

## Wall-Façade as Surface

*Sang Lee*

In architecture we can observe two paradigmatic modes of providing shelter. The first one is the condition of a void, or a cavity in earth, natural or man-made. Here the enclosure is defined by the hollowed out space in a solid. The second is the so-called *primitive hut*. It is an *assembly* that consists of a distinctive vertical structure, reminiscent of vertical tree trunks and an overhead cover of the tree's crown.<sup>1</sup> These two archetypes provide the principles of enclosure: a solid, load-bearing construction analogous to a hole in a solid material, the subtractive, and the frame structure analogous to a skeletal structure on which covers are added to provide an interior, the additive.

The two models can be considered in terms of the nature of each respective enclosure. The cave model provides one-sided *surface* that we can characterize as reflexive, e.g. the murals of the Lascaux cave where the dwellers chronicled their relationship with the outside world. The primitive hut model can be characterized as projective in that the *membrane* consists of a duality surface by which one can recognize both its interiority and the conditions outside.

In either model is the notion of enclosure that imagines, inscribes and produces habitable solids and voids that are simultaneously cerebral and emotional, reflexive and projective of one's own necessities and desires in order to  *dwell*. In these two models, our modes of dwelling have the idea of dwelling as *surficial* is not of demarcation, marking out and occupying geographical territories, but of constructing at once intellectual and emotional relations with one's own environment.

*Architectural Envelopes*

The concept of envelope has been applied as a way to develop built environment, cities and buildings. The building envelope has been thought to provide the separation between the conditioned interior and the uncontrollable exterior climate. The one persistent dictum by Louis Sullivan has defined the harmony of form and function of a building. And the building's external form is supposed to reflect its internal, structural logic. The aim here is the union, or at least an agreement, of the interior spatiality and the exterior enclosure where the elevation is seen as the representative of the *venustas* that also expresses the building's *utilitas* and *firmitas*.

Building envelopes can be characterized in terms of three aspects of design concerns: functional, technical and energetic. And the three as a combination determines the aesthetics of a building and also closely relate to not only the local conditions in terms of the geographical location, prevailing climate, material availability but also the kind of intangible, contextual issues such as the tendencies of ideology, politics, economics and thus social and cultural practices.

First, the functional aspect is primarily as a shield that protects the interior from the effects of the weather. In addition, historically, the function includes on one hand the prevailing materials and techniques of the locale. And on the other the dwellers *inscribe* on the surfaces their belief systems and narratives. The function of the building envelope as a substrate for expression can be said to be the most primordial and yet also the most analytical of architecture. Second, the technical aspect shows from a construction point of view a way to provide use as well as to maintain its structural integrity. Therefore the technical aspect again imparts the visual and tactile qualities. In addition, the technical aspect also indicates how adaptable and accommodating it is to different uses (i.e. operable windows, devices that block or filter sunlight and air, material resistance to weathering, wear and tear, etc.). And third, the building envelope is expected to perform a key role in transmission, absorption and

containment or energy. In a hot and humid climate, screens and louvers in combination with a lightweight timber frame is raised above the ground to facilitate ventilation. In an arid, hot climate, the building volume is enclosed in massive, insulating rammed earth or simply a fabric tent.

The building envelope in these three divisions forms the fulcrum of both practical and aesthetic considerations. Today, technologically speaking, the building envelope also represents a high concentration of advanced, so-called high-performance materials and assemblies where the rigorous pursuit of doing the most with the least defines the cutting-edge.

### *Surface Aesthetics for Wall-Façade*

The modernist model presents the most widely used form of building envelopes today, essentially a mechanical device that can be operated between the interior and exterior. It is in reality a membrane-barrier, no longer a solid, thickness wall. The modernist building envelope, the non-loadbearing curtain wall, is considered a plane that separates the interior from the exterior and that also connects the two together in terms of the visual and tactile experience as well as providing openness to the outside world. Therefore, the modernist building envelope is at once a separation and a connective, optical device, driven to maximize its transparency and minimize its physical presence.

Subsequent to the modernist model, according to Robert Venturi we find the conceptual building envelope, or flat and thin wall-façades, that provides an *agent* to represent and transmit *messages*. Throughout the history of architecture, Venturi argues, the wall-façades have communicated ideas and stories by material and tectonic making.<sup>2</sup> This points to a conceptual articulation of wall-façades where the substantive separation of the medium and the content takes place. In the Venturian model, the wall-façades signify, symbolize and

convey narratives, messages and information, as those in Las Vegas for instance, that promote fantasy and desire through the visual effect of the wall-façades.

The third is modeled after the natural selection and evolution process in terms of biological adaptation and optimization. This model proposes building envelopes that are analogous to an organ, for example the skin, that functions in a specific way. In this instance, the building façade is seen as an assembly of dermal layers. The primary strategy of this model consists of various so-called *parameters* that contribute to the relationship between a building and its environment, both natural and artificial.

The three models of building envelopes presented so far can be summarized as: the modernist envelope that informs the logic of the building's program, space and structure, i.e. "Form *follows* function."<sup>3</sup>; the Venturian façades that signify and communicate, i.e. "Form *accommodates* function."<sup>4</sup>; the biomimetic, emergent and/or generative systems that respond and adapt to environmental or parametric conditions, i.e. Form *is* function.

At this point, the three models of building envelopes can be hypothesized in terms of *surface*. The first conception is, according to the analytical philosopher Avrum Stroll, the "Leonardo surface,"<sup>5</sup> after Leonard Da Vinci's description of surface in his notebooks. This conception posits that a surface is not material but an abstraction that not only separates but also binds two different entities or states. Surface in this sense is an *interface*, a shared boundary with no "divisible bulk" that differentiates two substances.<sup>6</sup> The building envelope as surface belongs to both the interior and the exterior and therefore not only demarcates but also joins the building and its exterior environment together and *inseparably*. In addition, the building envelope as surface is a dynamic and indexical condition where the interaction of the building and its environment is manifest. The building envelope is an agent for both the exterior and

the interior. At the same time, the building envelope would actively *facilitate* such a relationship.

Based on the three models of building envelope, and with the Leonardo surface conception, we can discuss the wall-façade-surface as *mediation*. One of the mediative functions is to represent and emphasize the kind of buildings and their occupants. With images and patterns the wall-façade is expressive of the underlying narratives or conventions – ideological, political, social, cultural, etc. – of a given building and its context. The dynamic conditions surrounding a building are embodied and mediated in the wall- façade as surface. We can conceive of an envelope that in essence promotes a certain kind of equilibrium. The building envelope as wall-façade-surface not only reflects the external variations but also projects its internal conditions.

In parallel, according to the psychologist James J. Gibson, we perceive objects directly by means of surface, in contrast to the model in steps from retinal, to neural and then to mental that problematizes the integrity of visual perception.<sup>7</sup> Gibson posits that one sees is an actual, material surface and therefore our sensual cognition of objects are direct, primarily in surfaces. According to Gibson, various surface conditions contribute crucially to our understanding of the world in an *ecological* manner.<sup>8</sup>

In short, how do we conceive of a wall-façade as surface in both matter and affectation? Furthermore, how do we conceive of a wall-façade as surface that facilitates both the interior and the exterior? To these questions, the French philosopher, Gilles Deleuze provides the notion of *fold* that describes the relationship between the interior and the exterior, and the façade as an agent. The fold surface is also a connection and interface between matter and affectation. Therefore the fold articulates the connective tissues of two states – interior-exterior, object-environment, media-substance, etc. – as a process of folding and unfolding.

Therefore, a wall-façade as *surface-fold* forms a condition in which two states co-exist in a smooth, continuous relation and the transition between the two is indivisible.

### Conclusion

The wall-façade of building envelopes will continue to be expressive of the building's aesthetic intent. However, its most central aspects consist of how we conceive our material existence that is centered on creating interiority, or our *own* space of dwelling. In most cases, we encounter and approach a building in relation to the wall-façade-surfaces of architecture. In this relationship, we can criticize the *superficialization* (excess) of its purely visual and optical affectation as well as the *mechanization* (fetish) of buildings that serves the novelty effects that soon exhaust their purpose.

In the presented projects, we see a variety of expressions that demonstrate the quality of surfaces in the formation of spatiality. The swimming pool by DJ Architecture present the kind of interstices formed by walls that not only give make the place but also more importantly an articulation of the building as a surface form. In contrast, for the parking structures, the building type that is often a part of infrastructure and therefore out of place and scale, the architects attempt to engage the inherently problematic building form with the context by providing the surfaces of mediation. The façade conditions in these parking buildings not only envelope but also provide a means of reading the structures, in a Gibsonian sense, in a different light. And finally, the projects by Kengo Kuma and FOA attempt a contrasting strategy. By implementing geometrical surface patterns, the architects underscore the buildings' role in creating the space of *alterity*. This is to say that the buildings attempt to form space of otherness by radically detaching themselves from the context. In this case, the façades ply the role of an active agent in creating such alterity, the experience of the otherness that transforms the buildings' occupants and users.

The wall-façade seen this way is in essence the unfolding of various relations and forces between the building and its environment. The conception of wall-façade as surface in this sense presents the structure and the facades that are interwoven and no longer arbitrary. In essence the articulation of wall-façade as surface is to sublate the disparate views of the interior-exterior relations with the one that not only helps weave, pleat and mediate a series of communications and exchanges but also embodies the quintessential qualities of human space.

---

NOTES:

Notes:

<sup>1</sup> Laugier, Marc-Antoine. Wolfgang and Anni Hermann. Tans. An Essay on Architecture. Los Angeles: Hennessey & Ingalls, 1977 (1753) p. 12; see also Norberg-Schulz, Christian. Intentions In Architecture. Cambridge: MIT Press, 1997 (1965) pp. 109-111

<sup>2</sup> Venturi, Robert and Denise Scott Brown. Architecture As Signs And Systems For A Mannerist Time. Cambridge: Harvard University Press, 2004. pp. 24-25

<sup>3</sup> Louis H. Sullivan, "The Tall Office Building Artistically Considered." Lippincott's Magazine No. 57 (March 1896): 403-09

<sup>4</sup> Venturi, Robert and Denise Scott Brown. Architecture As Signs And Systems For A Mannerist Time. Cambridge: Harvard University Press, 2004. p. 153

<sup>5</sup> Stroll, Avrum. Surfaces. Minneapolis: University of Minnesota Press, 1988. pp. 40-46

<sup>6</sup> Ibid.

---

<sup>7</sup> This theory is also termed *Naïve Realism*. Gibson's theory of ecological perception was criticized as an undemonstrable and therefore unprovable proposition.

<sup>8</sup> Gibson's *ecology* consists of *invariants*, those that provide constant reference such as the horizon or the regularity of the paving pattern of a sidewalk, and *affordances*, our understanding and recognition as to what we can do with objects in situations around us.