Drawing on Walls: Louis Kahn’s Murals

After returning from Rome in 1951, Louis Kahn completed a mural in the Weiss House with Anne Tyng. Although the only other mural that Kahn actually completed was for the Trenton Bath House, Kahn proposed several in the 1940s and 1950s. Known as an architect of constructed and unadorned walls, the impulse to decorate in this way seems foreign to his sensibility. What compelled these proposals, and why was the practice abandoned? An answer to these questions involves a consideration of Kahn’s evolving understanding of drawing and his relationship to his contemporaries in architecture and painting.

Kahn, we know, began his studies as an artist; drawing came naturally to him. William F. Gray, one of his high school teachers, introduced him to architecture at a time when drawing was the primary means for studying architecture. A work of architecture emerged first on the page, often as a palimpsest, as successive attempts to define form and space collapsed into layers of graphite on translucent trace. The act of observation is also a creative act, if of a different sort. Unlike Mies or Wright, who did not leave behind travel sketches or paintings, Kahn, and his most significant model Corbusier, did. Also like Corb, Kahn considered himself to be a painter, even if his differences in this regard are more revealing than his similarities. While Corbusier’s paintings and murals remained an open process for exploring issues of form and color, we will see that Kahn’s interest in these media waned as he came to realize that drawing might translate into building.

We also know that Kahn was familiar early in his career with the work of the European modernists, particularly through his associations with George Howe and Oscar Stonorov. From the 1920’s through the 1950’s, Kahn sought to make modernism a language his own rather than following the doctrinaire assertions of others.

European modernism, as interpreted by Philip Johnson and Henry Russell Hitchcock in their 1932 Museum of Modern Art exhibition, was codified as the International Style: “first, a new conception of architecture as volume rather than mass. Secondly, regularity rather than axial symmetry serves as the chief means of ordering design. These two principles, with a third proscribing arbitrary applied decoration, mark the dictums of the international style.” Kahn famously challenged the first two dictums of the International style – volume versus mass and regularity versus symmetry – in the Trenton Bath House. Was the mural he painted there an acceptance or a rejection of the third dictum? The answer resides in the questions of arbitrariness and decoration, and whether the mural is either.

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3 The words “drawing” and “painting” need always to be qualified; either can be used as an open-ended exploration or a documentary technique. The open-endedness is the key in the context of this paper; though the two completed Kahn murals were executed in paint, I am thinking of them as drawings in the sense that they were done quickly.

Here, too, Corbusier was an invaluable reference for Kahn. As late as 1972, Kahn would declare, “Every man has . . . a figure in his work who he feels answerable to. I often say to myself, ‘How’m I doing, Corbusier?’” If Corbusier ever felt bound by any of the International Style’s conventions, it was certainly not by proscription against applied decoration. Applied ornament had been integral to his youthful architecture in La Chaux de Fonds, and even his “white” phase of the 1920s and 30s was to a great degree polychromatic, with early murals (for the Pavillons Suisse, Esprit Nouveau, Le Temps Nouveaux, Nestlé, wallpaper for Salabra and famously at Villa E. 1027, the home of Jean Badovici and its designer, Eileen Gray) setting the scene for a synthesis of art and architecture in his mature work. Perhaps it is not surprising then, that Kahn’s projects of the 1940’s and 50’s, which draw on Corbusier in many respects, also “ornament” the walls with color and/or figure.

The 1946-48 competition for the Jefferson Expansion Memorial in St. Louis gave Kahn the opportunity to try many, perhaps too many, things. Kahn stated as much in a letter to the winner, Eero Saarinen, saying that he had “developed it rather poorly by injecting too many ideas [making] nothing particularly strong.” The project was enormous, encouraging many competitors to enter the ongoing discussion of monumentality. As his office worked through those many ideas, Kahn focused on the design of several murals inspired by themes of community and history. Influenced also by Picasso’s Guernica and possibly by WPA murals, Kahn used imagery to tell the story of industry with “Life and Traffic on the Mississippi,” civilization with “Mural on the theme of Civilization,” and multi-racial society with a mural depicting African American and Native Americans joining Caucasians and attesting to “the influence of the many races on American education, science, and culture.”

During and after the depression and World War II, the communal and political aspects of Kahn’s work were explicit. “Life and Traffic on the Mississippi,” for example, was to be developed by the community under the guidance of a “master artist”. The studies for the mural include representations of fish and animals, boats and trees, all made of a tiled material and legible close up or from far away. Sarah Goldhagen notes that the communal production of the murals and their multiple scales of identification support the idea of a community of individuals that became integral to Kahn’s later institutional commissions.

While working on the Jefferson competition during the autumn of 1947, Kahn began designing the Weiss House. A mural was not part of the original design. The construction drawings show the wall adjacent to the fireplace clad with vertical tongue and groove paneling, similar to other parts of the house. Between June 23 and August 9 of 1948, this area changed. An underground utility room was relocated and combined with the fireplace as a core, and the adjacent wall was enlarged and plastered. A larger sketch of the fireplace, drawn at ½”=1'-0” in

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7 Allesandra Latour, editor, Louis I. Kahn, l'uomo, il maestro in, (Roma: Kappa, 1986). Interview with Anne Tyng. 43.
8 Goldhagen, Louis Kahn’s situated modernism, 36-37.
November of 1948, seems to have been the underlay for at least one study for the mural, though no date appears on the study itself.

At least two other preliminary drawings exist of this mural. These are closer to the final drawing itself, and were probably produced later. The later studies show a much finer grid than the 1/2 “= 1’-0” scaled sketch. Anne Tyng, who was Kahn’s major collaborator on the Weiss House, described the conceptual basis of the mural as a “giant pointillism” including symbols from the Pennsylvania Dutch and a black and white pattern to represent the Weiss’s dog, a Dalmatian. “Pointillism” supported the effort to combine scales and talents at the Jefferson Memorial: multiple authors under the eye of a master, with small images and single tiles combining to form a larger whole. Tyng compared the idea of a painting within a painting to Kahn’s emerging understanding of served and servant spaces that described discrete spatial types while cohering as a larger form, referring to them as “the space within the space within the space”.10

This is not a simple relationship: scale is critical. The scale and size of a drawing determine the level of detail that can be seen and constructed. As in an architectural drawing, the given dimensions of a mural’s grid can decrease as the scale of the drawing increases. At the United Nations Building in New York City in 1952, Kahn saw the murals designed by Fernand Léger and executed by Léger’s student, Bruce Gregory. Gregory enlarged Leger’s 10” x10” sketch without compensating for the enlargement’s effect. Kahn was perturbed by this oversight, and realized that a kind of pointillism could mediate between the scale of the hand and the scale of the mural.11

A drawing that is very close to the final Weiss mural, published in Architectural Forum in September 1950, may reference Kahn’s travels to Nova Scotia and New England in the 1930’s. Kahn’s travel drawings of this trip are populated with simple gabled roof houses and barns similar to those surrounding the Weiss House in Pennsylvania Dutch country.12 Regardless of the imagery’s source, the mural grid technique’s effect is striking. Tyng describes the “giant pointillism” having multiple readings depending on the viewer’s position: singular images distinguishable up close merge into larger forms at a distance.13

9 One was published in Architectural Forum in September 1950, and the other, in the collection of Nathanial Kahn, can be seen in George H Marcus and William Whitaker, The Houses of Louis I. Kahn. (New Haven: Yale University Press, 2013), 84, fig. 107.


11 Latour, Louis I. Kahn, L’uomo, Il maestro, 43.

12 Nancy Norris “Contemporary Home of Mr. and Mrs. Morton Weiss”, Times Herald, Norristown, Penn., August 1, 1953, 6. The mural was completed sometime after Kahn returned from the American Academy. Though noted as having been done as late as 1955 (McCarter), a photograph of the completed mural was published in the Times Herald. Hochstim also published drawings that he called studies for the mural, dated as late as 1955, and “Study for a mural based on Egyptian motifs”, 1951. Pyramids and travel to Egypt were perhaps on Kahn’s mind.

13 Perhaps only coincidence, an even earlier source of Kahn’s “giant pointillism” may appear in his own work. Kahn’s 1940 drawing of the Oser House fireplace tile work – in scale, regularity, and texture, – approximates that of the Weiss House mural.
The successive studies of the mural show the impact of scale. The 1948 ½” = 1'-0” study shows a grid representing one foot on a side; in the later studies, and in the final mural, the grid has been reduced to represent approximately 6”. As the drawings move closer to the final work in architecture, the issue of scale becomes paramount.

George Marcus and William Whitaker have recognized correspondences between Marcel Breuer’s 1949 “House in the Museum Garden” at MoMA and the Weiss House. Tyng, who studied at Harvard under Breuer, may have influenced these borrowings: the binuclear plan, the Knoll furniture, and the use of color on the bedroom and hallway walls. Marcus and Whitaker also point to the untraditional use of stone in the Breuer house, a use that refers more to painting than construction: “The stone fireplace wall seems to deny its weight; it has a taut series of abstract planes and shapes which presented a deliberate counterpoint to the earlier forms of building tradition.”

The collaboration between Tyng and Kahn on the! house, by her account, engaged some of Kahn’s most important mature concepts: the concept of “giant pointillism” translated into one thing nested inside another: served and servant, or in later work, ruins wrapped around buildings; and the “shadow joint”, where materials do not meet each other, but are separated by a reveal: a thin line made by a shadow. Whatever caused the submerged utility room in the Weiss House to move upstairs and become part of the consolidated core, providing the surface for the mural, the resulting discussions, as reported by Tyng, were critical events.

Painted color on walls, as in the bedrooms and hall, was quickly left behind after this project. Years later Kahn described changing light as being all the color he needed. “Ever since I knew that to be true, I grew away from painting and depended on the light. The color you get that way is not applied, but simply a surprise.”

Questions of representation and abstraction, so central to the twentieth century art and architectural discourse, are present in Kahn’s sketch and notebooks throughout the post war years. Kahn includes direct references to vernacular architecture and cultural aspirations in these books and in the Jefferson Expansion Memorial project. Kahn titled some of his drawings “Abstraction” between 1948 and 1951; they mark a shift in his thinking on representation, abstraction and language, a shift shared by many others at the time. By 1944 and perhaps earlier, Kahn was aware of the work of Josef and Anni Albers, with whom he eventually became friends and colleagues. Albers exhibited in Philadelphia in 1947, the same year that Kahn began teaching at Yale. Kahn was instrumental to bringing Albers to Yale in 1949, and another leader of abstraction, Willem de Kooning, taught at Yale from 1950-1952, and shared a room with Kahn on campus.

Eeva-Liisa Pelkonen, in her essay “Toward A Cognitive Architecture” discusses the possible impact of Kahn’s association with the Albers. Pelkonen compares Kahn and Josef Albers’ language through the 1950’s and finds Albers leading the discussion of a “quasi-mystical aspect of the form-giving process”. Kahn, who had arguably grown up with at least some

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exposure to German Romanticism in Goethe’s morphology and organicism, American Transcendentalism and perhaps Jewish mysticism, would have had at least one or two other voices resonating in his very synthetic mind, while in the 1950s he was hanging out with some other quasi-mystical geomancers such as Buckminster Fuller and Anne Tyng, and reading D’Arcy Thompson. Nevertheless, whatever their metaphysical implications, Anni Albers’ woven work and Josef Albers’ work with brick and walls provide thought-provoking parallels to Kahn’s emerging geometries and ideas about materials.

Josef Albers’ work, in particular, may be illuminating with regard to Kahn’s early drawing on walls. A 1950 commission at Harvard shows Albers “weaving” with brick: a pattern of solid and void in an architectural material creates a “drawing” with the wall’s materials. Two years later, Albers collaborated with King Lui Wu, another architect on the Yale faculty, in the design of two residential fireplaces. Drawing again with brick, Albers and Wu create a pattern of shadow and texture. Still later in 1959, one of Albers’ “Structural Constellations” is incised in a marble wall and filled with gold leaf.

If his colleague was drawing with bricks in 1950, Kahn was struggling with the translation of drawing into building. Kahn appeared one weekend in 1955 in Trenton with an assistant, Marie Kuo, and painted his second mural “spontaneously” not unlike Le Corbusier at Villa E. 1027. Indeed, an early sketch of the Bath House showed Corbusian figural murals on all exterior walls. As finished, both building and mural were reduced in scope from the original and evoke an architecture that predates Le Corbusier and the modern movement by centuries.

The “spontaneity” was illusory, since several preparatory studies exist. Though Kahn’s travels and travel drawings of 1951 may or may not have influenced the Weiss mural, they are palpable in the Trenton mural, which was completed before the opening on 31 July 1955. Early studies, more than the final work, echo the waves in the floor mosaics of the Baths of Caracalla, Whatever its sources, the Trenton mural lacks the perspectival depth and literal representations of the Weiss mural, and engages the geometry of the block wall on which it is painted to deploy non-representational but allusive lines and curves.

In an unpublished notebook, Kahn wrote about this mural, the issues of scale and representation that it brings to bear, and its final translation as realized. The undated entry states:

Mural—Trenton

The enlargement of a scaled drawing to full scale may be understood better by actual photograph enlargement of the small scale. The contours from accidentals are brought out of though not to be imitated still suggests the breaking up into smaller parts of the constructions of the line. The single stroke at small scale becomes a constructed movement at larger full size.

Doing the mural at the Community Center at Trenton it was evident that the scale drawing was only directional and that the lines and fields had to be built up from the limits of the

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18 I am indebted to Michael Merrill for this insight.
20 Goldhagen, Louis Kahn’s Situated Modernism, Plate 9
21 Solomon, Louis I. Kahn’s Trenton Jewish Community Center, 95.
22 Louis I. Kahn personal notebook, LIK, 030.VII.4. Transcribed here in its entirety as faithfully as possible.
brush the medium and the surface and treated as a construction problem. The original idea of
the disciplines set by the existing 8 x 16 blocks still hold however. The block actually is rough the
scale drawing is smooth. The actual joints between blocks are not uniform the joints in the scale
drawing are uniform the transformation from drawing to an actual vertical wall—which cannot
be tilted or laid flat as in a drawing requires the use of a ladder and the jumping from it to view
the work and back again. Many new experiences (factor indeed) enter which are not present in
making a drawing or painting. Again the struggle the work the labor must be evident.

The struggle must be evident—felt by the observer. When one must stop to consider
the ? effect on our senses of a painting let us say 100’ long painted to imitate the studio sketch
100” long. It is a question of scale. Scale may be defined as related to the labor and the
instrument of labor. Is it the hand? The hand? Or the bulldozer or crane? Also it is related to the
readability of how it is done. How it is done We cannot expect the spray to simulate the action of
the hand nor the hand to imitate the textures or uniformity of the spray. Nor can the hand of the
artist draw paint a single line 10 feet long without picking rewetting the brush several times and
probably modify the color in so doing.

The house painter prides in disguising his brush marks and in the matching of colors
uniformly.
The artist painter shows his brush strokes and considers each new brush stroke as a new
color. (even though the same color is used.)
Scale is the brush stroke.

If the hand gets to be as big as a crane then the scale is equally as so justifiable as the
scale produced by the hand. These two scale must not resemble each other. Leger’s immense
mural (U.N.) from a 10” x 10” sketch suffers for lack of scale.

The translation from scale drawing to built work, albeit a flat work in this case, requires
one to recognize the place of “the hand” in the final construction. Is the crane the hand, and if
so, does it allow the size of the finished piece to be simply an enlargement of the small
drawing? If the same tool (the hand with a drawing implement) is still in use, the marks will
create a much broader variation on the final drawn work. “The readability of how it is done” is
inevitable, and so must be embedded in the ultimate work. “Scale is the brush stroke.”

The lessons learned in Kahn’s translations from drawing to finished product are lessons
about tools and substrates and about the limits of the human hand. When Kahn writes “doing
the mural at the Community Center at Trenton it was evident . . . that the lines and fields had to
be built up from the limits of the brush the medium and the surface and treated as a
construction problem”, Kahn begins a translation from drawing to building. The joints of the
block regulate the endeavor, and the irregular surface of the block animate and change the
nature of the preparatory sketch. 23

Though he proposed small murals in subsequent residential projects, none exist. The
closest surviving relatives to the murals are the tapestries at the Unitarian Church in Rochester,
ultimately designed by Kahn’s office and woven by Jack Lenor Larsen. The building was
designed and constructed from 1959-62; the planned tapestries followed in 1963. 24

Anni Albers began the collaboration, but did not complete it; still her contribution is felt.
Her work started with a 4" increment to coordinate with the block dimensions. The finished

23 Kahn might not be pleased with the restoration of the mural in Trenton. It appears in photographs to be
far more finished, eliminating the sense of the brushstroke, or the roughness of the block substrate.
24 A descendant of these tapestries may be the paintings that were commissioned for the Korman House.
tapestries align with the openings required for ventilation and circulation, and are organized in color bands that reflect the light. Each line of the warp fibers can be considered a drawn line, used to build a subtle gradation in color. The visibility of the individual lines exists only at close range. Kahn’s interest in the drawing has moved to hand and scale. In addition, Kahn organizes the formwork of the concrete and controls the concrete block by its hue, drawing at the scale of the building with a crane as “the hand”. As with Albers’ and Wu’s brick compositions drawing is no longer applied, it is integral to construction.

Comparing again to Le Corbusier, Roberto Gargiani points out that for Corb, a tapestry, while sharing the contrast to the concrete and playing a role acoustically, was a “grand, easily transported fresco, or muralnomade, while for Kahn it was part of the wall and the room and the light where was hung. In effect, it was a part of the architecture, not a furnishing.”

The Trenton Bath House is widely accepted as a breakthrough for Kahn: a return to weight and defined space, and an assimilation of lessons learned from Rome, Egypt, and Corbusier. Kahn had found his way of speaking, and after this it no longer required drawing on the wall. Kahn’s declarations about the hand, the tool, and scale relative to the mural in Trenton reveal an understanding of drawing the wall by constructing the wall. Drawing on the wall was unnecessary if the wall itself was considered a drawing. Complete without the application of color, coating or material, the wall was drawn (constructed) and ready to accept the animation of light and shadow. Neither rejected nor accepted, the International Style dictum “proscribing arbitrary applied decoration” was absorbed by the act of construction.

While completing the Bath House, Kahn obsessed over the joinery of the Yale Art Gallery – the directionality of formwork and the pauses between materials – that left traces of construction. Kahn’s writing becomes ever more articulate on the relationship between the exploratory drawing and the construction drawing: we should draw “as we build, from the bottom up, stopping our pencils at the joints of pouring or erecting.” If this were to be done, “ornament would evolve out of our love for the perfection of construction.” In a lecture at Tulane University in 1955, Kahn speaks of the formwork joints in the Yale Art Gallery as the “beginning of ornament”, setting up a pattern that speaks of the way the building is made.

If the murals drawn on the walls of the Trenton Bath House and the Weiss House might still be considered “arbitrary applied decoration”, they point toward Kahn’s mature work. More than mere episodes, in them we can sense Kahn struggling with the larger questions of drawing, ornament and construction, representation and abstraction, and with his own self-image as artist or builder. After Trenton, “drawing as we build” became Kahn’s norm: leaving behind a palimpsest of construction: formwork material textures, ties, joints, and reveals, the “shadow joints” of Tyng’s memory, marking a change of material with the shadow of a line.

After the Art Gallery and the Unitarian Church, the joint and changes of material would always be seen as lines in a drawing. At Salk, the Kimbell, Dacca, and The Yale Center for British


26 Kahn and Latour, Writings, Lectures, Interviews. p.57.
27 Ibid., p. 63
Art: there is not a project that doesn’t celebrate the line left behind.

Marshall Meyers, who completed Kahn’s final project, the Center for British Art, at Yale, compared Kahn’s working charcoal sketches in the studio, which leave a ghost of process on a single piece of trace paper, to the residue of construction he insisted on. What may have begun as he and Anne Tyng discussed and completed the mural at the Weiss house ended with drawings made by cranes and concrete pours. The word mural, after all, comes from the Latin word *muralis*, itself from *murus*: simply wall. Ultimately the wall was enough.

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