

Complex Resonance

Complimentary Contrast in the Works of Mitchell/Giurgola and Venturi Scott Brown and Associates

Russell Berg

Beauty is either the resultant of force vectors or it is nothing at all.

- Theodor W. Adorno¹

Precursors to the Modern movement in the vein of styles such as Neo-Classicism arguably set conventions, or at least assimilated standards, for which architecture was designed in much of the western world prior to the industrial revolution. Despite these developments, the implications of industrialization and the scientific-technological advancements made in the 19th and early 20th centuries ultimately culminated in an unprecedented wave of homogeneity in architecture. The epitome of canonical Modernism—the International style—characterized by stripped, light-weight, planar forms which promoted the interior free-plan, was envisioned and promoted most famously in the likes of designers such as Le Corbusier, Walter Gropius, and Mies van der Rohe. This style rose to prominence precisely because such practitioners looked to these developments as capable of liberating architecture from the hindrances of tradition. The universality of this kind of architecture was evident in the sense that aspects of the movement had spread beyond Europe and America in one way or another before the outbreak of World War II. Henry-Russell Hitchcock commented on this global adoption of design principles in his seminal work published in 1958, *Architecture: Nineteenth and Twentieth Centuries*, in which he wrote: “*Not since the early years of the nineteenth century, when Romantic Classicism at the hands of a second generation reached a comparable clarity of stylistic definition, had there been such a rigid and humbly accepted architectural discipline.*”²

By the end of the second World War, the benevolence endowed in the Modern movement’s universalism became increasingly questioned. This notion is made clear through various developments in Europe and America, most notably perhaps by those attempting to categorize or distill the changes unfolding in real time. Hitchcock took note of these developments in the final chapter of the work mentioned above, writing: “*The accepted definitions of modern architecture are undoubtably much looser today than in the early thirties, partly as a result of various abortive attempts at more thoroughgoing revolt.*”³

A closer look at just what these “abortive attempts” are can be seen in projects of the second half of the 20th century, as well as in subsequent commentaries such as that of Kenneth Frampton’s essay ‘Critical Regionalism: modern architecture and cultural identity’. In this, Frampton analyzed the origins of and subsequent reactions to Modernism’s enduring principles after the war. His essay opens with a quote from French philosopher Paul Ricoeur’s 1961 text

'Universal Civilization and National Cultures', in which he outlined the cultural changes taking place at the hands of unfolding globalization. Ricoeur began: *"The phenomenon of universalization, while being an advancement of mankind, at the same time constitutes a sort of subtle destruction..."*⁴ Frampton's essay built upon this idea of globalization related specifically to architecture in order to identify several European and Asian practitioners of the 1950s and 1960s whose work addressed the "subtle destruction" of regional cultural values during the proliferation of High Modernism. Frampton highlighted the work of architects such as Jørn Utzon in Denmark, J.A. Coderch in Spain, Luis Barragán in Mexico, and Tadao Ando in Japan. Of each, Frampton portrayed their approaches as having reconstituted the developments of Modernism with a "regional" consciousness, in which a sense of locale was made present in their respective architectural vocabularies.⁵

This reappraisal of cultural value and local signification took hold in America as well, although under pretenses different than those of the architects mentioned prior. A particularly poignant example of this can be seen in the works created under the auspices of architects such as Louis Kahn and those grouped together under the title of the "Philadelphia School". The commonalities between the architects and urban designers of this group vary according to different accounts, but prevalent in all of their positions is a critical lens regarding urban social conditions and the fractured relation of building to existing context in the 20th century.⁶ The loosely defined cohort broke from the status quo of canonical Modernism by seeking to ground the conceptual underpinnings of architecture in notions of theory directed by history rather than abstract notions of space and form alone.

The best known and de facto leader of the "group" was Louis Kahn, who by many accounts influenced the work of the younger architects and planners working and teaching in his proximity.⁷ Kahn's explorative methodologies imparted on his students and those contemporaries gathered at the University of Pennsylvania a fundamental sensitivity to thinking about light, materials, and the composition of space—all of which he believed had been taken for granted in various manners throughout the Modern Movement. Thomas Vreeland Jr., another architect who early in his own career worked as a draftsman in Kahn's Philadelphia office, commented on Kahn's influence on the younger architects working in Kahn's proximity:

There is no question of the enormous impact that Louis Kahn has had on the architects of my generation... the effects of his genius were most directly felt [by those of us who worked in Philadelphia]. Each of us took from him what we needed and although we all acknowledged a common debt to him, the work each one of us produced under his influence frequently differed sharply. Geddes took the structural logic of his building and academized it (as was also my own tendency); Venturi took Kahn's love of history and his disregard for the canons of the modern movement; Giurgola's case however may be the

most interesting, for he fused his own very considerable and quite different design talent with Kahn's geometric discipline and sense of solid tectonic form to produce a unique combination of order and virtuosity—Kahn's robustness and rectitude tempered with an Italian 'bella figura'.⁸

For the purposes of my research, I have focused on two firms who posited distinct rebuttals to the enduring positions of High Modernism within this cohort of Philadelphia designers. Of the architects in question, the older and perhaps more stylistically reserved Romaldo Giurgola began his professional career upon opening the joint firm Mitchell/Giurgola (M/G) in Philadelphia with local architect Ehrman Mitchell in 1958. Born in Rome on September 2, 1920, Giurgola was introduced to architecture at a young age by his father, a practicing Beaux-arts architect. In a 1977 essay written about his initial discovery and appreciation of architecture, he wrote, *"My Rome was all pieces and fragments, beautiful that way. And nothing else could express its life, as I was coming to share that life, nothing else but architecture."*⁹ He received a traditional École des Beaux-arts education during his undergraduate studies at the Sapienza University of Rome before receiving a Fulbright scholarship to attend Columbia University for his Master's degree.

Following graduation in 1951, Giurgola briefly taught at Cornell University before beginning his tenure at the University of Pennsylvania in 1954, which served as the meeting grounds for himself alongside several inimitable architects and urban planners including (but not limited to) Louis Kahn, Robert Le Ricolais, Ian McHarg, Herbert Gans, and the other component members of my study, Robert Venturi and Denise Scott Brown. Compared to Venturi and Scott Brown, Giurgola's approach to design fell notably closer to that of Kahn in his ultimate adherence to expressing structural and material composition in order to "discover" a building's aesthetic form.¹⁰

The collaboration of Robert Venturi, born in Philadelphia on September 18, 1925, and Denise Scott Brown, born in Rhodesia (now Zambia) on October 3, 1931, blended the former's enthusiasm for studying context in architecture and interest in applying historicism in a novel, contemporary fashion, and the latter's studies of Pop art, Mannerism, and urbanism to engender a rupture in the progression of 20th century architecture. Their prolific firm which formed in the early 1960s, Venturi, Scott Brown and Associates (VSBA), is inseparable from numerous developments in architecture and corresponding interpretations of culture during this time. David Brownlee's retrospective essay in the accompanying book to the 2001 VSBA exhibition at the Philadelphia Museum of Art extensively described the innovative collaboration between the two designers and the far-reaching impacts of their efforts. Brownlee wrote, *"Venturi and Scott Brown's dual roles as cultural analysts and artists cannot easily be*

disentangled, nor can the separate contributions of the two artists be distilled. Their partnership has been as multidimensional and integrated as the challenges they have faced."¹¹

Venturi completed his Master's in 1950 at Princeton, which supplied him with a drastically different educational experience from that of Giurgola. *"Venturi's Princeton was notable for having resisted the modernizing trend in American architectural education,"*¹² contrasting that of notable institutions like Harvard and Columbia. Commenting on his time at Princeton, Venturi said, *"That's where I learned I was part of a historical evolution, where I learned about aesthetic and critical tolerance and the fragility of ideas; that today's rear guard can be tomorrow's avant-garde."*¹³ Venturi specifically credited his inclusivist approach towards historicism in architecture to the influence of Donald Drew Egbert's course on the History of Modern Architecture, which he took four times during his time at Princeton.¹⁴ According to Venturi, Modernist practitioners had by and large ignored the formidable influence of the Ecole des Beaux-Arts, but this was not the case with Egbert's teaching. In Venturi's tribute to his former professor, he wrote, *"Never doctrinaire, he was seldom in the mainstream... Egbert's openness had a later, gratifying affect on me."*¹⁵

Denise Scott Brown, born Denise Lakofski, completed her Master's in 1954 at the Architectural Association School in London, which was *"an exciting, unabashedly modernist place in the early 1950s, although its modernism was tempered by the humanity of the English town planning tradition and by a reviving interest in architectural history."*¹⁶ It was there that she was introduced to the "active socioplastics" espoused by Peter and Alison Smithson, as well as Mannerism and the development of an attentive eye towards popular culture. She and her former husband Robert Scott Brown began working at the University of Pennsylvania in 1958, where they found themselves a part of the land and city planning department *"in the middle between architects and planners, pulled and buffeted."*¹⁷

Venturi's famous 1966 publication *Complexity and Contradiction in Architecture* codified an attitude towards design which sought to revisit and employ elements and forms of historic precedents as part of a criticism directed towards the purity and functionalism engendered in the Modern movement. The 1972 publication of *Learning from Las Vegas* by Venturi, Scott Brown, and Steven Izenour, expanded on the analysis first explicated in Venturi's earlier publication but with a larger emphasis on popular culture and the relevance of vernacular forms in creating socially sensitive architecture.

The built works of Giurgola and Venturi differ in many regards, however, the language and aims in their distinct theoretical approaches often contained significant overlap. Both specifically defended an appreciation for "complexity" in architecture, and how this relates to a measure of

artistic merit. Venturi's famous 1966 publication *Nonstraightforward Architecture: A Gentle Manifesto* began:

I like complexity and contradiction in architecture. I do not like the incoherence or arbitrariness of incompetent architecture nor the precious intricacies of picturesqueness or expressionism. Instead, I speak of a complex and contradictory architecture based on the richness and ambiguity of modern experience, including that experience which is inherent in art.¹⁸

Over a decade later, Giurgola's article "The Aesthetic of Place" was published in *Process Architecture*, in which he stated:

Unlike the familiar image of unity of a machine, architecture retains the complexities of life, and is founded on them; it develops in a variety of episodes, situations, possible conditions. The relative juxtaposition of those structured elements (walls, surfaces, structures, windows) will convey a sense of the whole; harmonious, because it is related to a purpose; beautiful because it is a poetic manifestation of life. Thus, a building is a reasoned fragment, the sign of a presence; its aesthetic, a condition discovered, not a starting point.¹⁹

To understand the emphasis each architect/firm placed on "complexity" and the place for artistic manifestations in architecture, these excerpts should be viewed as resonant responses to the strict emphasis on purity and functionalism implicit in High Modernism. Venturi and Giurgola recognized the vocabularies employed by the previous generation of practitioners as having often been timid and overly simplistic, thus compelling each to engage a more encompassing design ideology to produce architecture imbued with contemporary meaning. M/G did not directly implicate ahistoricism like that seen in VSBA's projects, yet both have been associated at different times with the Post-Modern movement.²⁰ Despite this, both considered themselves a part of Modernism in the sense that they viewed their own work as a continuation of the architectural developments of the past century. These labels are often far too simplistic to convey the variegated movements which they represent, however for the purposes of tracing the developments in architecture after the Postwar period, they may generally suffice. To escape the confines of such groupings and illustrate the similarities and differences in their approaches, I have purported to draw a comparison between a project with similar programmatic requirements completed by each firm in the 1970s.

The two projects in question are M/G's University Museum Academic Wing at the University of Pennsylvania, completed in 1971, and VSBA's addition to Oberlin College's Allen Memorial Art

Museum, completed in 1977. Both firms were engaged to construct additions to the Tuscan Renaissance style museums which were originally constructed in the late 19th and early 20th centuries, respectively. Each new construction employed contrasting methodologies with the existing structures while remaining reverent to key elements such as the existing color palette, massing, and cornice heights. In both cases, it is clear that the architect's juxtaposition of the new with the old came about primarily from the given program and site determinants rather than stylistic predilections alone. Additionally, an important note in comparing the two buildings is the difference in degree of interference; M/G's work at the Penn Museum was an expansion which ultimately completed an unfinished project, whereas VSBA's engagement was to design an appropriate addition to a completed building, a challenge which Venturi likened to "*drawing a mustache on a Madonna.*"²¹

M/G's Museum Academic Wing in Philadelphia is a five-story addition to the existing Lombardy Renaissance museum of 1898. Prior to M/G's engagement, the existing building was only the first phase of an impressive vision (Figure 1) executed by architects Wilson Eyre, Jr., Walter Cope, Emlyn Stewardson, and Frank Miles Day. It had originally housed the university's Department of Archaeology and Paleontology. M/G's engagement for the Academic Wing included a partial renovation for the program of the existing structure in addition to new exhibit and storage facilities, teaching laboratories, seminar rooms and offices for faculty, a three-story library, the state-supported Education Section, and the Department of Anthropology (Figure 2).²² Regarding the design of the addition, Giurgola said:

*We had the choice of making an isolated new building. Or one which would completely blend with the old in some kind of cosmetized harmony. Or of making a building which would have its own presence within, stimulating encounter between the varied activities without undue interference between them.*²³



Figure 1: Wilson Eyre's drawing from 1911 of the projected (but never completed) full scope of the University Museum

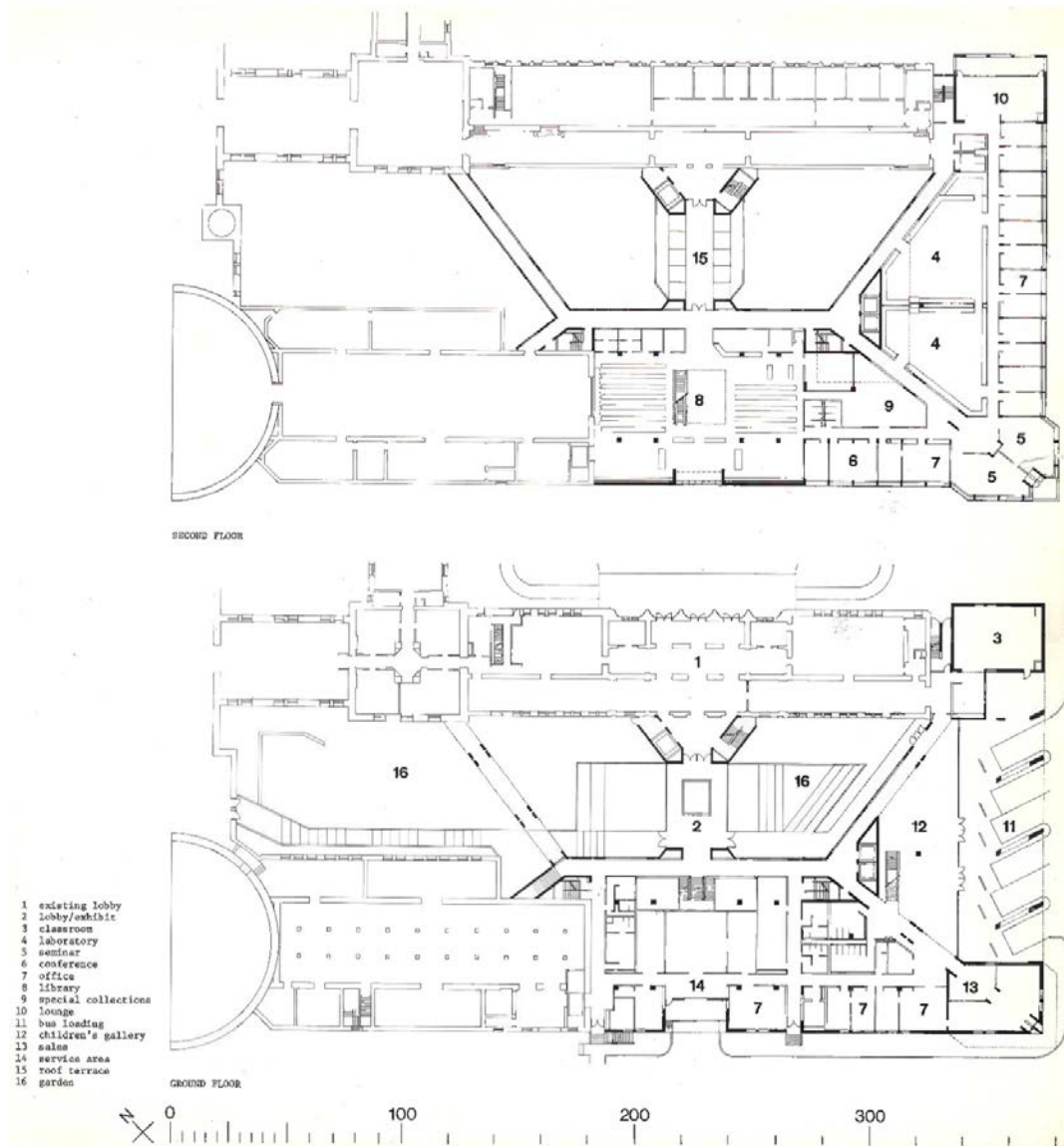


Figure 2: Plan for M/G's expansion wing at the Penn Museum is shown in the bold line weight.

The original museum's exterior consists of dark brick walls and pitched roofs topped with red tiles (Figure 3). Giurgola described the composition as "*Minute in window; strong in wall.*"²⁴ M/G's addition employed similar brick walls and tiled roofs on the outside, establishing what can be understood as a respectful dialogue of "cosmetized harmony" with the original museum (Figure 4). The unique presence alluded to in Giurgola's quote about the expansion's design is seen in the expansion's interior and central courtyards. Board-formed concrete and floor-to-ceiling windowpanes enclose the courtyard between the addition and the late 19th century museum (Figure 5). These courts are bisected by a diagonal bridge which connects the entrance of the existing museum with the new library (Figure 7), and by a separate

intermediary space which contains a foyer on the first floor, a restaurant on the second, and a small wooden garden/gathering space on the rooftop (Figure 6).



Figure 3: The main entrance and courtyard to the original University of Pennsylvania museum.



Figure 4: Exterior of the addition showing the connection with the original museum's rotunda in the rear.

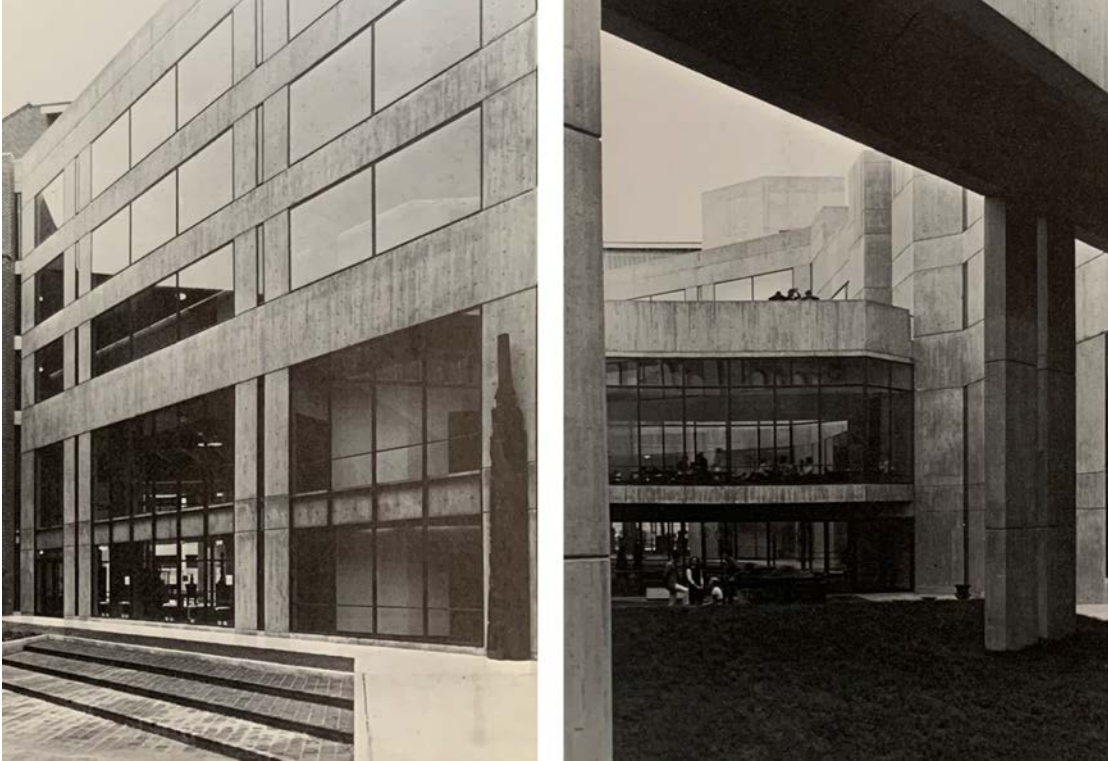


Figure 5 (left): One of the courtyard walls in M/G's Penn Museum Addition.
Figure 6 (right): View from beneath the elevated bridge of the foyer, restaurant, and rooftop which bisect the courtyards.



Figure 7: The diagonal bridge which spans the courtyard, connecting the old museum to the new addition.

The engagement of VSBA at Oberlin College's Allen Memorial Art Museum, similar to that of M/G's at the Penn Museum but at a significantly smaller scale, was also one of addition and renovation. According to Venturi, Cass Gilbert's original museum, completed in 1917 (Figure 8), is *"quite a literal adaptation of a Brunelleschi villa both as a whole and in its details."*²⁵ Venturi described the character of Gilbert's building as exhibiting aspects of "plain and fancy" architecture—a particular fascination and exploration for Venturi throughout his career²⁶—which in turn provided ample design impetus for designing an addition to be both complimentary and contrasting (Figure 9). Besides renovating the mechanical systems within the original museum and modifying the existing layout, the addition included a contemporary art gallery, conservation labs, shops, studios, study areas, and a 10,000 sq ft library (Figure 10).



Figure 8: Cass Gilbert's Allen Memorial Art Museum, completed 1917.



Figure 9: VSBA's addition at the Allen Memorial Art Museum



Figure 10: VSBA's plans for the Allen Memorial Art Museum addition

The two-story addition consists of two overlapping wings, each of which adapts the façade treatments of the buildings to which they are adjacent. The façade of the new gallery, abutting the shorter east face of Gilbert's original museum, employs a unique masonry pattern of pink granite and rose sandstone which are analogous to the colors present in the existing museum (Figure 11). Venturi described the color choices as complimentary *"but contrasting in overall pattern with the polychromatic but hierarchic panels and ordered bays of the old building... In relating these textures, colors, and patterns, we thought of a Medieval banner hanging from a Renaissance balcony during the Palio."* (Figure 12)²⁷ The rear building which houses the rest of the addition's program is a buff brick (Figure 13) which matches that of the adjacent Hall Auditorium, designed by architect Wallace Harrison in the early 1950s.²⁸

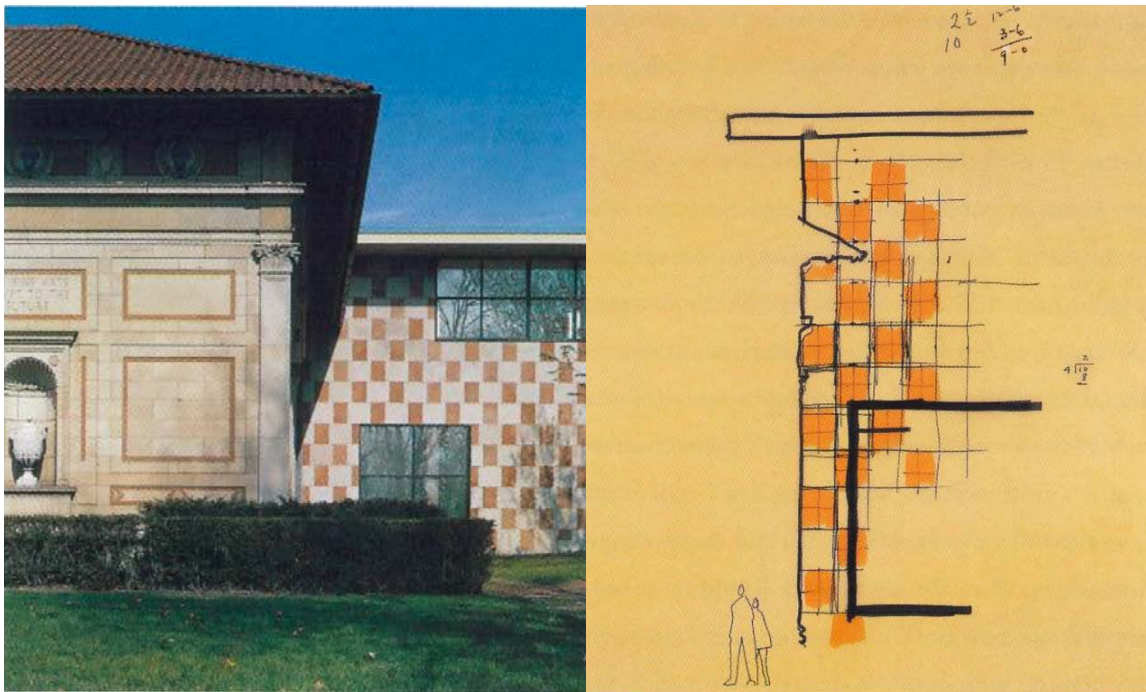


Figure 11 (left): Junction of Cass Gilbert's original Allen Memorial Art Museum and the addition by VSBA.

Figure 12 (right): Robert Venturi's preliminary elevation sketch of the checkerboard pattern employed on the museum addition.



Figure 13: The overlapping wings of the addition.

To draw comparisons between the museum additions and the design approaches implicit in each, I find it helpful to begin by refocusing on the common theoretical ground shared by both M/G and VSBA. Their pushback to the doctrine of High Modernism aligns quite well in the following passage from the influential Team 10 Primer, initially published in 1962:

Each period requires a constituent language—an instrument with which to tackle the human problems posed by the period, as well as those which, from period to period, remain the same, i.e. those posed by man—by all of us as primordial beings. The time has come to gather the old into the new; to rediscover the archaic qualities of human nature, I mean the timeless ones.²⁹

That both M/G and VSBA subscribed to this notion of crafting an appropriate “constituent language” to create meaningful, contemporary architecture is evident in each of their explications regarding artistic merit and the value of complexity in architecture. Their divergence occurs in the way in which each approached the articulation and definition of this “language”.

M/G’s approach aligned closer to that expressed further in the Team 10 Primer, in which they stated, “Architecture implies a constant rediscovery of constant human qualities translated in space.”³⁰ The emphasis on “constant human qualities” was a preoccupation in Giurgola’s work.³¹ For him, this “rediscovery” of constants materialized as an exploration into the “durable values which derive from stylistic understatement and precise formulation of the equations which govern the relationship between functional and visual elements”, along with a “thoughtful definition of the role [his] works will play in the social and architectural environment of which

*they are a part.*³² At the Penn Museum Academic Wing, these values are evident in the visual clarity and orientation in the form, which was above all intended to organize circulation. Shortly after the museum opened to the public, former editor-in-chief of the *Architectural Forum* William Marlin wrote:

*There is now an easy rubbing of elbows, functions, and space [at the Penn Museum]. The venerable old pile is better used and appreciated precisely because of Mitchell/Giurgola's sensitive treatment. Perhaps architecture is attained when basic needs are so thoroughly met, as they are here, that a building goes beyond what is merely necessary and makes it possible to reflect on deeper needs after the obvious ones have been taken care of.*³³

This commentary refers to how the addition's visual contrast employed at the junction of old and new clarified and distinguished the function and circulation of the museum at a large scale. At a smaller scale, this sensitive treatment can be seen in the detail-oriented cognizance of the tactile proportions which were carried between the old and new. The reliefs in the board-formed concrete of the addition were left by unusually small planks—perhaps complimentary in scale to the width of the original museum's bricks. This continuation of the preexisting tactile scale established a subtle association between the new and old without engaging in what Giurgola would have considered superfluous ornament (Figure 14). In a paper published nearly a decade before the opening of M/G's Penn Museum Academic Wing, Giurgola wrote, "*The aesthetic form is not the bypassing of the utilitarian function but the acquisition of an aesthetic value by that same function. Not art at service of function, but function that must be sublimated in expressive form.*"³⁴ For Giurgola, the rapport of parts alone—individual building elements—can communicate poetic and eternal values of humanity in architecture.³⁵



Figure 14: Detail showing the junction of M/G's addition to the original Penn Museum's bricks.

VSBA's approach to this notion of a contemporary, "constituent language" greatly differed from Giurgola's in that it was centered on an embrace of the commonplace in a "Dadaist found-object" aestheticization.³⁶ VSBA Brown broke from the adherence to structural expressionism embodied in the work of Kahn, Giurgola, and the "New Brutalists" of Europe with their studies of "Pop art and the pop environment."³⁷ This appreciation led them to "*reassess the role of symbolism and allusion in architecture and the uses of traditional forms, decorations, and pattern in design.*"³⁸

The wrapping of the rectilinear form of the Allen Memorial Addition with this decorative façade treatment displays Venturi's predilection for "*plain architecture with a fancy appliqué.*"³⁹ but further, the fabricated checkerboard pattern addition demonstrates an approach towards applying contrast to construct balance which was often employed in the firm's work. VSBA employed direct critiques of Modernist dogma in their designs through applied ornament, the blending of regional American and historic styles, and the experimentation with aspects of commercialism. This "*reassessment of symbolism*" can be understood as an attempt to subvert the strictures associated with decoration and the notions of relative piety commonly associated with architecture of the Modern period. In a 1965 interview, Venturi said, "*You can use the commonplace in a certain way so it isn't commonplace - standardization with an irrationality that is rational because it accommodates itself to the contradictions of a complex reality.*"⁴⁰ Such is the case with the checkerboard façade at the Oberlin Museum, in which "*the architects settled on a not-quite-square and not-quite-aligned*" arrangement, so that the resultant pattern

was “proportioned in such a way that it met certain key points of the earlier building’s detailing (at the cornice and water table) and then studiously failed to match at other locations, preserving the necessary distinction of the new.”⁴¹

Besides acknowledging the “high Art with a capital ‘A’”⁴² of Cass Gilbert’s original museum through the façade treatment, the reverence at the Oberlin addition is also implicit in its celebration of and dialogue with the surrounding midwestern vernacular. The comically exaggerated Ionic column seen at the cropped corner of the new gallery (Figure 15) was not inspired by the renaissance features of Gilbert’s original museum but was rather a nod to the columns on the porches of the homes across from Oberlin’s campus.⁴³ Evident here is Venturi and Scott Brown’s design methodology in which a site’s contextual information is taken together, as is, to discover unity through the seemingly incongruous aspects of modernity.



Figure 15: The Ionic column at the Allen Memorial Art Museum’s addition.

As far as delivering models of tact and composed sensitivity in expanding on beloved, historic institutions, M/G and VSBA’s engagements were celebrated by their respective universities. M/G’s addition at the Penn Museum delivered a politic scheme to complete the grandiose precedent in Philadelphia just as VSBA’s addition at Oberlin delivered a witty yet sensitive expansion for the beloved, lavishly ornamented Allen Memorial Art Museum. In acknowledging

the ideological differences in each architect's approach, two distinct—yet not wholly indifferent—design approaches were charted out of the insipidity of Modernism.

In both M/G and VSBA's built works and writings, we are reminded that, at its core, architecture is spatial intentionality. For much of architectural history, these intentions were various and encompassed aesthetic, spiritual, social, human, and even transcendental concerns. One of the defining features of Modernism had been to by and large reduce these intentions to utility, or functionality, above all; if it did not disregard these intentions, it at least sublimated them beneath functionality. The crisis which was the proliferation of Modernist ideals was one where much of the architectural climate was ruled by this single intention alone, and thus, the poetic and perhaps more humane concerns of humanity were disregarded in the name of universality.

M/G and VSBA's works during this time represented different negotiations of reimbuing architecture with such varied intentions through an inclusivist approach. For M/G, this manifested as viewing architecture as inherently mutable and contingent on its physical and cultural contexts, as explicated in Giurgola's notion of the "*partial vision*"⁴⁴. His firm's work stressed an integrity in elucidating a building's use and purpose in place of pursuing stylistic decoration and overt ornamentation. Their approach was not purely rationalistic, nor wholistic, nor technological, but rather something variegated and unique to each project and site. This approach can be seen in Giurgola's expressed view that "*buildings cannot have well-defined and articulated beginnings or ends,*" and that they are necessarily "*part of a continuum of larger social, political, cultural and physical contexts beyond the range of perception.*"⁴⁵

VSBA's inclusivism also materialized a notion of cohesion and contextual sensibilities in their work, however theirs was infused with the explicit pluralism of contemporary culture. Scott Brown summarized a vital aspect of their design research regarding pop art and pop culture in writing: "*looking to pop culture is to find formal vocabularies for today which are more relevant to people's diverse needs and [is] more tolerant of the untidinesses of urban life than the "rationalist," Cartesian formal orders of latter-day Modern architecture.*"⁴⁶ Their revision to Modernism charted an enthusiastic embrace of the existing which would not adhere to the formalities of the prior generation's self-proclaimed modesty.

In the approaches explicated by both, the inherently complex relationship between building and environment is stressed as an imperative precursor to developing meaningful architecture. Describing their work at Oberlin, Venturi wrote "*Diverse elements provide context and enhancement for each other.*"⁴⁷ That this sentiment was shared in the work of M/G is evident as well. Between the overt ornamentation of VSBA and the level of enhanced, fragmented

subtleties certainly indebted to (yet divergent from) puritanical Modernism in the works of M/G, varied experiential qualities in architecture were recaptured through a balanced focus on discovery and manufacture.

Notes

- ¹ Adorno, Theodor trans. Newman, Jane and Smith, John. "Functionalism Today." *Oppositions*, Summer 1979. 41
- ² Hitchcock, Henry-Russell. *Architecture: Nineteenth and Twentieth Centuries*. Penguin Books, 1958. 379
- ³ Hitchcock. *Architecture*. 412
- ⁴ Frampton, Kenneth. *Modern Architecture: A Critical History*. 4th ed. New York, NY: Thames & Hudson, 2007. 314
- ⁵ Frampton. *Modern Architecture*. 314-327
- ⁶ Explorations of the established relationships between the different designers in the Philadelphia School has been thoroughly explored in numerous publications. One such recent study is John Lobell's "The Philadelphia School and the Future of Architecture".
- ⁷ Jan C. Rowan. "Wanting To Be The Philadelphia School." *Progressive Architecture*, April 1961.
- ⁸ Thomas R. Vreeland, Jr. *Process Architecture*. 2. Tokyo: Process Architecture Publishing, 1977. 258
- ⁹ Romaldo Giurgola. "The Impetus To Build." *The Christian Science Monitor*, April 21, 1977. 25
- ¹⁰ Romaldo Giurgola. "The Aesthetic of Place". *Process Architecture*. 2. Tokyo: Process Architecture Publishing, 1977.
- ¹¹ Brownlee, David B. "Form and Content." In *Out of the Ordinary: Robert Venturi Denise Scott Brown and Associates*. Philadelphia Museum of Art in association with Yale University Press, 2001. 3
- ¹² Brownlee. "Form and Content." 8
- ¹³ Venturi, Robert. "Learning the Right Lessons from the Beaux-Arts." In *A View from the Campidoglio: Selected Essays 1953-1984*, First. New York, NY: Harper & Row, 1984.
- ¹⁴ Venturi, Robert. "Tribute." In *The Beaux-Arts Tradition in French Architecture*. Princeton University Press, 1980. xiii
- ¹⁵ Venturi. "Tribute." xiv
- ¹⁶ Brownlee. "Form and Content." 5
- ¹⁷ Scott Brown, Denise. "A Worm's Eye View of Recent Architectural History," *Architectural Record*, February 1984. Pp. 69-81. 75
- ¹⁸ Robert Venturi. *Complexity and Contradiction in Architecture*. New York, NY: The Museum of Modern Art, 1966.
- ¹⁹ Romaldo Giurgola. "The Aesthetic of Place". *Process Architecture*. 2. Tokyo: Process Architecture Publishing, 1977.
- ²⁰ Frampton. *Modern Architecture*. 308
- ²¹ Venturi, Robert. "Plain and Fancy Architecture by Cass Gilbert and the Addition to the Allen Memorial Art Museum by Venturi and Rauch, at Oberlin." In *A View from the Campidoglio: Selected Essays 1953-1984*, 48-58. New York, NY: Harper & Row, 1984. 51
- ²² Giurgola, Romaldo in "Excavating the Present: A Museum of Anthropology Builds Its Missing Link." By Marlin, William. *The Architectural Forum*, March 1972. 41
- ²³ Marlin. "Excavating the Present." 42
- ²⁴ Marlin. "Excavating the Present." 42
- ²⁵ Venturi. "Plain and Fancy and Oberlin". 49
- ²⁶ Venturi. "Plain and Fancy and Oberlin". 48-58
- ²⁷ Venturi. "Plain and Fancy and Oberlin". 56
- ²⁸ Oberlin College Library. "Hall Auditorium." *Oberlin College Archives* (blog). Accessed December 12, 2023. https://www.oberlinlibstaff.com/omeka_oca/items/show/82.
- ²⁹ Team 10, ed. Alison Smithson. *Team 10 Primer*. MIT Press, 1974. 20
- ³⁰ Team 10. Smithson. 20
- ³¹ Giurgola, Romaldo. *Architectural Constants*, 1984. <https://www.pidgeondigital.com/talks/architectural-constants/chapters/>.

-
- ³² Stanton, Phoebe B. "Works of Mitchell/Giurgola Architects." In *Process Architecture*, 153–60. 2. Tokyo: Process Architecture Publishing, 1977. 153
- ³³ Marlin. "Excavating the Present."
- ³⁴ Romaldo Giurgola. "Architecture in Change." *Journal of Architectural Education* 17, no. 2 (November 1962): 104–6.
- ³⁵ Romaldo Giurgola. "Notes on Buildings and Their Parts." *The Harvard Architecture Review*, January 1979, 172–75.
- ³⁶ Denise Scott Brown. "Learning from Brutalism." In *The Independent Group: Britain and the Aesthetics of Plenty*, ed. David Robbins, 203–6. MIT Press, 1990.
- ³⁷ Scott Brown. "Learning from Brutalism."
- ³⁸ Scott Brown. "Learning from Brutalism."
- ³⁹ Venturi. "Plain and Fancy and Oberlin". 58
- ⁴⁰ Robert Venturi. "Six Philadelphia Architects." *Arts and Architecture*, April 1965.
- ⁴¹ Brownlee. "Form and Content." 60
- ⁴² Venturi. "Plain and Fancy and Oberlin". 50
- ⁴³ Brownlee. "Form and Content." 62
- ⁴⁴ Romaldo Giurgola. "Reflections on Buildings and the City: The Realism of Partial Vision." *Perspecta*, 1965.
- ⁴⁵ David Bell. "Unity and Aesthetics of Incompletion in Architecture." *Architectural Design*, July 1979. 179
- ⁴⁶ Scott Brown, Denise. "Learning From Pop." *Casabella*, December 1971.
- ⁴⁷ Venturi. "Plain and Fancy and Oberlin". 50