

FAÇADE: THE SKIN AND THE FACE

1.0 Façade and its relevance in architecture

Façade implies to something more than the pragmatic external surface of a building. In a purely functional sense the external wall of a building contains and defines the boundaries of inner space. It is the interface between the sheltered inner environment and the harsher external world. It is the 'skin' of the building and protects the inner systems / organs from the natural elements while allowing the building to breathe. The primary function of the skin is to create a suitable artificial environment by keeping out the heat, cold, noise and dust of the street. However, not every skin is a face and not every building elevation a façade. As long as the outer surface of a building serves only the physical requirements of shelter and security it is merely a protective device. When this skin also carries an expression of man's ideas, makes an appeal to his emotions and aesthetic sensibilities, responds to his need for order and provides a backdrop for his activities; it becomes a face.

The façade is the most communicative element of a building. It is capable of portraying an image, of conveying the function, significance and character of a building. The façade wears an expression that gives a building "an independent stance, a meaning that is not merely borrowed from the activity which it contains"¹. A façade also has a role to play in its own environment. "Architecture is an instrument for not building in a place, but for building a place".² The façade of a building is involved in a symbiotic relationship with its environment. The façade is shaped by the existing historic and geographic conditions of a place and by becoming a part of these conditions completely transforms that place. The façade being an in-between element is subjected to opposing forces. These create a necessary tension requiring an expression of differences. The façade as an element of transition enriches the perception of inside/outside, public/private. Building facades are the setting for the drama of life. Façade should be more of a filter between the external and internal environment rather than just a tinted glass barrier.

In the 1960s, ironically, the movement that started as the search for truth had arrived at the stage where its own integrity was doubted. By this time there was a decided antipathy in the design profession to the idea of the hero architects erecting sculptural monuments – the form-givers to the world. Architects began to take a stance opposed to Modernism's abstractness and its claim to universality. They questioned its basic premises that presupposed knowledge of what the hordes of users required. Modern architecture had used the same pure forms for a wide range of purposes. Abstract theorising was rejected in favour of a common sense approach. Kevin Lynch, in 1960, made a study of the imageability of the built environment. This led to a realization of the necessity for architects to strengthen the popular image of a place rather than superimpose on it a uniform order. Around the same time Robert Venturi presented his case for complexity and contradiction in architecture, an argument based on the question of taste.³ He left the puristic aesthetic of the 'Bauhaus generation' in order to celebrate the inherent contradictions of structure and functions, inside and outside; An architecture of "messy vitality rather than obvious unity". Venturi drew equally from masterpieces of architecture and the pop-vernacular in order to make a symbolic architecture albeit an 'ordinary even ugly' one.⁴

Today façade can only be defined as a building's 'hull', whose function and meaning has transformed due to external technological, socio-cultural factors. It has become an "environmental control system" capable of highly sensitized response and technical perfection. This is meaning is argued by another consideration for façade that defines it as an urban wall.⁵

Any attempt to form a system of classification for contemporary façade construction would probably want to account for layering and the juxtaposition of layers:

The bearing layer
The insulated layer
The protective layer

¹ Scruton, Roger. 1979. *Aesthetics of Architecture*, London: Methuen, p.254.

² Dimitriu, Livio. 1983. *Architecture and Morality: An interview with Mario Botta*, *Perspecta* 20

³ Venturi, Robert 1966 *Complexity and Contradiction in Architecture*, New York: MOMA Press.

⁴ Jordy, William H. 1986. *Robert Venturi's Decorated Sheds*, *American Review*. P 40-47

⁵ Ruegg, Arthur. 1999. *Window/Façade*. Trans. By Lynnette Widder *A+U* 99:09

This approach can include traditional solid wall construction as well as brick cavity wall construction or even a highly specialized, high-tech construction. It may determine a building's optical weight through the choice of a particular sequence of layers by choosing particular materials.

Here, aim is to study different meanings of façade in contemporary buildings where it reflects either construction technological evolution, socio-cultural meaning or reflection into the past. The buildings will be studied by their choice of façade construction and specific materials, combined with the inventive formulation and detailing of window openings. The goal is to examine each permutation within the context of contemporary construction-based and aesthetic issues.

Here series of examples of buildings are described that have incorporated façade into design as strong element to interact and to connect to the past and future. The case studies are chosen on their relative appropriateness of specific issues they address by means of their façade.

2.0 Case Studies:

2.1 The façade as a dialogue between old and new

Palais des Beaux-Arts de Lille, Lille, France
Jean Marc Ibos and Myrto Vitart

Ibos and Vitart have constructed a building/screen on whose glass façade the existing museum is reflected, thus duplicating its image and reviving the original project of 1895 that proposed a building double the size of the current one. The new temporary exhibition hall is buried in an artificial pool of glass, which is surrounded by one of water. On the southern façade, a system of probes measures the sunshine, temperature, and wind strength, and automatically activates external sun shades.

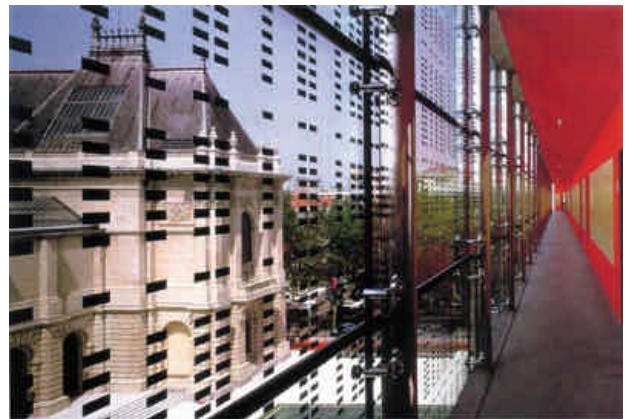


The glazed terrace structure with the existing building in the background

The surface of this structure is composed of a series of superimposed planes. The first is of clear glass that reflects an impressionistic image of the Palais and which serves as an interface between the old and the new. Beyond that surface are gold monochromes on a red background that appear all along the vista. The resulting backdrop reflects old and new simultaneously. The project reflects respect for the old and a transition to the new. It is a new building in a city center that creates an interesting and enriching dialogue with existing buildings. It possesses a poetic architectural spirit that is unique.



Le Palais des Beaux-Arts, Lille: the extension façade, detail



2.2 The façade as disappearing screens

Cartier Foundation, Paris, France
Jean Nouvel



In the Cartier Foundation, the trees remain where they were, superimposing themselves on an architecture in which boundaries disappear and walls glide into space. The Chateaubriand cedar stands alone, between two enormous, unobstructed screens (only attached to the building by a few horizontal ties to counter wind pressure) which frame the entrance. As to materials,

the whole expression of the building is given over to glass: a semi-reflective glass which avoids the emphasis and obstruction of completely transparent or totally reflective, mirror like curtain walls. The vertical wall creates the impression of the Cartier foundation as an ephemeral building on the verge of fading away. It belongs to an unspecified school of modern architecture.

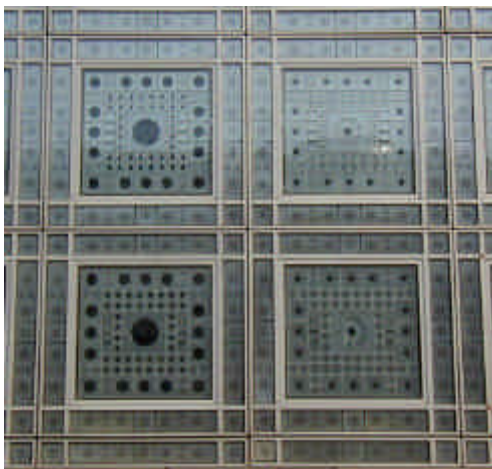


2.3 The façade as a reflection of tradition by means technology

Institute du Monde Arab, Paris, France
Jean Nouvel

The facade facing the Jussieu faculty at first sight looks like an ornament decorated surface. Close up, however, we can see that this is not so, but a combination of the ancient art of controlling light and the use of the most modern technologies. Its unique courtyard-facing south facade is ornamented by the regular patterns of hundreds of solar-activated mechanical diaphragms. The collective effect of these high-tech stainless steel irises is a rich optical brocade, strongly but abstractly evoking the beautiful patterns of traditional Arabian weaving. This metal sunscreen integral to the curtain wall provides active sun screening.

As Jean Nouvel explains that the façade is not an imitation of ornamental decoration, but an interpretation of the tradition. What he has reproduced is the play of light. To play with the system of its geometry, recover, and respect the principle of light filtration, of course adapted to the climate and the inconsistency of Parisian light.





2.4 The façade as monolith cladding

Signal Box, Basle, Switzerland

Jacques Herzog, Pierre de Meuron, Harry Guggler



Signal Box by Herzog and De Meuron is a stark monolith rising up from intersecting railways, wrapped from top to bottom in copper slats that obscure the windows like horizontal blinds. Signal Box, a substantial volume of copper, stands beside the railroad tracks, close to the new locomotive sheds in Basel. Distributed over its six floors are sophisticated control instruments and electronic equipment for managing switch points and coordinating the signals along the tracks. The concrete structure of the building is provided with external insulation, and is clad in copper panels approximately 20 cm in thickness. These panels are open at a number of points to allow ingress of natural light. The orientation of the panels, opening out, casts lines of shadow on the facades, resembling the scales of a fish. This introduces a variation in the texture of the skin of the building, while at the same time emphasizing the dramatic character of its isolation. The building is, by definition, a striking point in the landscape which does not evoke any echoes of known forms or images, codified in terms of culture. It is a unique feature of its kind.

2.5 The façade as an interactive participation / denial of the same

Home/Studio in Islington, London, UK

Adam Caruso and Peter St. John

The conversion of an old store on two floors in Islington, North London, into a home and studio was carried out by Adam Caruso and Peter St. John. The store, rectangular in shape and measuring 4.7 m wide by 9.8 m deep, provided a useful area of approximately 45m² per story. The floors were completely open, with now walls or even a pillar intruding on them.

The old façade replaced with glass wall consists of double glazed Climalit glass (8+24+6) with both insulation and acoustic properties. The panes are translucent but, although they let light through, they visually insulate the inside from the outside. They act like a silk screen or China paper. During the day the façade is hermetically sealed, as if it were made of a metal sheet. At night it becomes a light that illuminates the street.

Apartment Building at Schützenmattstrasse, Basel, Switzerland

Jacques Herzog - Pierre de Meuron and André Maeder

This commercial and apartment building built on a plot measuring 23m long by 6.3 m wide, located within the city's medieval fabric is strongly influenced by the plot which was utilized right to the back of the lot and exhibits a highly specific floor plan and section for life in a densely-built city. The street facade is made completely of glass and is protected by a cast-iron curtain construction that can be folded back piece-by-piece at will. Wavy light slits lend the curtain construction a flowing textile-like feeling. While the construction hides the living space behind it, its heavy cast-iron material serves as a counterweight protecting against the noisy street side. In form and

material, facade components are related to sewer grates and to the protective grills placed around trees. Thus they have their origins in the world of the street.



2.6 The façade as a Skeleton

Centre National – d’Art et Culture Georges Pompidou, Paris, France
Renzo Piano-Richard Rogers

Considering the unconventional architecture it is no wonder that the Centre Pompidou has often been compared to a refrigerator or a oil refinery. The façade of the building no longer exists but it is observed virtually as a mere skeleton exposing inside out. The Pompidou centre broke the mold with its ‘inside out’ construction: the steel skeleton from which floors are suspended dominantly visible from the outside, together with the giant external escalators, with the colour-coded service ducts exposed on both the inside and out. Besides a long transparent tube made of Plexiglas containing an escalator stretches from the first to sixth floor. The escalator is not integrated into the building, but it is rather hung up on the front. The whole building is held together by a construction of steel girders and cable covering the edifice. As result there are very few supporting walls to be found within the building itself.



2.7 The façade as an outer Skin

The Modern Art Museum, Fort Worth, Texas, USA

Tadao Ando

The modern Art Museum at Fort Worth by Tadao Ando joins the Kimbell Art Gallery, designed by Louis I. Kahn, and the new Amon Carter Museum, designed by Philip Johnson. As to respect Kimbell and design in coherence to the existing building, his design intends not to transcend the work of Kahn but to build link to it. One obvious link is that each has a series of long pavilions; Ando's are flat-roofed and Kahn's are barrel-vaulted. Ando's vision of the Modern as a communal focal point for Fort Worth also reflects his awareness of how the museum fits into the fabric of the Cultural District. The building is elegantly simple both in design and material. Only six materials are visible: concrete, oak, glass, granite, painted steel, and drywall. The only colors are white and two shades of gray. The simplicity of this palette provides a sense of calm that contrasts with the power expressed by the diversity of spaces and the magnificent art they house. The rhythm of contrasting spaces, from narrow to wide, short to tall, enclosed concrete box to exposed glass box, accommodates well the interesting variety of art and imparts a powerful energy to the visitor.

Forty-foot-high transparent walls of glass framed in metal surround the concrete envelope, providing magnificent public circulation areas from which to view the surrounding building, the large reflecting pond, outdoor sculpture and the landscaped grounds. The desire to use diffused and reflected natural light within the gallery spaces was a major influence on the building's design. The panels of glass-bead blasted aluminium, which form much of the museum's outside skin, also act as a foil for the tenacious Southern light. This metallic sheath, playing a duet with the building's 40-foot glass windows, leaves pewter like patina, an indelible fingerprint from the sun.



3.0 Aim

- To study the technological development and its integration in façade design to reflect the socio-cultural aspects in much stronger sense to keep building rooted in the urban context.
- Analysis of important buildings that represent this idea one way or other by their effort in making façade exploring inner space organization. The main concern is to do research in possible factors to be considered during designing façade that reflects the concept at the urban as well as minute detail scale.
- The façade's construction detail and material integration that gives optical weight to the overall façade also needs to be studied in these buildings. The objective is also about the contextual connection of material that are used in construction of façade and exploration of its properties.