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Architecture and its Double

The Expanded Medium of Architecture and Spatial Affect

Yasmine ABBAS¹

Abstract. The digital has expanded the medium of architecture, bringing with it a focus on architectural surfaces. This paper presents a theoretical discussion centered on spatial affect or how architecture operates as an atmospheric machine. The argument is that architecture's double, atmospheric and meaningful architecture, architecture that affords mental transport across time and space, emerges when instead of focusing on the backdrop to the action or on surfaces, architects consider dimensionality and play with the experiential assemblage of the many material and immaterial elements that constitute space. Engaging in the production of architecture's double is not only necessary for creativity and spatial diversity, but also for enchantment, which can drive attachment to places and help create and sustain a sense of belonging.

Keywords. Spatial Affect, expanded medium, double, surface, kissing architecture

Double Take

What if one role of architecture was to expand the spatial experience beyond its physical boundaries, to serve, using design and technological tricks, as an instrument for people to construct space, as a vehicle for mental transport, for being carried away - physically and emotionally - across time and space?

In "Le Théâtre et son double," Artaud (1938) explored the creation of a dynamic, total, immersive, and intense spectacle, the theater of cruelty, which puts in relation - spatializes and orchestrates - bodies, gestures, sounds, scenic elements, and technology.

Later, in his essay "Architecture and its Double," Bernard Tschumi "introduced new themes and references through the definition of spaces of desire, of performance, of exhibitions, of manifestos, of lust, of sensations, and of borders" (Martin, 1990, 31). Tschumi was committed to playing creatively with the text or medium of architecture to produce its "triadic" constituents, the "conceived, perceived, and experienced spaces," which became "space, movement, and event" (Martin, 1990, 31)². From Artaud and Tschumi, I draw the idea of space and space making as a performance. The arrangement in space and time of the many different elements that contribute to architecture as a performance constitute a spatial assemblage which effect that transcends the sum of its parts.

I posit that architecture's double is the enchanting phenomenon of an all-embracing spatial affect - effect and affect - produced through the playful, complex, and dynamic

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2. Chapter 7 of Manfredo Tafuri's *Architecture and Utopia: Design and Capitalist Development* (1976) is titled "Architecture and its Double: Semiology and Formalism."

design of a spatial assemblage of geometrical, material, sensorial, climatic, and allegorical elements. Although architecture's double may be incorporeal, it is nonetheless very real.

Architects summon architecture's double by creatively playing with the many possible combinations of spatial constituents. The enchantment that architecture's double can induce may keep us dynamically engaged with the world or, as neuroscientists say, keep us "doing cognitive work,"³ and bring into being a sense of belonging to a given place.

Surface Tension

How can we reconcile an interest in creating æffects that are spatial (have dimension) when flat surfaces, décors, or screens are deemed sufficient to invite an atmosphere? In his essay, "The Art of the Stage Set as a Paradigm of an Aesthetics of Atmospheres," Gernot Böhme writes that "it is, after all, the purpose of the stage set to provide the atmospheric background to the action, to attune the spectators to the theatrical performance and to provide the actors with a sounding board for what they present" (Böhme, 2017, 30). Mark Wigley connects the idea of creating atmosphere to the very surface of buildings, projecting from the "thinnest layer of paint, texture or wallpaper" (Wigley, 1999, 19). According to Wigley, architecture takes place, operating as a mediating "device," or as an interface between different microclimates, some nested within larger ones (Wigley, 1999, 19). But to create a "poetry in space" or an atmosphere, Artaud preconized having no backdrop, as everything, from gesture, sound, and lighting to architecture and scenic props, participated in combination in communicating the drama of the action (Artaud, 1938). Akin to "the artist as ecologist" as foreseen by Gene Youngblood in the 1970s, architects can "expand our reality" through the "revelation of previously unrecognized relationships between existing phenomena, both physical and metaphysical" (1970, 346). Similarly, architecture is not just a flat backdrop to an event; yet, digital culture has led contemporary architecture to become enamored with surfaces.

The digital has made it easy to fabricate ornate building surfaces (Picon, 2017). Too often cosmetic, skin-deep, and a spectacle, they are designed for today's consumerist-flâneur, and thus contribute to the commodification of the building experience. Ornament has made a return, at least in terms of æsthetics and the status that it affords, but this ornament is looking for expressiveness or to enable a "cognitive dimension" (Picon, 2017, 54). Sometimes, however, building envelopes wear a veil of respectability inasmuch as they summon sustainability values and/or our engagement with place. Think of, for example, the geologically and culturally inspired geometrical patterns of Eliasson's "kaleidoscope,"⁴ the atmospherical device designed as a building envelope for the Harpa Concert Hall in Reykjavík (2005-2011). The facade has dimensions: not only does it have a thickness, but it also affords a mental transport across space. Eliasson translates Icelandic rock formations (a local geological element that contributes to the identity and culture of a place) into a spaceframe composed of a stackable geometry ("quasi-bricks"). In concert with the changing weather, the direction of the sun, and the corresponding (interior) reflection of faceted mirrors on the ceiling, the dichromatic glass adorning the facade structure creates a dynamic effect that calls people's attention. In addition, positioned to embrace the elements, the geometry in

3. Quoted here is neuroscientist and artist Joseph Julian, with whom I regularly exchange thoughts on architecture, art, and the brain.

4. Joseph Grima, 2011, *Eliasson's Kaleidoscope, Domus*. Accessed June 10, 2020.

synchronization with the weather allegorically references local cultural identity and perhaps an ecological consciousness. Some of us may be more attuned to the architectural message that “has more signification for the mind than the clarity brought by the analysis of a speech” (Artaud, 1938, 76-77). The experiential assemblage contributes to a spatial affect, architecture’s enchantment, and possibly our connection to a place.

Surfaces are not solely interfaces between indoor and outdoor microclimates. They don’t just exude atmospheres. Their very materiality, geometry, location in space relative to other surfaces and to environmental vectors (light and sound direction, air flow), and their affordances, as well as the cultural signifier of the ensemble - implicit, rather than explicit - contribute to their dimensionality, i.e., to what deserves emphasis in contemporary architectural practice and discourse.

The Expanded Medium of Architecture

Throughout history, architects have experimented with tactics to concoct architecture’s double. In *The Drama of Space: Spatial Sequences and Compositions in Architecture*, Holger Kleine analyses how the “dramaturgy of spaces” operates (Kleine, 2018). The “dramatic effect of successive surfaces,” “the interplay of floors, walls and ceilings within a single room,” “the formation of rooms,” or “dramaturgical development,” and the “dramaturgical idea” that governs an ensemble of spaces, all speak to the precise and deliberate ways in which architects have endeavored to define our involvement with space. As he argues, “All phenomena that stimulate us to engage with (or disengage with) a space, as well as the parameters that help us understand these phenomena and our reaction to them, pertain to the realm of spatial dramaturgy” (Kleine, 2018, 9). The ensemble of architectural operations that weave the geometrical, material, sensorial, climatic, and allegorical elements together yields the message. What happens when the digital expands the medium of architecture?

Through analyzing the moment video art and architecture “kissed,” Sylvia Lavin came to define a contemporary architecture of effects made of augmented and animated surfaces (Lavin, 2011). These surfaces can be thought of as producing particular ambiances, interior or exterior, but each enveloped atmosphere is independent of all others (Lavin 2011). Thus, architects are freed from creating the coherent “dramaturgical idea” that Kleine was exploring (Kleine, 2018). Kissing allows architecture to become “superarchitecture” (Lavin, 2011) and has inspired architects to treat the surface as an element that can have “mood swings” (Lavin, 2011, 83).

As an example of kisses, *Perspective Lyrique*, the interactive “device” designed in 2010 by 1024 Architecture, provided an opportunity to distort through voice a very ornate 19th-century French facade⁵. Participants in the interactive event were asked to blow sound into a microphone (thereby almost kissing it) to command the relative distortion of a digital image projected onto the static Théâtre des Célestins (Lyon, France), with video mapping enabling a close fit to the building’s many architectural protrusions and ribs. Sometimes, the animated facade, which could only be seen at night, morphed into a large face or a theater mask, with a mouth that opened as if it wanted to devour the public or invite people into a virtual world beyond the facade. There are many ways in which the immaterial medium of the projection kisses the material medium of architecture, but how can architecture be designed so that its surfaces, instead of serving merely as a prop for projections, contribute to meaning-

5. 1024 Architecture. Accessed June 9, 2020: <https://www.1024architecture.net/projects/>

ful spatial assemblages?

Through the Looking Glass

Designed by Ateliers Jean Nouvel, the courthouse in Nantes, France (1993-2000) exemplifies the idea that architects use “diversionary strategies” to create “seductive” and immersive spaces, “virtual spaces of illusion” (Baudrillard and Nouvel, 2002, 6). On one hand, the “just”⁶ and precise geometry of the building is based on a square grid that expands or compresses in a fractal way, defining its total organization, from the structure layout to the floor, ceiling, and wall patterns, from the square apertures to the square paving. The rigorous arrangement is designed to translate and symbolize the ideal concept of justice, structured, impartial, and universal (which, it should be noted, has a variable geometry depending on who decides the laws at play). On the other hand, the color and materiality of the building surface, black and, in some instances, polished and reflective, transcend the idea of the screen and give a virtual double to the physical space, expanding it beyond walls and in multiple dimensions. People experience the spatial æffect as they move through space.

In the same lineage, *Longing*, the atmospherical machine by Jennifer Newsom and Tom Carruthers of Dream the Combine, creates an infinite projection space by placing a mirror at either end of an urban structure such that they face each other. These mirrors were also designed to move in order to create an enchanting effect of spatial distortion or elongation⁷. Much like for the “theater of effect” of Mies’s building in Berlin described by Stan Allen, the location and materiality of surfaces as well as their controlled movement (as in the case of *Longing*) contributes to “complex optical and experiential effects that can never be simulated or predicted by drawings” (Allen, 2009, 99).

Computing the Im/material

The increasing simulation and computational capabilities of architectural software facilitate the design of spatial æffect. Architects can choose from many outputs the preferred and/or optimized solution for the effect they seek. These options result from the assemblage, in space, of surfaces that have, each, a particular geometry and certain material properties and that respond to the direction, movement, and quality of immaterial parameters such as light, sound, air flow, or temperature. For example, Greg Lynn’s Sociópolis housing block in Valencia, Spain (2002-2010), is “clad in six different anodized aluminum panel finishes, each of a slightly different color and degree of brilliance, and each set at a different crystalline angle” writes Lavin (2011, 105). The facade “appears to break and reflect light into a range of sparkly grays, like a disco ball under a pulsating strobe” (Lavin, 2011, 102), thus animating other surfaces in the urban space, and creating an urban spectacle. Materials have both properties and “atmospheric potentiality,” meaning that a material in and of itself or in conjunction with other materials evokes the prior perceptions of that said material (Griffero, 2010, 97). Also, unintended double effects result from their assemblage with immaterial elements. Consider in the example of the Sociópolis housing block, the role that the reflective facade may play in the temperature of the immediate urban microclimate. Kissing architecture, a concept introduced by Lavin, calls for an investigation of “material phenomena” (Mori, 2002), but these expand beyond visual perception. Iannis Xenakis was, for example, interested in the “three-fold link [that] exists

6. Ateliers Jean Nouvel’s website. Accessed June 15, 2020:

<http://www.jeannouvel.com/en/projects/palais-de-justice/>

7. *Longing* by Dream the Combine. Accessed June 15, 2020: <http://www.dreamthecombine.com/longing>

between audience - [sonic] source -architecture” (Kanach, 2008, 155). He stressed the variable typologies that could emerge from, for example, the spatio-temporal relationship combined with the nature of the sound and the materiality of surfaces, thus opening a Pandora’s box of sound and sensory computational explorations in architecture. As a final example, Dana Cupkova and Nicholas Azel’s “mass regime” research into the relation between mass, geometry, and the material capacity to store and release heat included the construction of a wall strategically located in the Hsu House (2010), which played a role in controlling thermal flow, thereby improving energy efficiency within the home.

Spatial Æffect

Finally, what is the project? Why would spatial Æffect matter? First, it relates to creativity: Even though architects cannot be expected to foresee (forefeel) all the double effects that could arise from any given experiential assemblage, it remains critical for them to play with the endless possibilities of spatial Æffects. Such play, experimentation, is also the means for diversifying the typologies of affective space and for avoiding reducing them to a collection of hyper-controlled environments or eternal springs. Second, spatial Æffect matters in relation to belonging: Like “Inter-media environments,” architecture’s doubles “create ‘a matrix for psychic exploration, perceptual, sensorial, and intellectual awareness’” (Youngblood, 2020, 348). It is, therefore, important to explore the spatial Æffects of assemblages that can afford enchantment. As political theorist Jane Bennet writes in the *Enchantment of Modern Life: Attachments, Crossings, and Ethics*, “this life provokes moments of joy, and [...] joy can propel ethic” (Bennett, 2016, 4). Likewise, enchantment can drive our attachment to places and, at the time of the neo-nomad, a much-needed sense of belonging. However, a lot remains to do, if the enchantment of architecture’s double is to move beyond catering to the wealthy to also pervade everyday life and so reach everyone with a need to belong.

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