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## **Art & Architecture Building, Yale University**

### **Architect: Paul Rudolph**

by Vincent Scully

*published in: Architectural Review, May 1964*

This furiously ambitious building is the first of its architect's full maturity. It is surely the most historically significant of the many buildings constructed at Yale since Louis I. Kahn's Art Gallery of 1951–58, and it demands and rewards extended critical attention. Though completed only barely in time for its dedication on November 9, 1963, it has already attracted extravagant dislike and no less fulsome admiration. The hysterical twittering of the ninety-four painters who are caged in what can only be regarded as its entablature, and the heavier, troglodytic resentments of the seventeen sculptors who have been driven down into its second basement, are more than matched by the euphoric beatitude of the one hundred and seventy-three architects and planners who, under the white-painted eyes of Minerva, are now expanding grandly through its airy middle floors.

It might be argued that such distribution of space is iconographically appropriate for the various arts involved: sculpture primitive and fundamental as old bones and so lodged in a cavern, painting occupying the traditional garret and roof-terrace (*les toits de Paris*) with a fine view across the stone-, land-, and seascape that New Haven is, architecture engaged in its usual mass operation in the middle of the road. True enough, the functional requirements involved might have suggested other spatial solutions. The painters insist, perhaps rather unreasonably, that they have not enough usable volume for their present numbers and will not have enough when they take over the area now assigned to city-planning offices on the sixth floor. In most of their area the ceilings are too low for proper lighting from above. Everywhere the building tends to elbow in at the corners of their vision, coming insistently between their canvases and them.

Down below, the sculptors have a restricted volume of air in which to set solid forms. Their ceilings are generally too low. A few feet under the floor lies water. The building could dig no deeper, and, for urbanistic reasons best considered later, Rudolph decided it should go no higher. The sculptors feel that the three ingenious monitors which rise another full floor-height from their level are not themselves wide enough to do other than to admit light and to emphasize the oppressive horizontality of most of the space. They do afford staggering views up the sides of the building, however, and there may in fact be more spatial release in them than has yet been appreciated. The sculptors have also been given a small but high studio once intended for Graphics. That department is housed in the first basement and has a better distribution of areas for its twenty-eight students, although the ceilings are still inordinately restrictive.

Wrapped in the centre of the two basements, a large, double-height lecture room is entombed. Its atmosphere, despite excellent ventilation, still seems as oppressively close as that in Khufu's chamber. It is called Hastings Hall, and was named after Helen and Thomas Hastings, of the architectural firm of Carrère and Hastings, whose heirs contributed the money for it. The name, which euphonicly calls up The Rover Boys at Princeton or something innocently ivy-clad of the sort, is spectacularly inappropriate for this terrifying room. A fine painted cloth by DeKooning cloaks the ductwork behind the speaker, and two Greek Revival Ionic capitals are flourished like severed heads on tall thin pikes before it.

Another level up (that is, at ground floor level), the Art Library occupies an entire floor and has one of the most successful spaces in the building: well lighted, expansive where it needs to be, offering a multitude of vistas that continue outward toward the street and the courts, and upward through the building and toward the sky. It also has a small mezzanine, more or less at the level of the vast exhibition and jury space which, glass-walled to the library, occupies most of the first floor. That is to say, the library is at grade and is reached by a tiny door and narrow corridor off the main entrance stair on York Street. That stair lifts grandly, though hastily designed (visually, not pedally, one guesses) with low, deeply undercut risers that can trap the feet. It is open to the sky between the towering, overhanging cliffs that rise on both sides of it: the body of the building to the left, the major stair and elevator tower to the right. Ahead, the landing at first floor level is not enclosed, so that an exhilarating wind whistles through it and up as well. Here a metal construction by Josef Albers is flattened against the wall like, as one student put it, an aeroplane which has crashed into the building.

This is the most dramatic entrance in the United States of America, bar none. It does not lead anywhere in particular, however, so tentatively pluralistic are the choices it offers. That is to say, movement from it to the left brings one rather decisively into the exhibition area, movement right merely to the stairs and elevators that serve the other floors. Circulation is thus split, although there is another stair tower, serving all levels, whose landings pop in and out at the far corner of the building. The exhibition and jury floor with its mezzanine of offices may seem rather lavish in conception in comparison with some of the accommodation described below. It functions splendidly, however, serving all disciplines well, and a spacious student lounge and a lovely small classroom, tucked into the south-east column-cluster, open off it. Originally its space was to have been extended vertically in two slots of skylight through the height of the building, but this was prevented by the newer provisions of the building code relative to fire.

These provisions are beginning to affect American architecture noticeably, and generally for the bad. Open stairways are forbidden in public buildings, for example. Unlike Philip Johnson, who rather disastrously compromised between conception and code in the stairway for his Geology Building at Yale, Rudolph made a positive virtue of the enclosed stair. It sneaks around through the tower, secret and labyrinthine, its landings opening upon unexpected heights and chasms. The University's collections of plaster casts, long abandoned in various basements, reappear here, as elsewhere throughout the building. Fragments of the Parthenon frieze, sprayed white and spotlighted, slide vertically down a three-story well, sending some of the faculty mad with rage. Finally, above the architects' cathedral and the painters' attic (*la vie de Bohème*), a dizzy guest suite high in space

climaxes the tower; a wide view opens from its gusty terrace and from the sheltered roofscape behind it.

“East” and “West” Rocks rise to the north; most of Yale spreads out in that direction. South-eastward the harbor can be seen with the wind on it; the Connecticut Throughway curves along its shore. Closer on that bearing the city is rent by the Oak Street Redevelopment Area — at present, God help us, a sea of parked automobiles winking in the sun. More directly eastward and close below, Chapel Street leads toward New Haven’s splendid Green; along it are placed the other buildings which serve Yale’s elaborate program of teaching for the visual arts. First, across York Street, stands Kahn’s Art Gallery. Rudolph’s structure now looms above it. Seen together, the former has a taciturn air, the latter a somewhat gesticulatory one. This occurs, I think, because the closed box of the one is visually contained within the open gesture of the other. They complement each other exactly and, in my opinion, so constitute a triumph of urbanistic design. Westward is Egerton Swartout’s Old Art Gallery, of 1926–28. This flatulent if heroically scaled exercise in semi-pseudish Romanesque still serves its original function, but is also riddled with art historians, who manfully hold its bridge across High Street and now Street Hall as well. That sharp little prism of Victorian Gothic form was designed by Peter Wight in 1864, replacing the original Trumbull Gallery, of 1832.

Painters and sculptors occupied Street Hall until the recent move, and it should in all fairness be said that they never seemed overly fond of its accommodations either. Thus, when in 1958 it was decided to construct a new building to house all the arts together, Street Hall was to have been demolished to make way for it. Rudolph, who had become chairman of the Department of Architecture in 1957, produced a few tentative designs for that site before wiser counsels, his own among them, decided to spare Street Hall and, finally, to remodel it for the art historians.

Before having undertaken any of those studies, Rudolph had suggested either Kahn or Le Corbusier as the architect for the new building. It is perhaps understandable, though hardly heroic, that Le Corbusier’s name should have been rejected by University authorities as that of an architect too far from the scene, but the University’s failure to date to re-employ Kahn is surely one of its special minor shames, especially in view of the quantity of construction, little of it anywhere near Kahn’s mark, that Yale has undertaken since that architect began it all in 1951. The rejections, however, were hardly Rudolph’s fault or, in fact, his responsibility. Indeed, his own building shows the influences of his first two choices for it, since it echoes at once Kahn’s towers and Le Corbusier’s active sculptural force. The exterior of the very first project for York Street is most specific, reminding us at once of Rudolph’s second High School for Sarasota, of Chandigarh’s piers, and of one of Kahn’s early perspectives for the Medical Laboratories at the University of Pennsylvania.

At the same time, Rudolph’s increasingly complex interlocking of spatial volumes throughout all his [earlier] projects for the Art and Architecture Building specifically recalls the neo-plastic experiments of the ’teens and early twenties. His other work also shows that he had been interested in these for some time. Here, however, a *brio* decidedly like that of Lissitsky is felt. Lastly, a more fluid sweep from part to part in the final project recalls Frank Lloyd Wright as well, especially the early Wright of the Larkin building (though now the vertical continuity is unhappily foiled by the fire laws), four piers rising in the centre, trays of space slung horizontally around them, circulation gathered in

towers at the corners. In this relationship to the early work of Wright one is, of course, again reminded of a similar stage in Kahn's career.

Into the basic conception Rudolph introduced a curious duality entirely his own. He felt that the Art and Architecture building, since it stood at an intersection of streets, should turn the corner in a spiraling or, more accurately, pinwheeling movement; he therefore turned his four central piers broadside to each other with the beams attached to their sides instead of supported upon them. The latter feature, structurally indirect though it is, he retained throughout all the many phases of the design, but he now says that he would not do so again. The pinwheeling or the piers was soon abandoned for good, while in the second version piers as such were eliminated entirely, so that the interior walls, acting as space definers, would be the structural elements as well. Soon, however, the piers returned, each at first split into four components, but eventually re-combined into oblong hollow masses containing utilities. The levels they supported now began to multiply according to the pinwheel principle. Rudolph stated his intentions clearly enough in the *Architectural Record* for April, 1962: "Once having adopted the pinwheel scheme, the architectural problem became one of articulating it in three dimensions. A structure was adopted which allowed each leg of the pinwheel to be at a different height, giving a kind of overlapping and interpenetrating series of platforms. These have been manipulated to vary the spaces in an intricate way which grows out of the use of the building."

Each "leg" thus became a long, low, comparatively narrow tray of space. If such a tray opened upon one of the high central voids all worked well enough in terms of spatial volume. The ground, first, second, third, fourth and fifth floors all did so in one way or another, but the basements and the fifth and sixth floors — the painters floors' — were cut off enough from the open centre to make the rigidly compressed horizontality of the each tray both spatially depressing and awkwardly dimensioned for subdivision.

All these arrangements began to be permanently fixed as the external massing of the building was further studied both as an expression of its internal structural and spatial organization and as an object in urban space. In Rudolph's view, requirements relative to the latter severely limited its height. This was finally set, arbitrarily enough, but probably correctly, as equal to that of the tower of Bingham Hall, far down by the Green at the corner of Chapel and College Streets. The heights of all floors were frozen at a minimum level in order to keep to the restriction, and this limitation was aggravated by the fact that the Art Library, sometimes in and sometimes out of the program, was finally frozen in, and an entire floor had to be given over to it. Rudolph was especially concerned about the scale of the building in relation to Kahn's Art Gallery, and he had this to say: "... the scale ... is purposely reduced by the cluster of forms at each corner, breaking down the total appearance of volume. The irregularity in plan permits the vertical to be emphasized. The horizontal demarcation of each floor in the new structure restates the horizontal layers in Kahn's Art Gallery on the opposite side of York Street."

The whole complex now began to integrate along these lines. Vertical towers visually supported horizontal slabs to create interwoven spatial volumes. The high central spaces were externally revealed on the east side, giving the building a kind of expansive breadth which intensified, by

contrast, the obsessive interlocking of the narrow horizontals. Between the girders, the glazing, innocent of integral sun-protection, never became more than an extraneous element in the design as a whole, which persistently demanded to be read in terms of its solids — as, that is, bridges spanning between towers. Hence the necessary stiffening mullions have remained visually disturbing, since, though quite large and obtrusive, they are clearly not involved in the intricate rationale which binds the other forms.

Finally, the major stair tower at the north-east corner succeeded in shaking itself loose from the rest of the building in order to become a stationary principal in a dance: standing clear of but supporting the elaborate gyrations of its partner. The great precipice of its north side was left pierced by a window at each elevator-landing to allow the eventual expansion of the building in that direction, so far blocked by recalcitrant landlords. Indeed, even the most minor of programs carried out there could easily solve the spatial problems of the painters and sculptors. Those problems had, of course, now passed the point of no return so far as the sequence of design was concerned. The sculptors had to be pushed down to keep to the restriction in height, while the painters' upper levels now clearly came to be regarded as plastic terminations for the building — as, in fact, massive horizontal solids, like great beams, which the towers visually carried and with which the terminal interlockings were made. (The tower lifting the high volume strongly recalls Le Corbusier's pier-lift of horizontal cells at La Tourette. Rudolph clearly likes the effect and is using it further in his vast Service Centre for Boston.) Fenestration was confined to a narrow horizontal slot, and a structural but decoratively conceived semi-triglyph-and-metope feature was developed in order to punctuate it. The timber-like quality at that final level superficially recalls Tange's detailing in concrete.

Here one comes to the fundamental problem of Rudolph's handling of that material. He had determined from the beginning to use nothing but concrete in the building. And in fact — with the exception of a foam-colored acoustic ceiling, dark brown-painted metal guard rails, some cargo nets, a few white cabinets and partitions and a blaring orange carpet — the building is entirely of sand-colored concrete outside and in. Rudolph had also hoped that his *béton* should be everywhere severely *brut*, but felt, as had Wright before him, both that concrete weathered badly in the American climate and that it was, as normally handled, inadequately expressive of its crushed-stone aggregate. (Wright's round-pebbled, brown concrete in Unity Temple comes to mind.)

Rudolph, therefore, tested various kinds of forms and finally designed a ribbed type with bevelled, trapezoidal battens which brought the aggregate pushing forward in vertical ridges. The effect was brittle and indecisive, however, until he hit upon the device of bashing the formed surface with a hammer, so "pre-weathering" it and bringing the aggregate out. This method, which proved to be quick and inexpensive (the building came in at \$26 a square foot overall) and is now being used in other buildings, gave him exactly the kind of vertically continuous surfaces he wanted; by emphasizing the joints of the pours he inscribed the horizontal structural components upon it. Naturally enough, the linear striations were entirely in accord with his drafting technique. They also reduced the apparent weight of the mass as a whole, so making it more civil in town than untreated concrete normally does; though that effect here is obviously purely visual, not tactile.

The original intention, as perspectives right up into early stages of construction show, was to surface all the beams and slabs in the same way, and one or two so finished can be found far down in the depths of the building. The visual illogicality of the system for horizontal elements was soon apparent, however, so that all the rest of the beams were finally left naturally *brut*. They thus furnished a welcome expression of structural articulation to the interwoven solids. The concrete was also formed naturally in the stair-wells and in some of the other more restricted spaces — for the excellent reason that the slotted and bashed surface is one of the most inhospitable, indeed physically dangerous, ever devised by man. Brushing against it can induce injuries roughly comparable, one supposes, to those suffered in keel-hauling. The building thus repels touch; it hurts you if you try. The sense is of bitter pride, acrid acerbity rising perhaps to a kind of tragic gloom, since the light falls across the gashed ridges in long dusky veils, all brightness eaten by the broken surfaces, no reflections possible, instead sombre absorption everywhere. Artificial lighting itself presents a special problem under these conditions. This is best seen in the exhibition area; spots of brilliance must hit the eye — that is the lighting system anyway, divisive and space-cutting — since nothing can suffuse or glow across a plane.

Contrast should be made with Le Corbusier's handling of the problem, where the placement of the planks in the forms imparts to the concrete a surface which expresses the loving care with which it was received in the pour. One might say that it was cradled there; here, despite an even higher level of structural detailing, it is squeezed and splintered. One is reminded of some of the general comments made by John McCoubrey relative to a traditional lack of love for the medium itself on the part of American painters in contrast to those of Europe. Paradoxically enough, craftsmanship, however high in fact, is persistently underplayed in effect for other values, generally those of an impatiently expressive intensity; so here, where the surface rushes up, stretching thicker and thinner, devouring light, dripping and scratching off like the heart-stopping broad strokes of Franz Kline.

It is here perhaps most of all that Rudolph moves into the fullness of his generation and the most characteristically American development of his powers. Behind his work lies humanistic European precedent in Le Corbusier (his heart's rival), a reviving native tradition in Wright (the grandfather safely gone), and the challenge of that special generation which is represented by Kahn alone. But through it all his own insistent will holds sway, and most earnestly so. Thus Le Corbusier's buildings at their best give the impression of having taken shape according to a passionate force integral to themselves, Kahn's as if in response to some solemn law, Rudolph's according to their architect's embattled command.

Perhaps the difference in age plays a part in this. The total integrity of effort is surely there, as is a most marvelous visual control inside and out. This puts Rudolph among a sparse handful of contemporary architects who can combat the present tendency toward sterile packaging and decorative classicism precisely because they are capable of grappling with complicated and richly articulated structures, spaces, masses and details. The functional and formal situation is, therefore, always three-dimensionally fluid in Rudolph's hands; he is in search of an architecture which is whole. One can hardly doubt, comparing his building with some others recently completed at Yale, as elsewhere, that his method is in the end more right than wrong, that he is on the side of life. But there is still some strain in execution no less than conception. Hence the building comes stamping aggressively

out of the pavement, its high corner tower rearing violently up exactly on the axis of Chapel Street's northern sidewalk, so dominating all movement from the Green and, in fact, climaxing the sequence of shapes of the older art buildings ideally and with absolute authority. Around it the structure proliferates with its infinity of levels, as complicated as any human soul, as dark and tortuous in some places, as surprisingly generous in many others, lighted from unexpected sources, a never ending wonder to explore. (My colleague, George Hersey, is reminded of Soane's own house despite the difference in size.)

Whoever uses the building is caught up in that human complexity — in the curiously intimate scale of personal drama — in that insatiable will and unappeasable anxiety. This is, one imagines, the larger reason why the painters and sculptors hate it so, who wish to be caught up only in their own. Into every intersection the abundant energy reaches, the power and the unease. One senses the fast-drawing pencil with its compulsively neat, parallel linear shadings, which studied each nook and cranny time after time, proliferating forms, breaking them down, recombining. Total integration is the intention — of interior and exterior, of all floors, which cease to exist as such — total integration and the constant action of surfaces. So throughout the whole fabric the process of analysis is felt; areas break in the end into microcosmic cells, like, for example, the serried army of compartmented drafting tables which now jostle each other in the architects' grand hall.

The competitive creation of forms: this is clearly what the building is about. This process is its obsession; through it its program, protean and elusive, is fulfilled. So everywhere the casts appear, trophies of creative acts long gone, scalps and challenges. So, too, most appropriately, the building now holds a few of Sullivan's bronze panels and wrought-iron screens from his Stock Exchange Building, and plaster casts of his swirling, interwoven ornament from the Schiller. How full and calm, how humanely kind even, these now seem to be when they are seen in their new setting here. How raw and violent it is — that is, we are — how resourceful, determined, and uneven in strength: all this so truly, openly, with so much talent, I think bravely, stated here.

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