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A RATIONAL INTUITION

RACJONALNA INTUICJA

Abstract

In the last two centuries, “rational thinking” has been continuously alive in architecture, even if in different forms; it has been recalled for architectures that are also very different from each other.

Intuition-related values, on the other hand, have rarely been mentioned. But intuition is not in contrast to reason. Intuition comes first, reason represents “how”. The result is something else. Intuition can provide ideas, reason can provide explanations. The explanations can be *a priori*, if they serve to make decisions, or *a posteriori* if they serve to give meaning to the whole. Both indicate the method, not the result. They have no real opposite. Lack of intuition is not necessarily void of ideas; and lack of reason is different from against reason... I don't think there are any intuitional or even rational architectures, and we can see a number of examples in recent centuries. Perhaps it is better to avoid the madness of reason, but reasonable folly is sometimes the best we can hope for.

Keywords: twentieth-century architecture, rational architecture, design

Streszczenie

W ciągu ostatnich dwóch stuleci „racjonalne myślenie” było ciągle żywe w architekturze, nawet jeśli istniało w różnych formach; było przywoływane w architekturach, które również bardzo się od siebie różnią. Z drugiej strony, rzadko przypomniano wartości związane z intuicją. Intuicja nie jest przeciwieństwem rozumu. Intuicja stoi na pierwszym miejscu, rozum symbolizuje „jak”. Rezultatem jest coś innego. Intuicja może dostarczyć pomysłów, rozum może dostarczyć wyjaśnień. Wyjaśnienia mogą być *a priori*, jeśli służą do podejmowania decyzji lub *a posteriori*, jeśli służą nadawaniu znaczenia całości. Oba wskazują metodę, a nie rezultat. Nie są prawdziwymi przeciwieństwami. Brak intuicji niekoniecznie jest pozbawiony pomysłów; a brak rozsądku różni się od bycia wbrew rozsądkowi...

Nie sądzę, by istniały jakieś intuicyjne, a nawet racjonalne architektury, i widzimy tego wiele przykładów w ostatnich stuleciach. Być może lepiej jest unikać szaleństwa rozumu, ale rozsądne szaleństwo jest czasem najlepszym, na co możemy liczyć.

Słowa kluczowe: architektura XX wieku, racjonalna architektura, projektowanie

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1. Introduction

In the last two centuries “rational thinking” has been continuously very alive in architecture, even if in different forms; actually it has been recalled for very different architectures.

Intuition-related values, on the other hand, have rarely been mentioned. Intuition is a difficult term to understand, perhaps it includes those few moments in which the right and the left parts of the brain work together, maybe with the addition – more at the side – of something that the brain feels without really seeing it.

For this reason, the term intuition is more rarely used. Now generally preferred is the term *creativity*, which is more generic, kaleidoscopic and today without a true precise meaning.

In fact, *creating* is rarely used as a verb, which would instead be a very special “doing”, almost miraculous. But the miracle has lost its meaning: in the past it was a wonderful and impossible thing, yet it happened; now the term is used for something surprising and to which we do not provide explanations, even the slightest.

Creation is not used as a real noun, we know it would not make much sense. But it happens that it is used a lot as an attribute: *creative*; then the attribute becomes a noun again, and without knowing how, our society has been filled with *creatives* (even if I don’t believe in *creativity*).

About creativity: *In his last chapter, under the heading “The Sum of It All”, Mr. Perkins lists fourteen points to express what creating seems to be all about. They are, alas, obviousnesses. Point 1: Creating is the process by which a maker achieves a creative product. Point 4: it is useful to view creating as a process of selecting from among the many possible outcomes – arrays of words, formulas, pigments on a surface, and so on. Want to write a great poem? Just find the right words. Want to carve a great statue? Just chip away all the excess marble. Want to invent a great scientific theory? Discard the wrong formulas¹. As you can see it doesn’t bring us great clarification.*

Intuition comes first². It is a kind of spontaneous or automatic choice among the thousand options that chance offers us.

But intuition is not in contrast to reason. Intuition comes first; reason represents “how”; the result is something else. Intuition can provide ideas, reason can provide explanations. The explanations can be *a priori*, if they serve to make decisions, or *a posteriori* if they serve to give meaning to the whole.

Both indicate the method, not the result. They have no real opposite. Lack of intuition is not necessarily void of ideas; and lack of reason is different from against reason...

On the other hand, we have to remember that reality itself does not need to be “logical” or “rational”, according to our limited standards. But this does not imply that we can ignore these necessary qualities of our thinking.

¹ M. Gardner, *Order and Surprise*, Oxford University Press, 1984; in the chapter *Eureka*, where he reviews *The Mind’s Best Work* (Harvard University Press, 1981) by Perkins.

² „I believe in intuition and inspiration. Imagination is more important than knowledge. For knowledge is limited, whereas imagination embraces the entire world, stimulating progress, giving birth to evolution. It is, strictly speaking, a real factor in scientific research”. Albert Einstein, *Cosmic Religion: With Other Opinions and Aphorisms* (1931).

We know that logical thinking alone cannot provide us with knowledge about the world of experience. Purely logical propositions are empty before reality. And then, we see that intuition does not really need to be rational. But it needs to become rational, or to be guided along that path. It is not by chance, I think – or perhaps precisely to bring these two different values together – that mathematicians speak of beauty. Mathematicians very often discuss beauty! Beauty seems to be their aim...

Because, in architecture, rationality is not a “content”, or not even a “quality” of architecture, even it is very often quoted and mentioned this way.

The concept of rationality has changed a lot throughout time.

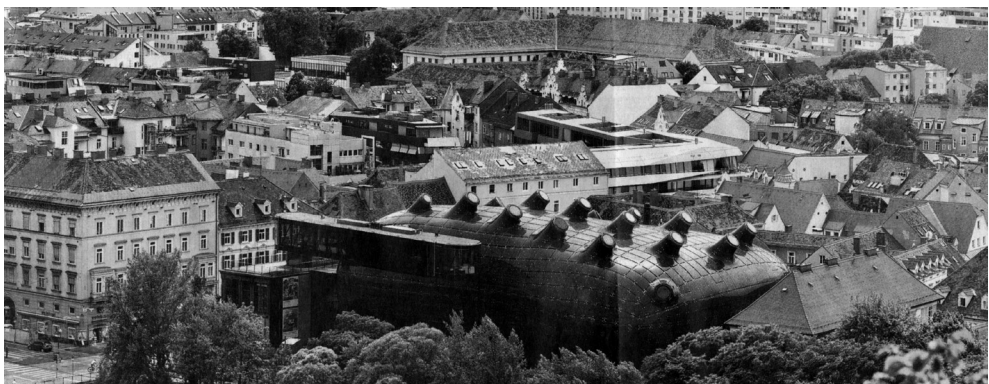
Once sculptures were placed in museums, today museums are sculptures, and the real invention lies in deciding what to put into them, and how to show the things inside. A museum was once full of objects, so full that it was considered tedious, as gloomy as if it were a large mouldy old drawer. Today a museum of contemporary art is an homage to nothingness, but for many just reasons: there is nothing but a large space that can allow things, events, installations, acts of visual rhetoric... Today people must be *entertained*, it is no longer reasonable to teach something – albeit very little – but it is *rational* to entertain the people. That is fine, we know that concepts change.

A museum of contemporary art is often a deliberately spectacular empty work, it's a bit like Heidegger's work, a large, perfect, highly studied empty space, made of nothing, containing nothing, and talking about nothing. But it does so well that it narrates itself, to the point of being considered a masterpiece (not the best for a philosopher, but very good for architecture). Perfect!

Half a century ago that was not the case, and half a century from now it will not be the case.

But we also know that many of the greatest and most important works of architecture in history – even if they were built with the most precise intentions at the time – often did their first job for very little time, and only after many years did they find other important uses. They are beautiful precisely for this: and they will allow very different uses over time.

Here a beautiful *Verwandlung in ein Ungeziefer*, a metamorphosis into an insect.



Ill. 1. Kunsthaus in Graz, arch. P. Cook and C. Fournier, 2003

What reminds me of an animal of Kafkaesque memory, although more friendly soft and less coriaceous, is the Kunsthaus, built on the occasion of Graz, European Capital of Culture in 2003. “The Kunsthaus is a photogenic solitaire, but with its shimmering blue plastic cover is generally considered a very cheerful representative of “blob architecture”. The architects themselves called it a “friendly alien”. Before it landed here, the socially separated district of Lend, separated by the Mur River, was considered disreputable. The construction started a positive development, the disreputable side of the banks of the Mur slowly developed into a trendy quarter.”³ So, better than it seems!

The before and the after, which are two absolutely opposite choices, both seem to be rational to us. Perhaps the *intuition* lies in grasping that the opposite of a *rational* thing, could still be a rational thing... Then we realize that rationality lies much in *how* we do things, and much less in what we actually do. Rationality is the ability to transform intuitions into actual, true, useful things; those intuitions that are necessary to create something good or new.

Today there is a lot of dust and people tend, or rather they deliberately try to confuse ideas, by inserting continuous sentimental trappings into all decisions. They will always explain to you that the most important thing is emotion (they sell you anything and you always buy for vital emotion!) and that through innovation everything is solved. When we will at last find out what innovation really is, then perhaps we will know it wasn't true....

If you try to tell a beautiful lady that she is the most beautiful in the world, even if she may pretend to ignore it, she will most likely be happy... But if, with the same conviction, you will tell her that after all, with what is around, there is not much better, certainly she will look at you with intense contempt... What is the difference between the two statements?

In terms of content there is no distinction, but in terms of communication there is a lot!

From a “scientific” point of view they mean exactly the same thing: *At present we have not found a better solution, there is nothing better* (until new discovery).

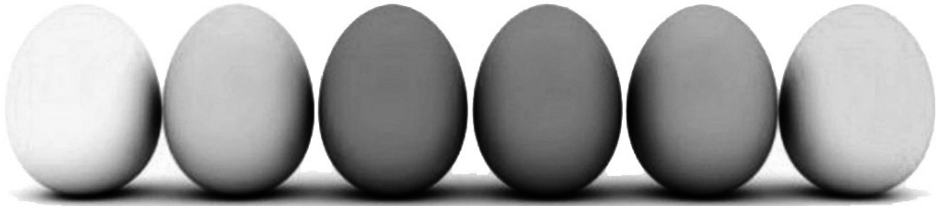
Statement 1: you are the most beautiful one

Statement 2: all in all, there's not much better....

³ *Große Namen, Große Bauten*, von Rainer Müller, 20 Mai 2018, Seite 51, Frankfurter Allgemeine Sonntagszeitung,

If you wonder which of the two statements is more rational, what can you say? As substance (substantive), the statement 2 is more rational. But as action (verb), to assert the 1, is perhaps the most rational thing.

Some of us this year have received a nice Happy Easter greeting from the chair of architecture. Here a detail.



III. 2. Easter Eggs

For the first time I see all the eggs in a row... they ran away from the old wicker basket! Certainly, as good architects you will have wondered: but how are all those eggs standing? Did the cooking put the weights in such a way as to make them balanced? Maybe they are empty, and the helium content allows that position? Perhaps they are holding hands and supporting each other!

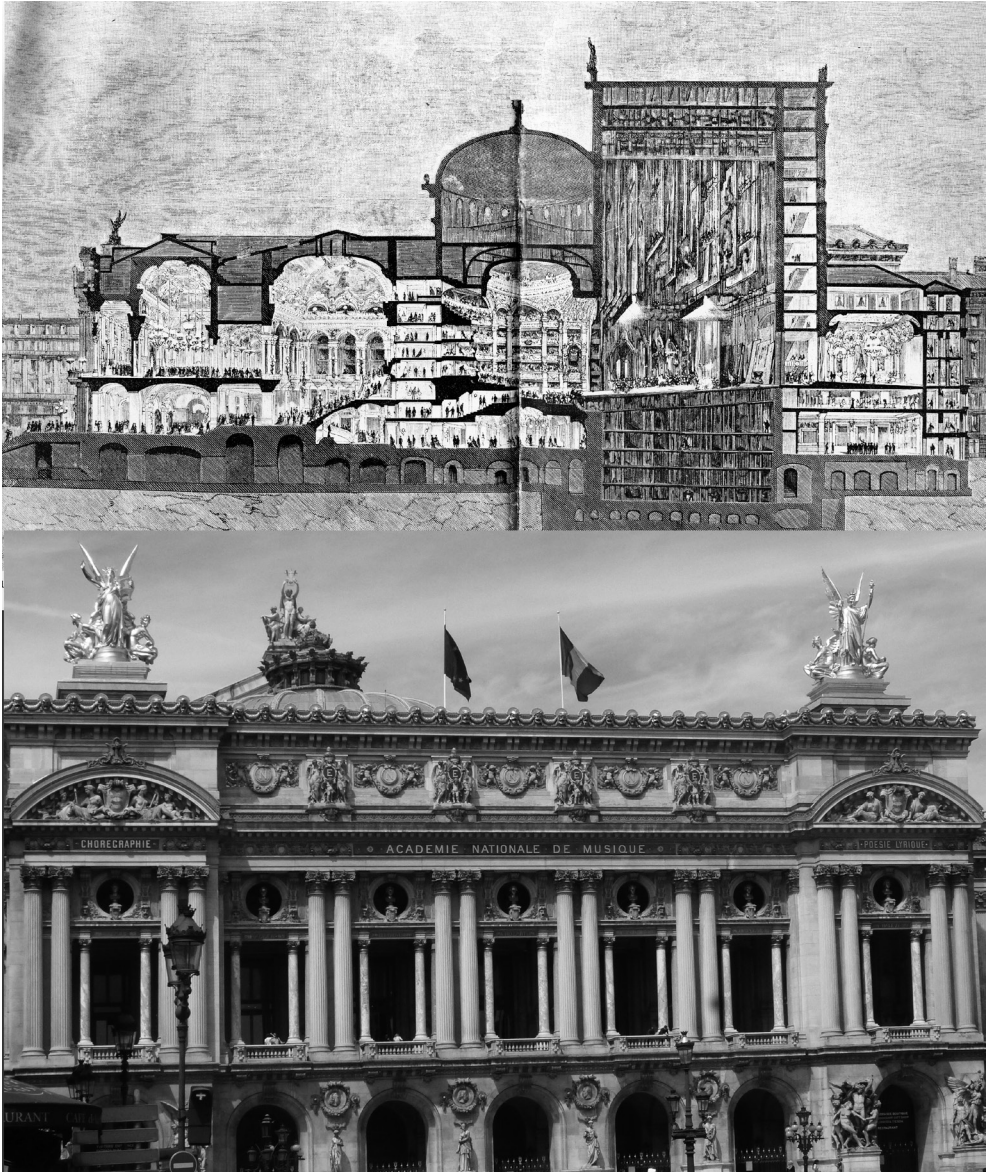
Rational has to be the way we work... "rational" may be the explanation given.

And that doesn't change much over time. What is interesting is that the last centuries, from this point of view, have not significantly changed this reading.

A contemporary idea? *If every new creation has to be truly modern, it must correspond to the needs of our time and to the new materials, it must express our democratic and responsible mentality in the best possible way, it must take into account the enormous technical and economic achievements and the practical spirit of contemporary man. This is all too obvious.* Today? No; as you can understand from the language, serious and sensible and with no slogan, is a bit older. It is Otto Wagner, in 1897⁴.

We can see interesting examples in history: starting from C. Garnier's Opera House in Paris, one of the first times when people spoke of rationality! But a few years later it didn't look this way...

⁴ *Einige Skizzen Projekte und Ausgef. Bauwerke*, von Otto Wagner, Kunstverlag Ant. Schroll, Wien 1897.



III. 3. Opera house, Paris, C. Garnier, 1861/74, then and today (in the section there was a clear separation between the various sectors of the theatre)

But technology and modernity are double-edged weapons. With those you can explain and support many things, but just for those they can be feared or rejected. We can quote hundreds of examples, not be shown here because very well known, but which are worth recalling.

The way to reason is a very long one... The designers went on to look for the most disparate forms, and eclecticism was an inevitable consequence.

As they then complained about the contradictions of eclecticism, many realized that it was necessary to anchor choices to objective, rationally demonstrable reasons. Already in the 19th century they were called *rationalists*, and they exercised a very important stimulus and censorship, with words that sometimes seemed to anticipate the modern masters of the 1920s, to whom the same qualification would then be applied. But the analogy is only verbal, because in the act of designing, the nineteenth-century rationalists could not imagine concrete forms except in reference to some of the past styles: classical or mediaeval.

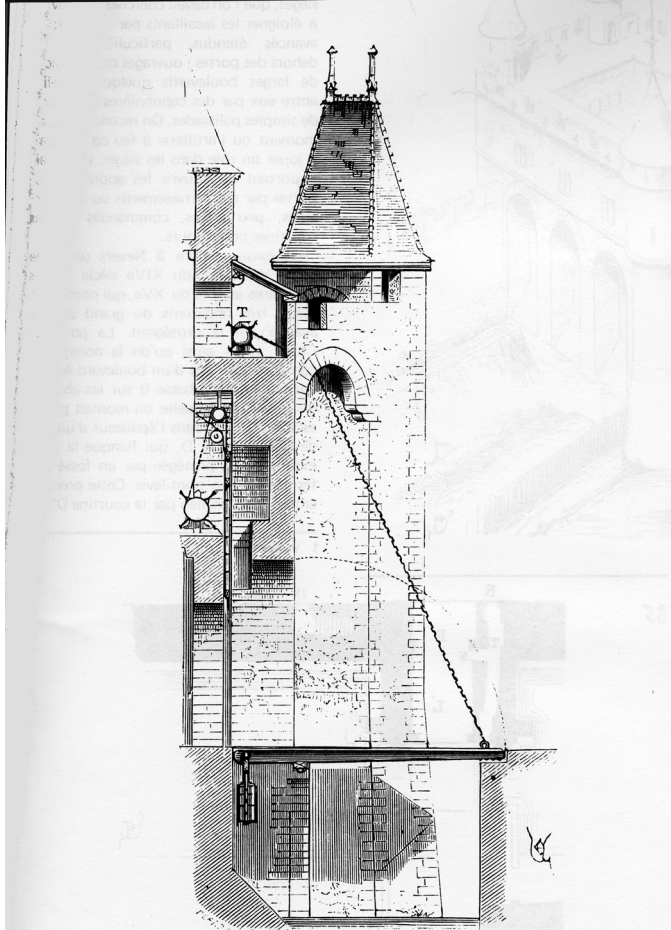
The most important figure of neo-classical rationalism was Henri Labrouste, who designed the well known Bibliothèque Sainte Geneviève in 1843 and the Bibliothèque Impériale in 1855, where he used an iron structure to create spacious interiors, although enclosed in a stone envelope decorated in the old style.

Labrouste's ideas were not new. His speech on construction and function was similar to that of Durand, but at this moment his statements acquired a more ideological colour.

The revolution of 1848 marked the high point of these progressive hopes, where art, science and politics seem almost identified with each other; but the course of subsequent events changed the world... then again Eugène E. Viollet-le-Duc, in 1852, began a campaign against eclecticism in various magazines, arguing that architecture must be based on *functions* and on the respect of materials.

Viollet-le-Duc, although a supporter of the neo-Gothic trend, removes any romantic or sentimental reference in his debate; in his view as a scientist the Gothic has nothing confusing or mysterious, indeed it is appreciated precisely for the clarity of the construction system, for the economy of the solutions, for the precise correspondence to the distribution programs. By setting Gothic against classicism, Viollet-le-Duc, while remaining within the terms of historical culture, contrasts the Academy's rules with other rules that are less ambitious but more in touch with reality: the appropriate use of materials, the obedience to functional needs. ... The transformation that Viollet le Duc gives to the Neo-Gothic movement, associating it with rationalism, is very important...⁵

⁵ L. Benevolo, *Storia dell'architettura moderna*, editori Laterza, Bari, 1971 (prima edizione 1960).

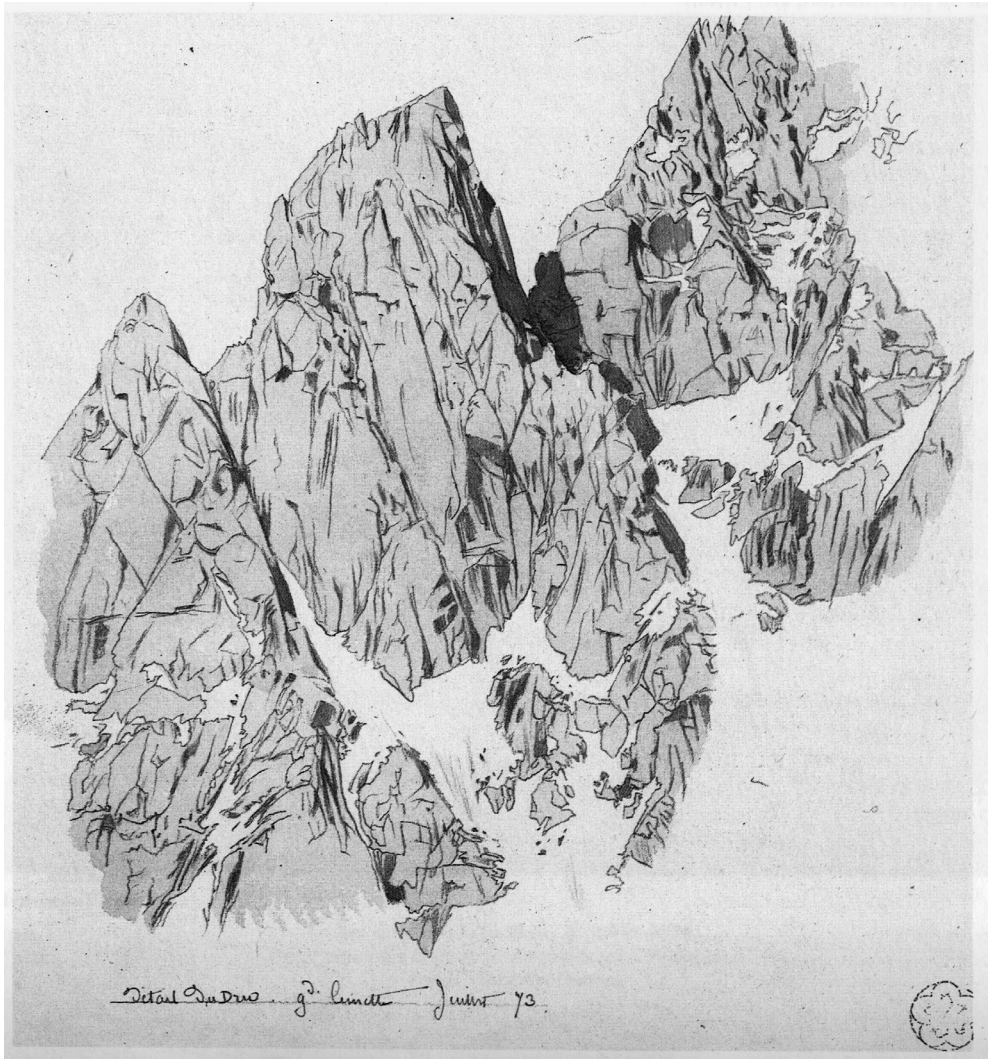


Une coupe longitudinale faite sur la partie antérieure de la porte (fig. 33) fait voir la manœuvre du pont-levis et son mécanisme. Des contre-poids, suspendus en arrière des deux longrines du tablier, facilitent son relèvement, lorsqu'on appuyait sur le treuil T. La première herse abaissée, le mâchicoulis qui la protège était ouvert aux défenseurs. Dans cet exemple, comme dans tous ceux précédemment donnés, la défense n'agit que du sommet de la porte, et par la disposition des échauguettes et des grands mâchicoulis obliques, le fossé ainsi que les abords du pont pouvaient être couverts de projectiles.

On comprend qu'un pareil ouvrage, si peu étendu qu'il soit, devait être très fort. D'ailleurs les courtines avaient un grand

relief, et étaient renforcées sur le front opposé à la rivière par un gros donjon cylindrique qui existe encore. Toute l'enceinte de cette ville, si gracieusement plantée sur les bords de l'Yonne, n'était percée que de quatre portes semblables, deux sur les fronts d'amont et d'aval, et deux autres, l'une près du donjon, l'autre en face du pont jeté sur l'Yonne. Six tours cylindriques plantées aux angles formés par les courtines complétaient les défenses. Quant au donjon, il est séparé de la courtine, qui s'infléchit en demicercle pour lui faire place, par un fossé. Il ne se reliait au chemin de ronde que par un pont volant et était percé, vers les dehors, d'une poterne au niveau de la contrescarpe du fossé.

III. 4. Viollet-le-Duc, Porte fortifiées, Villeneuve sur Yonne, (*Encyclopedie Médiévale d'après Viollet le Duc*, Tome 1: Architecture, 1996)



III. 5. Viollet-le-Duc, Détail du Dru, à la grande lunette, juillet 1873, Crayon et aquarelle, 22,5 x 20,5. Fonds Viollet-le-Duc (*Viollet-le-Duc et la montagne*, sous la direction de Pierre A. Frey et Lise Grenier, Editions Glénat, 1993)

In these drawings we can see something deeply and *rationaly* architectural, even if at first glance it doesn't appear. In the study of the Castle, he also considered the closing mechanism to be of the greatest importance, and in the study of Mont Blanc (carried out for two years), we have the clear feeling that he is trying to grasp the secrets of the construction and design of that immense monument, the only one perhaps built by an "architect" more important than himself. It is very interesting to discover that it is the Neo-Gothic, where it takes root, that produces a healthy re-examination of the past heritage and invites to a better analysis of the modern construction techniques; In fact, the very books of Viollet-le-Duc, which circulated

throughout the world, had great importance for the formation of the next generation, the one from which the masters of *art nouveau* emerged.

Then came what has been called for many years *rational architecture*.

During the twentieth century much of the new architecture preferred to be called, or was called, *rationalist*.

Sometimes it was a true explanation, sometimes it was a way of presenting itself. But at times it was simply a way to explain its being international. But also being *rational*, if true, you get tired soon. After all, being rational seems to be too “depressing” a thing, if taken literally, to be appreciated by ordinary people. But if *rational* is the way *intuition* and technique are carried forward, then success can be good. A good rationality is quite boring; but why not? I would always prefer a machine that always works well, equally, in a rather boring way, than a machine that gives me the *excitement* of only working sometimes, or in happy moments!

More recently, there has often been talk of architecture on a human scale.

Much has been said in the past about “architecture on a human scale”, but we know that true architecture, while always starting and reasoning from man, is never merely on a human scale. Only in this way can be appreciated and can enter history. The “human scale” is also a particular way of being rational: but the measure is in the way you work, the result, if true art, will be beyond. If it is true art, the rational will disappear, not because it does not exist, but because it will remain concealed by the rest. Even the oldest of *architecture without architects*, often linked to the struggle of life in the territory, and which was starting by the size of the hard hands and calloused of those who did the work – if it has passed history – you realize today that it had something “beyond”, stronger than the measure of human scale...

To appear rational could often have seemed restrictive... For this a rational madness can be often the right choice.

So, in the fourth part of the last century, the only rational thing seemed to be to do something new, something that would come afterwards, *post*.

It was the age of the *post*. It was the moment in which one did not seek intuition, but the historical root, in which one did not seek reason, but the overcoming of it. Even if we are not sure that intuition and reason were really so far apart... This is a time very close to us and there is no point in discussing it. Among the many *post* and many *new* overlapping with each other, it was not easy to comprehend, although sometimes it could have been very funny. For instance, I read on a site, by a self-declared expert (but I don't know who is) that:⁶

“... Aldo Rossi is also considered a postmodernist architect, but more precisely he belongs to the current of Neorationalism or Neomodernism...” A few years earlier, Gillo Dorfles had remarked: “The post-modern classicism of Krier and Aldo Rossi should also be considered...”⁷

This is amazing. I don't know if A. Rossi would have appreciated these opinions, but it is nice to read them: Think about the emotion of being a *Postmodernist*, but a *Neorationalist* or *Neomodernist* one, with a touch of *Classicism*! And all this without declaring yourself to be *Eclectic*! Great!

⁶ Fare città. *Architettura postmoderna*. Di Nat Russo. 2017

⁷ *Equivoci architettonici del Postmoderno*, FucineMuteWebmagazine, di Gillo Dorfles, 1 maggio 1999 (trascrizione di un intervento tenuto per il convegno: *Postmoderno?*, tenuto a Trieste il 28 e 29 dicembre 1998 e organizzato dall'Istituto Gramsci F.-V. G. e da La Cappella Underground.)

Some old academics speak now of *neofunctionalism*, referring basically to what is now called *sustainable architecture*. From here the paradox of an architecture whose image is related to ancient plastic structures (like sculptures). The paradox would be that these two “mis-guided” and contrasting attitudes lead to architectures that are successful and that seem to work! Here, then, they search for the fundamental statutes of architecture (as they did 20 years ago); that is to say that they are trying to discover architecture continually looking into the mirror...

But I believe that architecture can't have *statutes*.

Architecture can be considered as life or nature: Nature is not necessarily logical. But we need to deal with it with a certain degree of rationality, as much as possible.

In addition, we know very well that the tools we use are always stronger than us. And they take the power. A veritable artist is able to control them in such a way that this fact goes unnoticed. If we design by hand, with a ruler, with a compass, with a drawing technique, with different measuring systems, or with digital machines, the result will be very different.

If you look at the design of the picture (Ill. 6), it seems an interesting sketch of one of the many architects of the twentieth century, perhaps even rationalist.



Ill. 6. 1964/65 F. Gehry, Studio and Residence Danziger, Los Angeles (Domus 1020, January 2018, article “Frank Gehry. Studio and residence Danziger, Los Angeles, 1964/65” where you can see photos and archive drawings of the residence that led to the first international recognition of the American architect. Text by Jean-Luis Cohen, together with a selection of sketches by Frank Gehry, Carlos Diniz e Greg Walsh)



- III. 7. 1979, F. Gehry Residence, Santa Monica; Gehry Partners LLP. The 1978 project, in which Frank Gehry transformed the family home, wrapping it in an irregular shell of corrugated metal, plywood and other materials “to create a new space band between interior and exterior, similar to a three-sided patio”, won the annual award given by the American Institute of Architects to works that have been proven to be significant for more than a generation. The Twenty-five Year Award is conferred to buildings that stood the test of time for 25–35 years and continue to set standards of excellence for architectural design and significance. (*Domus* 599, October 1979, article by Barbara Goldstein)

If you look at the picture (III.07), here appears a perhaps uncompleted form of de-constructivism, interesting only if studied in detail; but even a little like an intelligent slum. If you do not know these buildings, perhaps you do not recognize the designer immediately (only by looking at the projects in detail in terms of composition and distribution, you can discover that they are very interesting). But later came the possibilities of CAD, and computer-aided design, with a direct transition to 3D. This is when F. Gehry “explodes”, and those two of his previous projects acquire a new, but also very different value. Perhaps even the AIA prize, which in 2012 was awarded to the project, and which rewards more than 25 years of durability in architectural value (a very long era for Americans!), would not have existed, without his later projects.

In the documentation accompanying his candidacy for the Twenty-five Year Award, Frank Gehry clarifies the creative process behind the invention developed around the two-storey house of Santa Monica: *I looked for an interpretation of what I thought might be suitable for my family, for me. I’ve dug deep into my personal story... and followed my intuitions* (aia.org).

Once again the instrument has won; but this time in the best sense.

And last, a quite interesting example of a design where intuition and rationality seem to collide.

Here’s a chair. When was it designed?



III. 8. The Pantone Chair, Verner Panton, Vitra Firm

The history of the Pantone Chair dates back to the last half of the 1950s, when Danish designer Verner Panton developed the idea of a plastic cantilever chair. However, manufacturers did not want to pursue this daring concept. The Vitra Firm itself presents a precise explanation of the many attempts to produce that chair, during many years, up to the last ones, at the end of the 90's.

Forty years after first attempts, one of Panton's key goals was finally reached: the plastic chair as an affordable industrial product. Verner Panton died shortly before the chair was presented in 1999.

What is *intuition* and what is *rationality*?

Is a project that proves to be unfeasible for 40 years rational? You would have answered **no**... for the first 40 years! We don't know why, but we like it to be possible.

I don't think there are any intuitional or even rational architectures, and we have seen a number of examples in recent centuries. Perhaps we can re-read the simple and clear words of Otto Wagner: *Before even taking your pencil into your hands* [the only words that today may seem too old], *it must be clear in your mind and deeply meditated a good, strong and great idea* [that is intuition!]. *It doesn't matter whether this idea turns out quickly or slowly; whether it needs reflection and refinement or whether it turns out to be right at the first apparition, like a lightning strike in a clear sky or a fixed nail; or whether it requires continuous reworking. What is certain is that today a happy basic idea, well thought out, has a great weight and contributes to the evaluation of a work more than any luxuriant flower that the spontaneous and unconscious strength of the artist allows to sprout.*

*It is also important to take into account the spirit of practicality that pervades humanity today. Each designer will have to follow this principle: "Nothing that is not functional can ever be beautiful"*⁸.

So with simplicity, let us start from *intuition*, let us work with *reason*. The result will be neither, but it will depend on what we were really looking for. Because that is the most difficult theme; if we were looking for something good, maybe something good may have arrived... And perhaps, if it is without extremism, it is always better; even if, in this last case, more rarely it will lead you to glory!

Perhaps it is better to avoid the madness of reason, but a reasonable folly is sometimes the best we can hope for.

PS

In the world of architecture there is actually no precise definition of the words most used, as is the case in other scientific or humanistic worlds; consequently, the meanings of *intuition* and *rational*, like many others, can vary greatly in time and space, and between individuals. For this reason, I fear that many of the things said here will have only a temporary meaning...

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