

REPRESENTATION OF ARCHITECTURE

This essay revolves on 2 themes:

the 1st questions the limits of the representation
of the visual experience of architecture,

the 2nd theme wonders about the very specific character
of our means of graphic representation.

REPRESENTATION OF ARCHITECTURE

We have the habit of saying that the architectural experience is primarily **visual**, and everyone shares this opinion. Indeed, we observe it, travel through it, interiors are photographed, postcards are bought; magazines and books on the history of architecture are filled with drawings, with illustrations in black and white or in colours.

Admittedly our sense of sight gives us a lot of information on a building: its mass, its general colour, its silhouette contrasting with the sky, its openings, the proportions between plains and voids, shadows which give character to the main face of the building, its overall proportions, at the same time in approaching it the enhancement of details that are discovered little by little etc...

Inside, sight continues to inform us on shades and the play of lights, proportions, heights, colours, lines, textures, scintillating, reflections, etc...

Magazines that we are accustomed to consult tend to return this as far as possible by means of cross section, plans and photography.

The illustration of the architectural experience found itself being reduced to sight only. Does this not breed a singular distortion of a much richer experience?

The architectural experience is a multi sensorial experience, and reducing those multiple impressions through drawings, photographs, amputates major parts of its components.

"Does this implicate not only the distortion of reality which would arise from the development of an uniform average which reflects all the aspects of our universe in the language of only one of our senses that can be used to lull our culture to sleep. The awakening occurs when one of our other senses are awakened and thus alerts the sleeper". (Marshall MCLUHAN) (1).

The outcome is a rather underhand misrepresentation to which we do not pay attention, so much so that not one architect in 100, looking at photographs of the Frank Lloyd Wright's 'Falling Water', raises the question: does this waterfall not create a loud (noisy) environment ever present for those which live there?

To say as a matter of fact that a building is visited already contains a kinaesthetic concept: one walks, one goes up, one descends, one turns left, one veers towards the right, etc... Things that one could render using a drawing sequence of photographs.

But the ever changing light throughout the day; vertigo felt when one stands at the top of a skyscraper looking down on the streets below, however quite visual and outstanding the perceptions, are already much more difficult, or even impossible, to reproduce.

From the moment when one would also like to reproduce the pleasant feeling of freshness when one enters a Moroccan patio, the wind swirling (meandering) around the base of a building, the echo of our steps which resound under the vaults in a small church, the visual representation of these impressions becomes impossible to achieve.

The fact of representing architecture only visually, drawing it, tracing plans, cross sections and elevations, drawing only the outline of spaces (poaching of walls); but also to read with great difficulty the enthalpy graphs', acoustic surveys in Db, diagrams in LUX... and especially to forget to remember that architecture is the envelope and living environment, lead us to a situation that one is currently experiencing which reflects the hyper visual culture in which we live today, being image orientated only.

This tricky situation causes us, as I have already said, to deform our judgment on architecture, if this distortion is not very sensitive under our latitudes, our judgement becomes erroneous when we are dealing with other skies or referring to other countries or other cultures past or present.

Architecture does not always have visual concerns and what we see is not necessarily its essence. The photographs of the Moroccan dwellings for example, do not show the suffocating heat that makes the air tremble that surrounds them, the sun beating down on the walls with all its strength, the heat which makes asphalt melt, the furnace of the afternoons. Architecture there has its own thermal parti and all that we see is a response to a particular climatic situation, extremely different from that which is known here in Brussels. The "essence", the principal is to create the best possible use of freshness in order to make a house in a very hot region, and it induces another conception of housing, that apart from the "enthalpy" or thermal survey, only a vocal description or a written text could represent our living experience with success: narrow streets that create lots of shade, sparse openings of houses towards the outside, the fact of sitting nearer to the ground (because it's cooler) generating openings perceived only in sitting position and not upright as accustomed to in our regions, winding streets which does not permit the wind to brush away too quickly the freshness trapped at the base of these streets, very high ceilings, flat roofs arranged in such a way that one could sleep thereon during the night, the use of marble which remains cold even in the hottest sun, etc...

These remarks are valid for all North African architecture, and also for traditional Japanese architecture, conceived entirely around the visceral fear that the residents of this country have of the sun, to which they offer other architectural solutions: roofs with broad overflows offering a great deal of shade, sliding doors making it possible to have maximal ventilation in all directions...

These two examples show on the one hand that visual is sometimes far from representative of all the aspects of the experience that we have of architecture, moreover, the fact of showing by images, drawings, video, these constructions levels them and makes them lose much of their characteristics which, when we are on site, **hit us directly and are constantly present**. If it is true that in relation to our other senses, sight is the least tributary to atmospheric conditions (except in the fog/mist), therefore more stable, more constant, the only visual representation of the experience of architecture has itself its own limits. These are of two forms.

1° It cannot present render the internal temperature contained in a building, its contrast with the outside, the sounds reigning in space, wind, smells, in other words, which "is transported by the air" **which is itself invisible**, but only some of its effects (one cannot see wind, only the fluttering of flags).

2° In the study of the architecture, which is visual, **one is distant from the object**.

In the study of architecture, if we say visual, we distance ourselves from the object. One is not implicated, one is never involved, not being influenced by the difference in temperature, the effects of wind, humidity and drought, aromas from kitchens, noise from swimming pools, etc... all spatial qualities **which surround us completely in our daily lives**.

Architecture is reduced to sight, "seen remotely" is not a living environment; it is only an image, an incomplete illustration.

Nevertheless, the representation of architecture that we put into practice today can remain valid in two cases:

1° When one refers to contemporary buildings, built under moderate climates and in places where prevail more or less constant luminosity and temperature, little or no odours, a low reverberation (echo) rate and not a breeze in sight: which is the case in our shopping centres, offices, museums, schools, etc...

2° In a major part of stylish architecture, privileged places which form only a small piece of the history of architecture. Those buildings sought to prove themselves, endure the passage of time and were expressed by using stable and timeless means.

In other words, our visual training, our favourable weather conditions, our "comfortable" living spaces to which we have become accustomed prevent us from recognising that it is a distortion in relation to the totality of the experience of architecture for self gratification and communication by images only.

If one wants to start a real phenomenological approach to architecture (based on experience), the only possible attitude since its essence is by definition to be apprehended (detained), to be lived, is the global relation its perceptive components, all its effects on the observer (bystander), the artist, the Rambler -, we have to return to "direct description of our experience such as it is" and to return to the things self "(Merleau-Ponty) (2) . In this manner our sensorial data rather than our visual give us an "image" of space, powerful, emotional images when added together multiply their effects on man; but also, in order to find the intentions of other architects whom we neglected, the apprehension of builders from other centuries, or living under different latitudes, that we (architects, historians, archaeologists) have ignored because they were not visual.

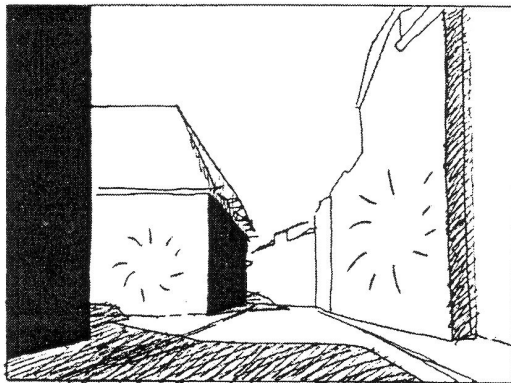


fig. 1 representation of heat

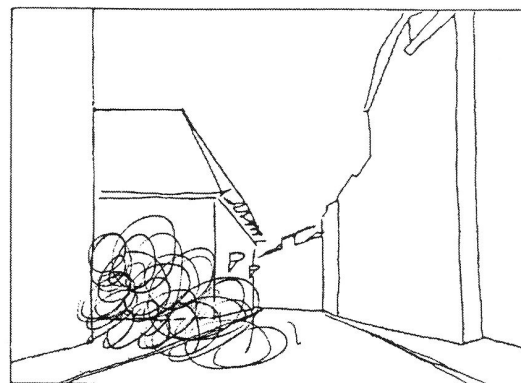


fig. 2 representation of sound in urban space

Our sensorial system has not changed in the last 2000 years, and if cultures are different, political, cultural and economic conditions are not the same as what they used to be. The sensations provoked by architectural spaces remain the same and finally this is the only constant throughout time.

We have to note that:

1° the presentation of other senses than sight is difficult and not very frequent. As stated already reading a survey in Db, enthalpy graphs, standards in LUXES are not understood by everyone therefore they must be converted into familiar feelings for others to seize the meaning of these figures.

2° Our western culture does not encourage sensual expressions other than visual. As Claude LEVI-STRAUSS (3) wrote: "*While visiting the Jain temple in Calcutta, which was built in the 19th century by a billionaire, in a park full of cast iron statues daubed in silver or in marble carved by inexperienced Italians, I thought I recognized in this alabaster lodge coated with a mirror mosaic and all saturated with perfume, the most ambitious image that our grand-parents could have conceived in their youth, of a luxury brothel. But on making this reflection, I did not blame India for building temples similar to houses of ill repute; rather ourselves, as we were incapable of discovering other places in our civilisation which enabled us the freedom to explore and express the limits of our sensuality, which is the main function of a temple*".

Let us finish this first part by saying that the day when Africans, Chinese and South Americans write a history of world architecture, things will change and I hope that it is in their representation of their architectural experience that the sensitivity of their findings will enable other points of view to emerge.

Indeed one cannot begin to describe, illustrate architecture such as we do here especially when one lives in a subtropical climate, in the middle of an exuberant nature subject to constant earthquakes and hurricanes. One sees differently constructions which surround us when one inhabits an arid continent or the opposite a region that is hot and humid, one attaches different values to a building, especially, if one comes from a desert, an icy or a very windy region or if one was born in Paris.

It is the universality of the lone visual presentation of architecture inherent to our culture and our moderate climate, which will be questioned.

Here above, I showed that the means most used to represent architecture (photographs, drawing) were directly linked to the ruling culture: that were associated to the values and the climate of Northern Europe and Northern America, architecture from moderate climates in which **the thermal parti**, common in North Africa and the Middle East e.g. were not taken into account.

In a climate without extremes, it is the eye which predominates and questions the balance of the masses, the proportions of openings, relationships, (therefore not the shades (porticos), the freshness of the narrow streets of the Mediterranean cities;...)

Visual in this sense is truly a preoccupation for serene folk.

Perhaps it is not by chance that it is France, the most central of all European countries, which benefits from an ideal climate, who produced this art of well being, maintenance which becomes apparent in its architecture. Equilibrium and good taste develops more naturally in a **moderate climate**, a climate which predisposes in its search towards a certain measured style, the perfect average, of well-being, dignity excluding any form of excess.

Here, I would like to extend this idea and to show that the most widespread graphic representation in architecture that one believes is universal, is in fact very particular and additionally, directly associated to a certain architectural style.

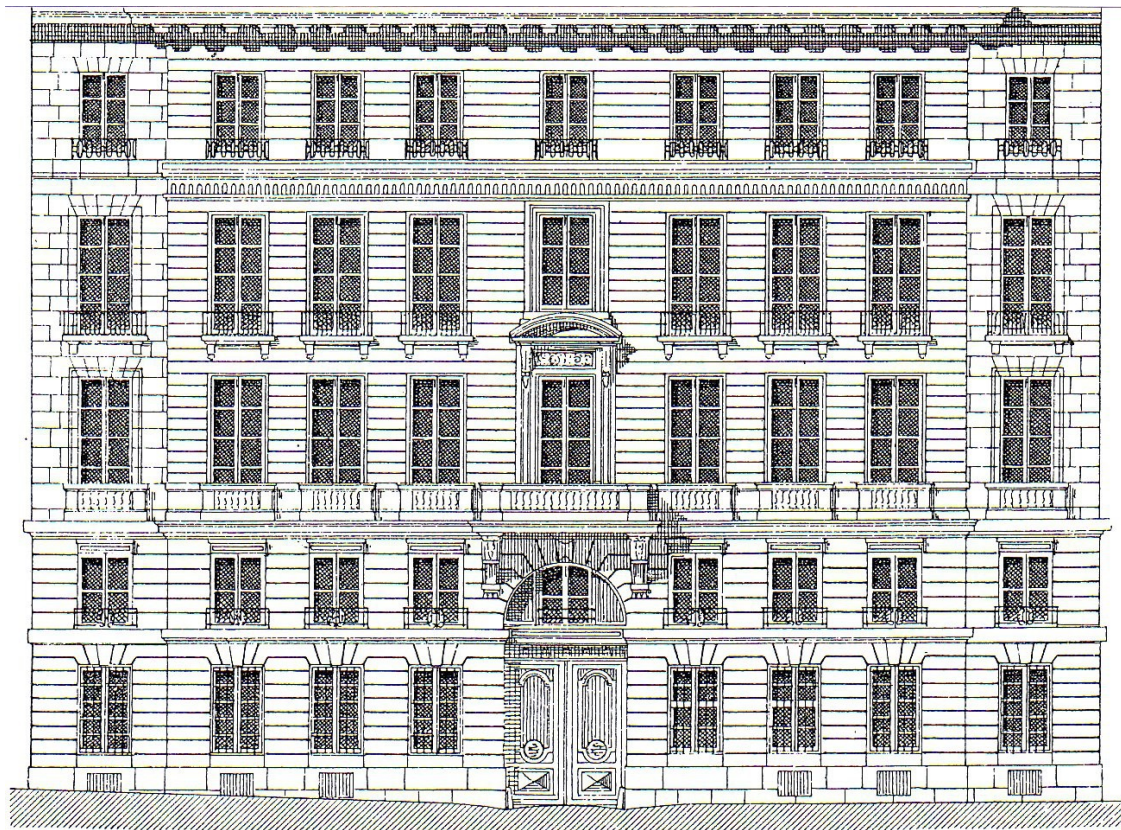


fig. 2: façade rue de Tournon, Paris

Illustration 1 shows the front elevation of the facade of a Parisian building. Geometric elevation in which one can understand the relation between plains and voids and, proportions between heights and widths, ashlar and flat arches, stone designs of joints and mouldings. All the necessary indications, that allows its construction.

This way of representing a building became universal and was thus used during centuries.

In fact, it is uncommonly representative of a certain kind of architecture and moreover is, particularly limiting for other architectural forms and/or preoccupations. This method is closely related to an architecture, that of the classical style (term that is used in the stylistic sense).

Analysis

1° Representative of a monochrome (façade) front elevation, either in plain stone, or coated with white paint, this drawing emphasize and makes black on white obvious, the base joints, the lines of mouldings, the voussoirs of flat arches and the central arc.

► **Consequently excluding** all chromatic concerns, i.e., painted antique temples, chromatic Gothic portals of cathedrals, gold on Flamish Renaissance façades, etc... When Le Corbusier wrote "Quand les cathédrales étaient blanches" (When cathedrals were white), he already had a classical point of view !

This conventional manner of drawing a front elevation (façade), in fact restores in particular **the essence of classical architecture**: a white facade, very graphic, graphics that are marked by distinct and precise lines. By one reproducing precisely the outline in black, clear and precise strokes on a white background – by pencils, pen and China ink or engraved, which was used to draw it.

By this means of representation,

on one hand one gives priority especially to white architecture where linearity is developed, where joints between stones regulate all the graphic art of the elevation, where the modénature is clearly legible;

moreover, one also facilitates its distribution and its advertising.

2° it must be added that it is a facade where voids/planes whose proportions predominate by their dark on light rendering,

► **Consequently excluding** works of the Twentieth century in which research such as reflections (Mies 's projet for a skyscraper in Berlin, 1919), of materials and textures (Herzog and De Meuron), dynamic concerns (ie: facades with sliding sun screens thus constantly changing their aspect).

3° What is shown in the image, is the presentation of a façade in a geometric and **fore position**. But in classical architecture, vision is fixed from this privileged point of view: frontal, which increases the importance of symmetrical elevations, the central fore-parts and the axial entries.

► **Excluding consequently** $\frac{3}{4}$ of vision (the Parthenon), the more picturesque effects of curved streets ("short perspectives "or blocked according to the Lavedan expression)

See below: length of sight in frontality.

4° No trace of shade, or so little in this drawing, so much so as everything was brought back to two dimensional graphics, which is exactly the essence of classicism, whose projects bring this spectacle to the surface.

► **Consequently excluding** depth of architecture and baroque expression.

In summary, what we find as common and conventional, is so in fact only for a particular architectural object. There is in classical only (and neo-classical) architecture, that the photograph of reality is very close to this graphic style. Today, only Richard Meier's buildings still stick to this style of graphic rendering. Photographs do not say more than the drawing of their elevation, which shows accuracy and pertinence of this means of building transcription. 90% of Today's French architecture can still be represented in black and white.

Distance of sight and frontality

The front elevation of the façade in rue de Tournon is in its graphic presentation, an abstraction. One never sees a façade in such a way **except if one is standing exactly in front of it and at a certain distance**. Then the appearance of the building becomes very near its geometric drawing. At the same time frontality is a basic essential element towards a sound understanding of the intentions of classical architecture.

It is interesting to compare this concept in the remarks and advice on the distance necessary to appreciate a building properly in Camillo Sitte's (4) and Pierre Lavedan's documents. The latter, in the chapter devoted to "the optical scale and the optimum angle of vision" wrote: *"One can express in figures distances - relating to height - to which a monument has to be seen: it will be the value in degrees of the angle under which it is seen. It may be that the aesthetic superiority of certain proportions is explained ultimately by physiological reasons: the problem is too complicated and above all too unique to be dealt with here. But for the angle of vision one fact is certain: the human eye is made so that a building can be seen only at a distance equal to three times its height, i.e. from a view point of 18 degrees. If one move away further, the building gradually loses its individuality, its silhouette ends up merging with its neighbours. If one approaches nearer, at twice its height (and angle of 27°) the general view is still perceived, but nothing of its environment and the monument no longer appears within its framework; at one time its height (angle of 45°), one only grasps details. Alberti estimated that the depth of an ideal place has to be three or six times the height of the buildings which border it, i.e. in the middle one will have the maximum ratio of 1/3 and an 18° angle of vision of J. H.-Mansart, in the XVIIth century, in the drawing and facades of his Great Royal Places, guessed and applied this law by instinct".* (5)

The graphic artist Luc Van Malderen, believes that the best distance in order to appreciate a painting or another piece of hanging Art is at a distance of 3 times its diagonal.(6)

It is true that at a certain distance, visual distortions are no longer perceptible, verticals seem parallel and we are quite close to its geometric elevation, such as that presented in the image at the beginning of the text (although the width of the rue de Tournon is not 3 times the height of the building).

This technique of presentation is exactly the method used for optic observation in life (from a certain distance) **but also culturally**, because **frontality in so doing also indicates, indirectly the location of the observer and the place where one stands to observe it, to analyse it**. One is not surrounded, one is not involved, and on the contrary, one is opposite, "distant", with the necessary distance to fully appreciate it. And it is in this manner of presenting architecture, that so reflects the French spirit: Everything is done so that the best appraisal is done from a necessary distance, In order to **judge** the object "in an objective way", one can be only "at a distance"; therefore not surrounded, being inside it, as in a patio or with an angle broader than that of human vision.

But is it not precisely this angle of vision that is used by the camera lens? (the photographer), in face of, but keeping away from the subject, not clinging to him, but at a distance, a bit like peeping from a distance, "a distant setting", a backward step. In other words, photographs show buildings in the same way, "from the same angle" as the drawings and engravings did so before.

But mainly, this "length of sight", this ideal distance is kept in order to capture a building in its entirety, it promotes visual architecture, a demonstrative, representative architecture of look and appearance more than of implication.

Attitude and choice of means reflect once again the kind of architecture that one gives priority to. In France architecture is external and to show off. North African and Middle Eastern architecture are internal, whose surroundings are a primary concern, a choice, while at the same time being a way of life: to be **in** the arched baths or an **enclosed space** in a hammam, standing **under** a dome or **in the centre** of a patio where arcs surround and **encircle** people.

Here one is no longer a spectator like in France but a contributor.
 I remark that, in all the history of painting and of photography, one managed to represent the portico only one way: a corner view, or slightly in retreat, with the archways in the foreground. One cannot do better, "to evoke" space which surrounds us with a limited angle of sight. Photographs can only show a portion, a fragment.

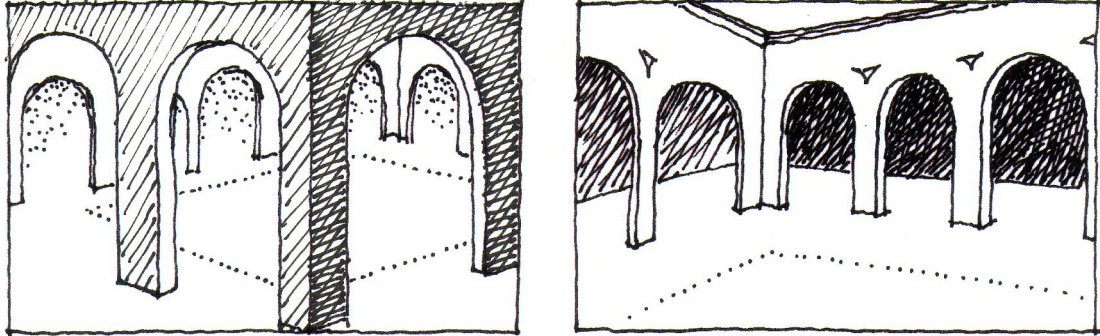


fig. 4 & 5: 2 ways of representing a courtyard

Camillo Sitte pointed out very precisely that one can see at the most only three sides of a space, reason for which, a space with 5 sides is never noticed nor does it shock.) (7)

The shadow rendering convention

Research in developing the most effective way between certain architecture and its representation (which, in addition to being its way of construction, is its way of international distribution!), one arrives at such a perfect sufficiency, so intimate, between the building and its representation, that it became exemplary and subsequently, universal. (It also is the purest French style: adequation between style and reflection, between the idea and the words to state it, between graphic art of the Gothic vaults and their structure, "where the play of lines visualizes the distribution of strength" in such an elegant way).

But what is even more astonishing, is the convention to represent the 3rd dimension using 45° shadow rendering (where the length that the shadow casts on the façade (elevation) is equal to the depth of the projection) it is **precisely the latitude of France!** - more exactly of Lyon (Paris being 48°).

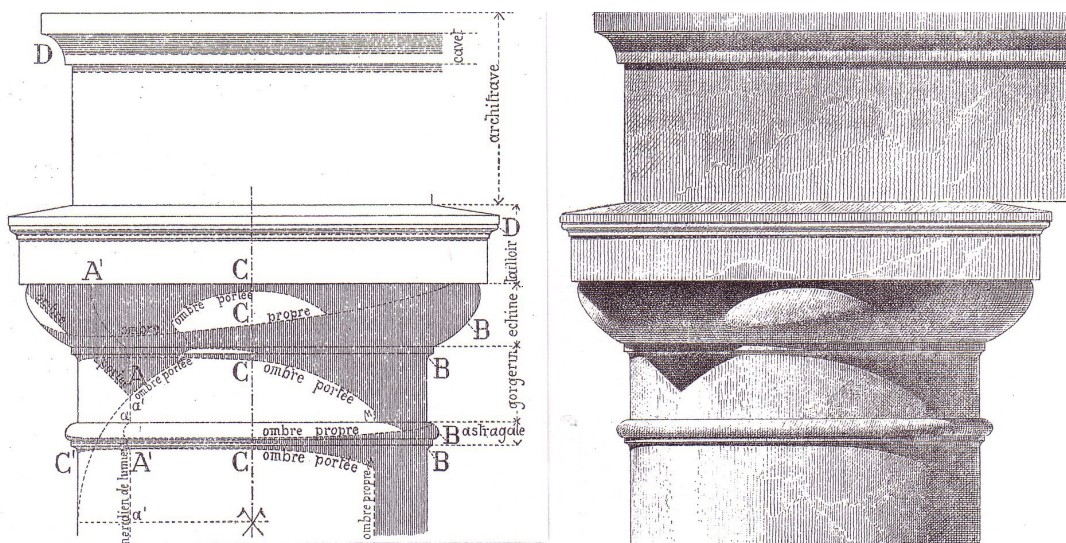


fig. 6 & 7: shadrendering of a doric capital

One can only be astonished to find there such a perfect adequation between the means of representation and the essence of this classical architecture, in a country where the climate is very moderate, for one to have chosen a tempered style, where shadows are perfect averages! Consequently shadows cast in this way, using this principle, whether one wants it or not, one is already on French territory, and specifically in a French climate! (Because Marquis and tents are more evolved in Sweden where the sun is lower; in Egypt, where the sun is higher, a small ledge produces an important amount of shade). In other words, by using this universal principle, one always remains in France, or equally, one exports French sun (or French light)!

Conclusion

It is astonishing to see to what extent the manner of representation that classicism developed is a way of representation, in fact it is so well linked that while still claiming to be objective, allows by this means its broader distribution.

If one managed to convey the manner of representing certain architecture perfectly, one has a right to invent them, so effective, for other styles, other climates, other latitudes and other spatial conceptions, as, one has seen, this way of representation does not convey colours, reflection, transparencies, the articulation of baroque architectural volumes and esthetical research. In this direction, Henri Ciriani, makes apparent certain aspects of this problem: "*If purely architectural architecture seeks to emerge, it must be acknowledged that it will be impossible to promote it by using the media . Media (photography, television or writing) wont be able to translate it fully. For example, the effect of frontality (surface) which today is minor in ratio to the effect of diagonal in modern spatiality , pays more from a media point of view. In photos, the dilation of a space where tension does not pass. Light is impossible to represent, because if strong contrast lighting is not used (which is not always an architectural quality), one can neither paint, nor understand space. The development of photography and architecture magazines is so important, that people no longer visit buildings. All that appears in magazines is subject to graphic aesthetics "*. (8)

Visually, thanks to colour, today one can represent pistachio, pink and blue architecture of the Antilles ; space sequences in a roaming computer graphic or in video, but the space itself remains the most difficult to represent visually and non-visual preoccupations, such as warmth, audio, olfactory (sense of smell) are even more challenging. Legends should be created...

Can Japanese architecture be presented in such a shortened manner?

Let us admire the manner that classical architecture was implemented and let us invent those which represent and suit best our current concerns. Today the time has come to create the way of rendering the various skins in a facade, textures and reflections, sliding elements, dynamic components, colours for ever changing, etc, etc... and all that still remains to be imagined.

(1) Marshall MCLUHAN (1977), **La Galaxie Gutenberg** (Gutenberg's Galaxy), Paris, Gallimard, coll. Idées vol.I n° 372, pp. 146-147.

(2) Maurice MERLEAU-PONTY (1945) **Phénoménologie de la perception** (Phenomenology of Perception), Paris, Gallimard, Tel n°4, Paris, Avant-propos, p.I.

(3) Claude LEVI-STRAUSS (1955), **Tristes tropiques**, (Sad Tropics), Paris, Plon, 10/18, p.359.

(4) Camillo Sitte (1901) **l'Art de bâtir les villes**, Seuil, Paris, 1996

- (5) Lavedan Pierre, **Architecture française**, French architecture, Larousse, coll Arts, styles and techniques, Paris, 1944, p.34.
(6) personal communication (2000)
(7) Camillo Sitte (1901) **L'art de bâtir les villes**, Seuil, Paris, 1996
(8) Henri Ciriani, (1986) in: Techniques et Architecture n° 366, juin-juillet 1986, p. 57

illustrations:

fig. 1: tentative de représentation of heat and sounds in an urban space

fig. 2: façade rue de Tournon, in: Julien Guadet, "**Eléments et théorie de l'architecture**", Librairie de la construction moderne, tome IV, Paris, 1909, p. 450.

fig. 4 & 5 : representations of a courtyard: drawings by the author

fig. 6: shaderrendering of a doric capital, in: Julien Guadet, "**Eléments et théorie de l'architecture**", Librairie de la construction moderne, tome IV, Paris, 1909, p. 60.

fig. 7: shaderrendering of a doric capital, in: Julien Guadet, "**Eléments et théorie de l'architecture**", Librairie de la construction moderne, tome IV, Paris, 1909, p. 61.