function, but not if it means that it should «follow» its function. The form of a building as a whole «cannot» follow its function, for two reasons. First, many different forms can serve the same function. That is why the designs of churches, theatres, and tombs vary so widely across cultures and across time, as the designs of shoes and hats, and even knives and scissors do as well. Second, one form can serve many functions. For example, the turbine hall of a power station can become an exhibition space in a museum of modern art. This shows how little function is constrained by form.

It is instructive to consider a building whose function has changed. Take the cathedral in Syracuse. The main part of the building is a Doric temple with a few simple modifications, and a Spanish baroque façade attached to its West end. If you walk along the street on the North side of the church you will see the peristyle filled in by the Normans, and an Arab battlement resting on the architrave. And within the building you can see the great Doric columns again, and how the colonnade has been filled in. You can also see the walled cella, the enclosed part of the temple, where the carved image of the deity originally stood, which has been pierced by arches to produce a nave flanked by aisles. In effect, the temple has been turned inside out, and the reason is simply that while the building's function has always been worship, Christian worship is communal, and so the community has to fit into the building, not just the priests. Thus, buildings can be adapted, and although different functions sometimes require different forms, the differences are often not very complex and the formal constraints dictated by the function of a building are not very demanding. David Pye explains this point well:

The ability of our devices to *work*, to get results, depends less exactly on their shape than we are apt to think. The limitations arise only in small part from the physical nature of the world, but in a very large measure from considerations of economy and of style. Both are matters purely of choice. All the works of man look as they do from his choice, and not from necessity.¹⁵

Thus, Viollet-le-Duc's claim that architecture 'must be true in respect of the programme', in other words, his functionalism in regarding the building as a whole, is not a plausible doctrine. But «being true in respect of the constructive processes» is a more interesting principle. For example, the form of a suspension bridge is not dictated by its function as a whole, but it is quite tightly constrained by the functions of its parts: the roadway that supports the traffic, the cables that support the roadway, and the pylons that support the cables. But of course that is not to say that all suspension bridges look alike.

14. E.-E. Viollet Le Duc, *Discourses on Architecture*, trans. B. Bucknall, London, 1959, 448.

15. D. Pye, *The Nature and Aesthetics of Design*, Bethel, CT, 1978, 14.

Like realism in literature and painting, functionalism is not a fundamental principle that defines architecture as a whole. It is a specific kind of style. It was originally a response to the loss of vitality and expressive power of classical forms, and it gained traction in the nineteenth century, when new materials—first iron and glass, then steel—allowed the structures of buildings to develop rapidly. Throughout the history of architecture, there are periods of structural change, followed by periods of decorative embellishment, and functionalism as an aesthetic programme belongs with the periods of structural change. But it is not a plausible theory of architectural value in general, and it has fallen out of favour since the 1970s, partly because of the influence of post-Modernism, and partly because of its association with the analogy between buildings and machines, which ignores the importance in architecture of a building's harmony with its surroundings.¹⁶

If fitness for function is not a plausible definition of beauty or artistic value in architecture, and if the idea that form should follow function is unconvincing, what is the relationship between the functionality and the artistic value of a building, its value as architecture? I doubt whether this question has a general answer. But as far as the philosophy of art is concerned, the important point is that the function of a building, and the functions of its main structural elements, are parts of the complex of problems that an architect has to solve. Apart from a building's program, in other words, its set of related functions, there are two main kinds of problems the architect needs to solve: engineering problems and aesthetic problems. The architect's task is to invent a design that integrates the solutions to problems of these kinds in a satisfying way. Let us consider a couple of examples.

One well-known example of an engineering problem, which was solved in late antiquity, is how to channel the weight of a dome down four piers arranged in a square. The dome of the Pantheon in Rome, which is 43m across, is supported on eight piers. To reduce the number of piers supporting a large dome to four required a new solution. The most elegant solution, and the only one capable of supporting a large dome, was to introduce four segments of a larger dome, the segments that remain when its sides and its top have been sliced off. These triangular segments are the pendentives. The earliest examples, which are on small mausolea, date from the fourth and fifth centuries, and the most famous example is the Hagia Sophia in Istanbul, which was built in the 530s, although the dome was rebuilt after an earthquake, in 558 (fig. 1).

The aesthetic problem I have chosen is how to design an aesthetically integrated façade for a church where the nave is raised above the aisles, and the basic idea governing the design is the portico of a temple surmounted by a pediment. The earliest solutions in Tuscany are the façades of the Duomo in Pisa and San Miniato al Monte, both of which were completed during the twelfth century. In effect, the upper storey of the façade of San Miniato is a narrow temple end, which rests on the entablature of a broad one, and is placed between two pedimental segments, chequered with strips of dark green serpentine (fig. 2). The façade of the Pisa Duomo is dominated by four arcades, the cornice above the aisles is continued across

16. Le Corbusier, *Towards an Architecture*, trans. J. Goodman, Los Angeles, CA, 2007, 160ff; P. Collins, *Changing Ideals in Modern Architecture*, Montreal, 1998, 159-166.

the central part of the façade, the spacing of the columns that support the raking cornice narrows, and the columns shorten as if they were sinking into the arcade below (fig. 3). Alberti's design for the façade of Santa Maria Novella, which was inspired by San Miniato, introduces two large volutes above the aisles, which press against the sides of the upper storey, with finely decorated discs beneath them, contrasting with the sunburst in the pediment above (fig. 4). Finally, Palladio's solution on the church of San Giorgio Maggiore in Venice is an ingenious exercise in architectural illusionism—subtler than the perspectival effects in the Teatro Olimpico, but equally compelling (fig. 5). In effect, Palladio creates the impression of one temple end being superimposed upon another.

Much more of art is problem-solving than the Romantic conception of art as the expression of the artist's thoughts and feelings suggests. In fact, most works of art that merit serious attention are integrated sets of solutions to a number of problems, some aesthetic, and others technical, mathematical, theological, political, and so on. This is not essentially a different kind of task in architecture and in the other arts. The obvious analogy is with an organism, whose genome encodes an integrated set of solutions to a number of problems that need to be solved, if it is to survive to maturity and reproduce. Are any of these biological problems aesthetic? Indeed they are, in the case of plants and animals that need to attract a pollinator or a mate.

In sum, the concept of art that was formed in the enlightenment and developed under the pressure of romantic and post-romantic thinking does not help us to understand architecture; but neither does the functionalist doctrine that was formed in reaction to it, and is its diametrical opposite. If we approach the analysis of a work of art as an integrated set of solutions to a variety of problems, we can avoid both of these erroneous ways of thinking about architecture as an art.



Fig. 1: Hagia Sophia, Istanbul.



Fig. 2: San Miniato al Monte, Florence



Fig. 3:
Duomo, Pisa



Fig. 4: Santa Maria
Novella, Florence



Fig. 5: San Giorgio Maggiore, Venice