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A Drawing of the Cathedral of Albi by Louis I. Kahn*

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Abstract

The influence of the late 13th-century Cathedral of Albi on the American architect Louis I. Kahn is discussed through an analysis of a drawing Kahn made of it when he visited Albi in 1959. Albi had an important effect on many of his subsequent works, particularly the religious buildings.

That a contemporary architect who wanted to achieve monumentality in his work had to study great buildings of the past was something Louis I. Kahn, the American architect, had realized as early as 1944. He wrote:

No architect can rebuild a cathedral of another epoch embodying the desires, the aspirations, the love and

hate of the people whose heritage it became. Therefore the images we have before us of monumental structures of the past cannot live again with the same intensity and meaning. Their faithful duplication is unreconcilable. But we dare not discard the lessons these buildings teach for they have the common characteristics of greatness upon which the buildings of our future must, in one sense or another, rely.¹

Kahn's debt to medieval architecture is well known, particularly his interest in the towers of San Gimignano, the castles of Scotland and the walled city of Carcassonne. Less has been made of his interest in the Cathedral of St. Cécile at Albi. When Kahn visited Albi in 1959, probably in late August or early September,² he made

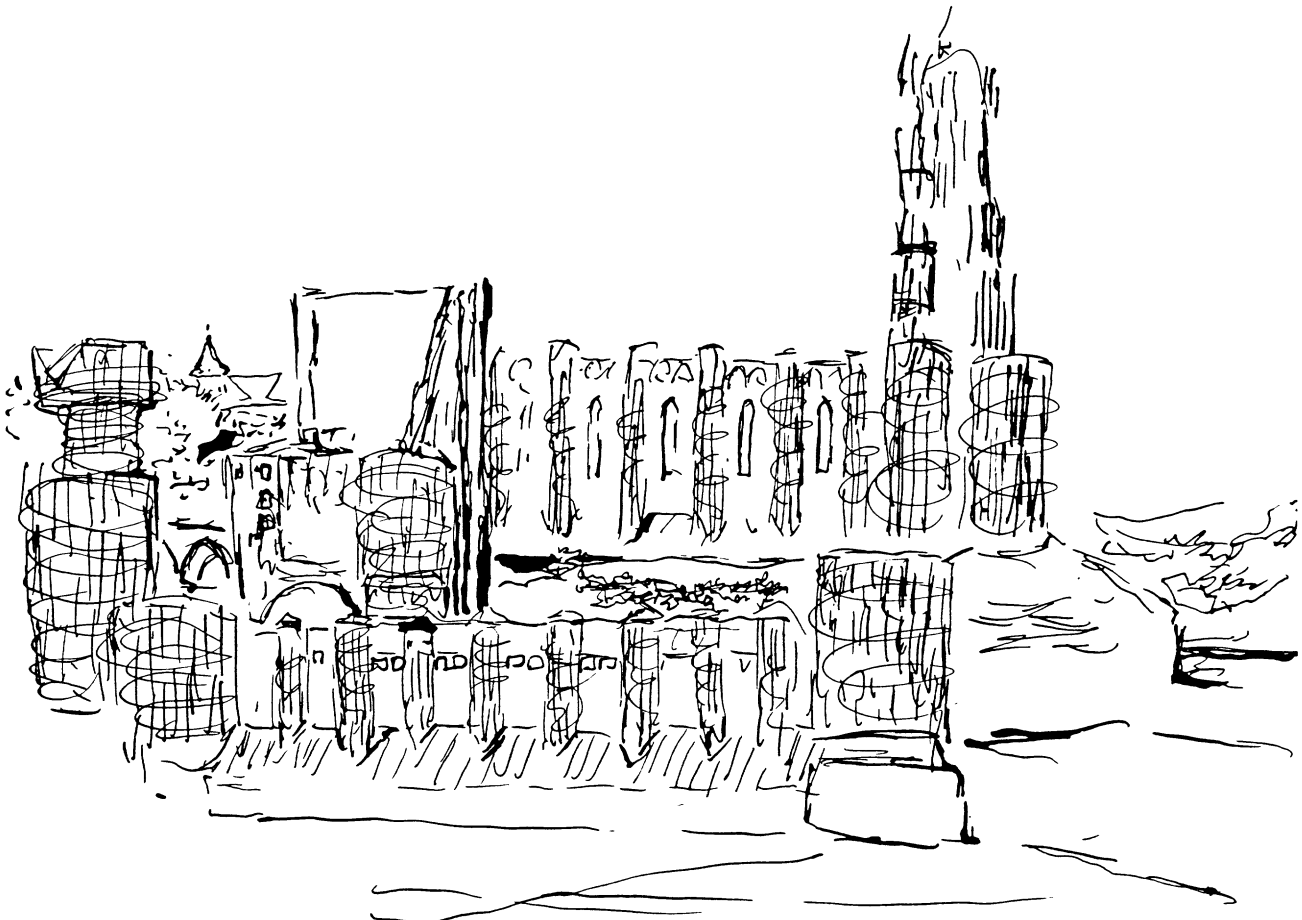


FIGURE 1. Louis I. Kahn, *Cathedral of St. Cécile, Albi, 1959*, drawing, ink on paper, 8³/₈" x 10¹/₄", Williams College Museum of Art (photo: Museum).

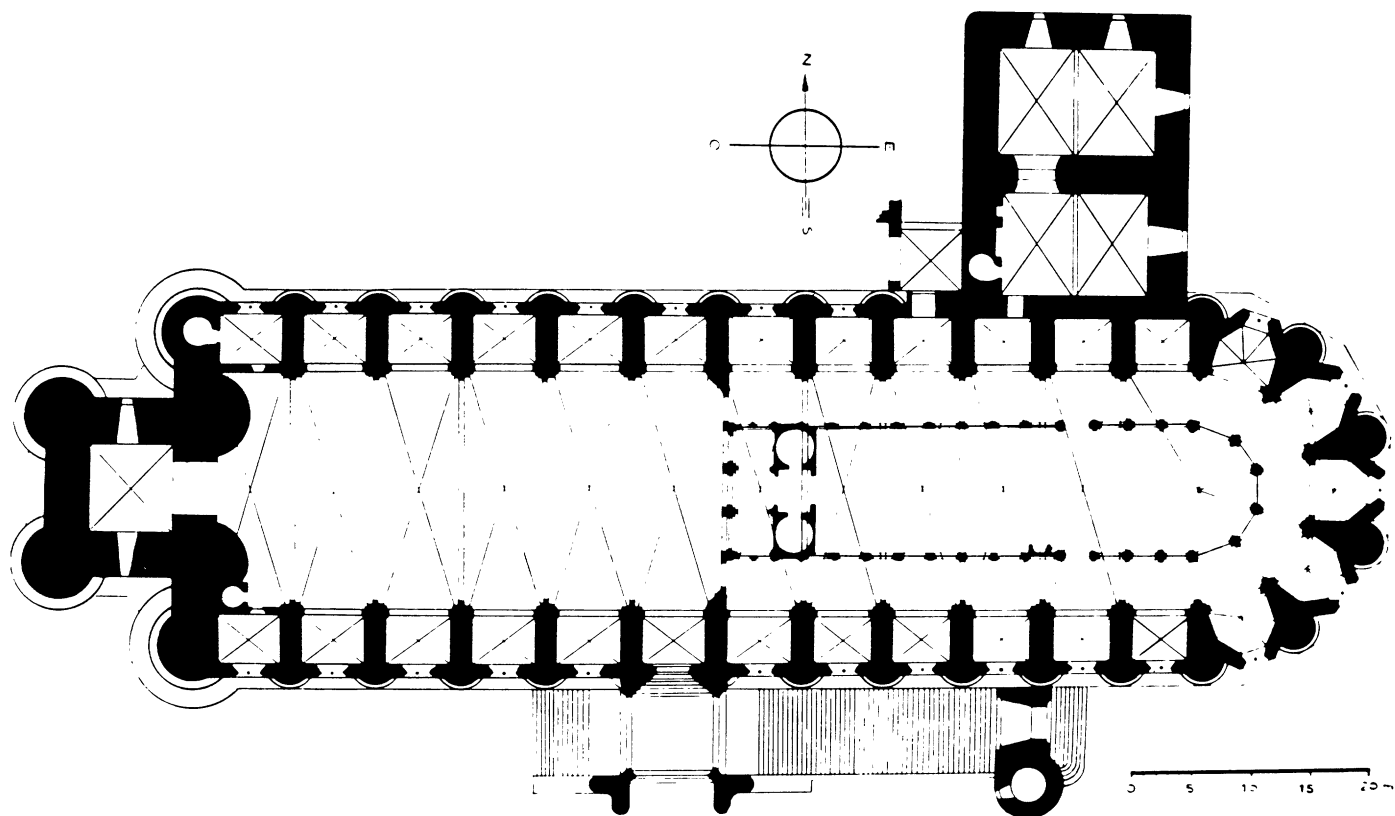


FIGURE 2. *Cathedral of St. Cécile, Albi, begun 1282, plan (photo: Mâle, La Cathédrale D'Albi).*

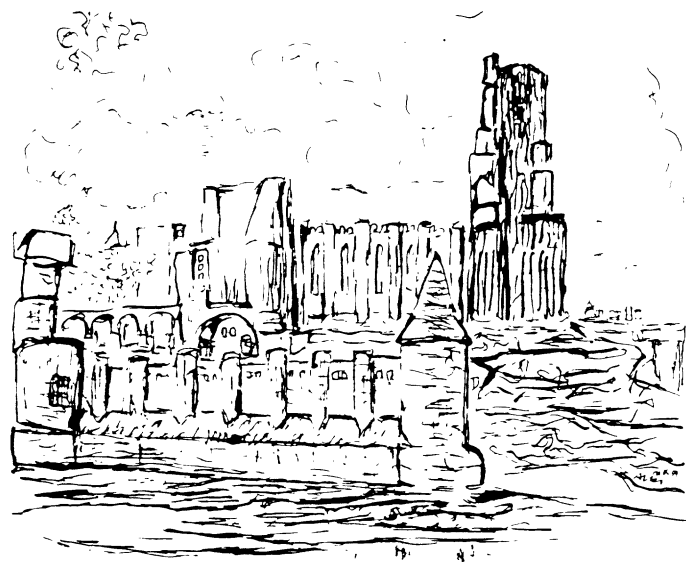


FIGURE 3. *Louis I. Kahn, Cathedral of St. Cécile, Albi, 1959, drawing, ink on paper, 8 3/8" x 10 1/4" (photo: Louis I. Kahn, Drawings, pl. 14).*

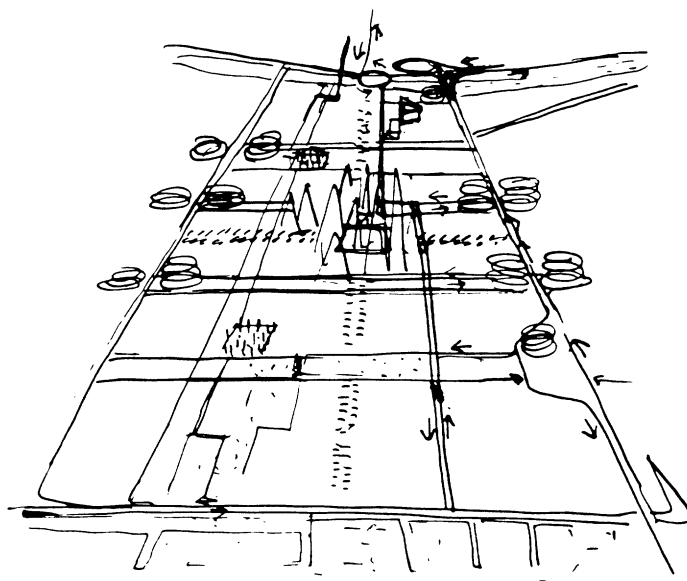


FIGURE 4. *Louis I. Kahn, Movement Study for central Philadelphia, 1952-53, ink on white tracing paper, 12 1/4" x 9 1/2". Architectural Archives, University of Pennsylvania, Gift of Richard Saul Wurman (photo: Louis I. Kahn, Drawings, pl. 64).*



FIGURE 5. *Louis I. Kahn, Richards Medical Research Center, University of Pennsylvania, Philadelphia, 1957–60, detail of south façade (photo: author).*

several sketches³ of this mighty fortress church begun in 1282 by the Dominican bishop of Albi, who intended it as the visual and physical expression of his dominance over the city, including its remaining heretics.⁴ One of these drawings (Fig. 1), now in the Williams College Museum of Art, shows the north flank of the church as it appears from across the river Tarn. In the foreground the towers and walls that protect the gardens of the bishop's palace, known locally as the *Berbie*, rise from the river's edge. Beyond, to left of center, appears the quadrilateral bulk of the palace, while farther back rises the seemingly flat-roofed rectangle of the church, terminated by its soaring west tower. While Kahn rendered the overall form of the building faithfully, he drew the half-round exterior buttresses, which are solid masses of brick that absorb the thrust of the nave vaults (Fig. 2), as hollow cylinders defined by spiral lines. Another Kahn drawing of the cathedral, executed from the same site (Fig. 3), makes clear that in the Williams drawing Kahn consciously transformed the buttresses, for in this drawing he drew them more or less as they are. Making two kinds of drawings of a building, one "real" and one "transformed," seems to have occurred to Kahn uniquely at Albi,⁵ if the evidence of his published drawings can be trusted. The architect

Charles Moore, who was working in Kahn's office when he returned from Albi, recalls that Kahn was enormously moved by the power of the towers of Albi, and that the drawings of the church with spirals were, in part, Kahn's attempt to render that power graphically.⁶

Spirals, far from common in Kahn's drawings, had appeared previous to his visit to Albi in his projects for downtown Philadelphia. Kahn's bird's-eye sketch of central Philadelphia of 1952–53 (Fig. 4) shows, in schematic form, William Penn's grid plan of the city. The major streets that define the center, to right and left, are punctuated by what look like coiled bed springs, Kahn's shorthand notations for the large parking garages that he intended to erect around the city as a system of fortifications against invasion by automobile. Other drawings from the mid-50s repeat these tower/garages, multiplied to form a denser line of defense. In all these drawings, the spirals represent lines of circulation within hollow cylinders, whose curved exteriors are suggested by the curved lines of the spirals themselves.⁷ For Kahn, central Philadelphia and the great single nave of Albi were both primary spaces protected by a ring of towers. The potential for an inner dynamism in these towers is stressed by the graphic vigor of the swiftly sketched spirals.

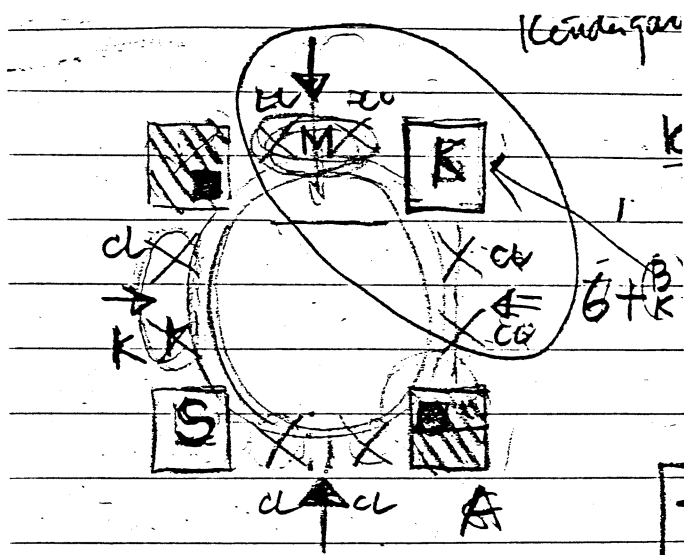


FIGURE 6. Louis I. Kahn, project for First Unitarian Church, Rochester, New York, December, 1959(?), black and red pencil on yellow, lined 8 1/2" x 11" paper, detail. Copyright 1977. Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission (photo: Kahn Collection).

Kahn's dissolution of the Albi buttresses had also been foreshadowed in his writings. In an article on his Philadelphia plan, published in 1953, he had written, "In Gothic times, architects built in solid stones. Now we can build with hollow stones."⁸ In her recent book on her father's work, Alexandra Tyng has rightly pointed out the importance for Kahn's work of his concept of the "hollow column."⁹ To the "hollow column," in light of the Albi drawing, we should perhaps also add the concept of the "hollow buttress."

In Kahn's work of the 1950s these "hollow stones" became spaces through which air, plumbing and people might pass, to the advantage of the building as a whole. In his first major commission, the Yale University Art Gallery, 1951–53, he had placed the main staircase in a cylindrical tower, located inside the building. In the Trenton Jewish Community Center Bath House, a work of the mid-1950s, hollow, square piers serve both as supports for the pyramidal roofs and as entrance or toilet spaces. For the Richards Medical Research building at the University of Pennsylvania, on which Kahn began work in 1957, he devised hollow towers to accommodate the circulation of air and people—towers that were rising even as Kahn drew Albi (Fig. 5). At Richards, Kahn first fully realized his famous notion of served and servant spaces, with the towers as the servants and the laboratory spaces as the served.¹⁰ (Here, as in Beaumarchais's *The Marriage of*

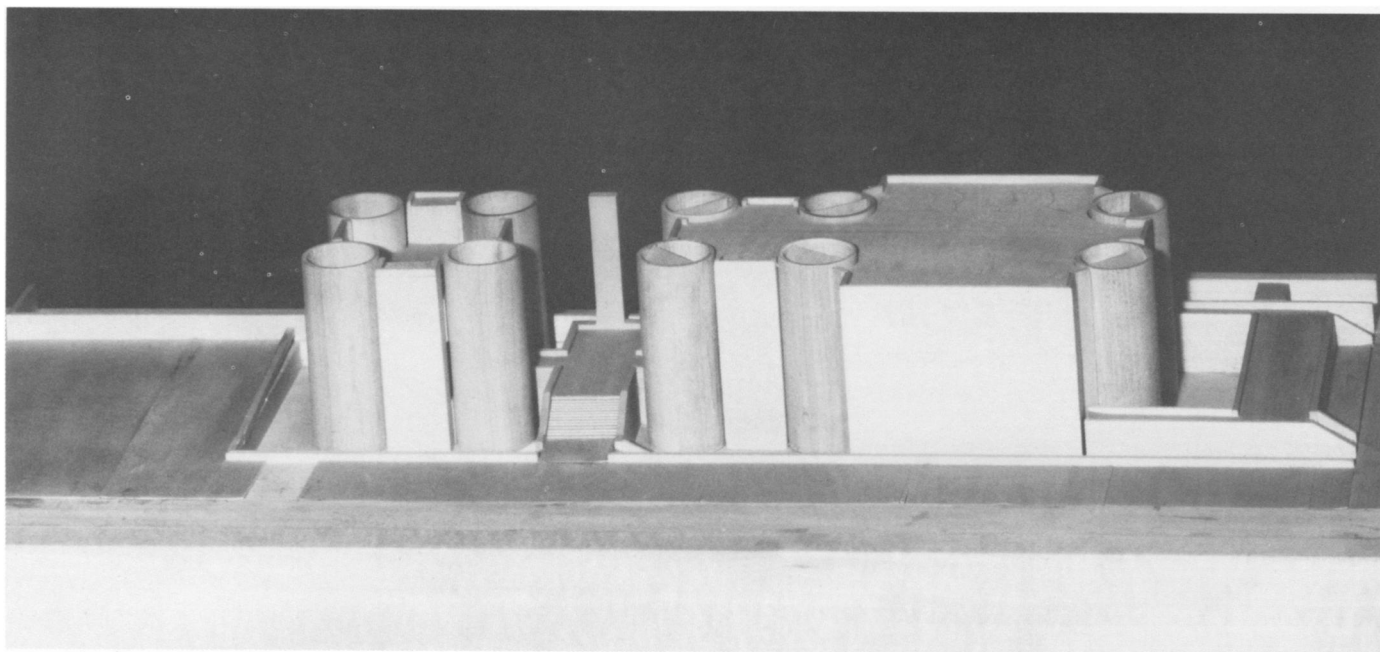


FIGURE 7. Louis I. Kahn, project for Mikveh Israel Synagogue, Philadelphia, 1961–70, wooden model. Copyright 1977. Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission (photo: Kahn Collection).

Figaro, the servants are more interesting than those they serve.) In the Williams drawing of Albi, Kahn converted it into one of his own works by hollowing out the buttresses to suggest their metamorphosis into servant spaces (Fig. 1).

If Albi was a building that Kahn's own architectural preoccupations had pre-disposed him to convert into a building of his own, it was also a building whose form had a profound effect on him and his subsequent designs. In 1962 he wrote, "In the presence of Albi, I felt the belief in the choice of its architectural elements."¹¹

The compact, horizontal, fortified mass of Albi, rhythmically interrupted by the hollow verticals from his drawing of the church (Fig. 1), appears in a number of Kahn's buildings that have a fortress-like character. In early sketches for Erdman Hall at Bryn Mawr, begun in 1960, he conceived the dormitory as flat-roofed squares or crosses encircled by round towers. In the final version, the round towers became square, but the image of a flat-roofed fortress persisted.¹² For the Salk Institute, begun late in 1959, after the Albi visit,¹³ Kahn made sketches of rectangular laboratory blocks punctuated by round towers. Here too the round towers were abandoned in the final version for square ones, but the flat-roofed, fortress-like character of Albi remained, to produce the image of a guarded sanctuary for the study of science.¹⁴ Moreover, in their final forms, the great uninterrupted spaces of the Salk laboratories, flanked by stair towers on the exterior and

study towers on the courtyard sides, become an updated and transformed version of the nave and buttresses of Albi.

In both these cases, and others as well, Kahn abandoned the spiky Richards towers, dramatic exclamation points jabbing the sky that clearly derived from the towers of San Gimignano, which Kahn had drawn in 1929. Albi had suggested to him a different kind of tower, one to which that group of four closely massed towers he had just designed for the south side of the core pavillion at Richards (Fig. 5) had perhaps already made him susceptible. While these owe a lot to the square towers on the corners of Frank Lloyd Wright's Larkin Building in Buffalo, New York, they also suggest the tightly grouped, bulky, flat-topped buttresses and corner towers of Albi. In a sense, one can already see, on the south side of Richards, Albi and San Gimignano side by side.

It was in religious structures, appropriately, that the influence of Albi most immediately surfaced, and, indeed, direct reminiscences of Albi appear in most, if not all of Kahn's designs for religious structures that postdate his visit to the church. (This fact suggests that Kahn's forms, or at least the images he sought to give his buildings, might profitably be studied typologically. Such a study seems never to have been undertaken systematically.) One of the earliest sketches for the Unitarian Church in Rochester, New York, drawn in the corner of a plain,

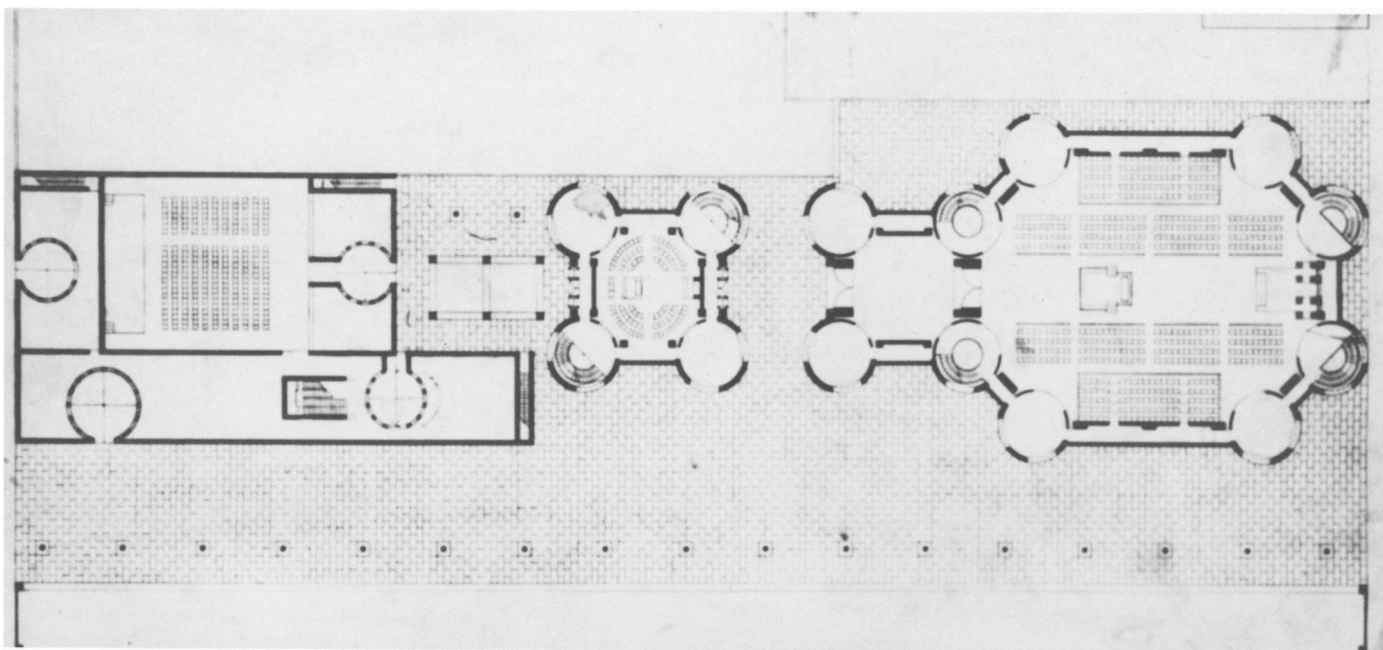


FIGURE 8. Louis I. Kahn, project for Mikveh Israel Synagogue, Philadelphia, 1961–70, plan. Copyright 1977. Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission (photo: Kahn Collection).

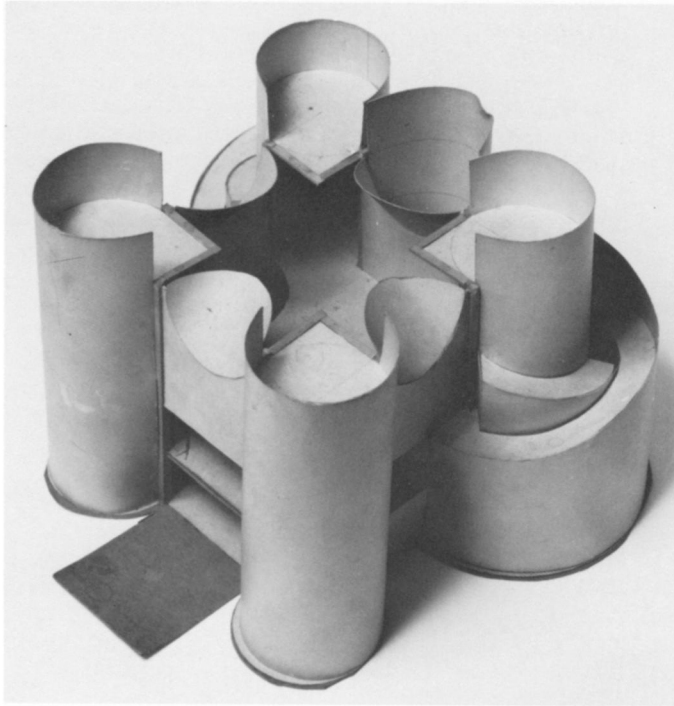


FIGURE 9. Louis I. Kahn, project for mosque, Assembly Building, Dacca, Bangladesh, begun 1962, cardboard model. Copyright 1977. Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission (photo: Kahn Collection).

lined sheet of yellow paper on which Kahn had noted down the space requirements for the church, shows a circular center surrounded not only by four square towers, which one can easily relate to the Trenton Bath House, but also by eight circles (Fig. 6). These were to be classrooms—the buttresses or corner towers of Albi hollowed out to become servants of the circular, centrally placed sanctuary.¹⁵

As executed, the Rochester church lost its obviously Albigenian flavor. The square sanctuary is surrounded by a square corridor that is in turn enclosed by rectangular classrooms and offices. There are no hollow cylinders. These classrooms and offices, however, are treated on the exterior much as if they formed a fortress wall. And, in a curious but typical inversion of his source, Kahn transformed the projecting buttresses of Albi into recessive, negative spaces—slim, tall shadows, cut out of the wall. Through these, paradoxically, light passes into the interior.¹⁶

Of all Kahn's designs, the one closest to Albi is the unrealized project for the Mikveh Israel Synagogue in Philadelphia, on which he began work in 1961. In all the many versions of the design, such as the wooden model in Fig. 7, the sanctuary is, like Albi, a flat-topped building surrounded by round towers. A low, square block, with

round towers at all four corners, forms the entrance to the sanctuary.¹⁷ In plan (Fig. 8) this square recalls, with uncanny closeness to the source for Kahn, the west tower of Albi (Fig. 2). In the synagogue project the towers were hollow cylinders designed to filter the light as it flowed into the interior. Kahn here inverted the relationship between support and curtain wall that exists at Albi. There the structurally essential buttresses are separated by curtain walls pierced by light-giving windows. In the synagogue, the unpierced walls form the supports, while the towers (*nées* buttresses) become hollow, non-structural conductors of light. The servant spaces here are no longer for the passage of people, or the exhausting of noxious gases, but for the control of light as it enters the building. Light-bearing towers Kahn had encountered in 1959, on the same tour of France that included Albi, when he visited Le Corbusier's church at Ronchamp, consecrated only four years earlier.¹⁸ But it was not the hooded, half silos of Ronchamp that Kahn repeated formally. Rather, it was those buttresses and corner towers of Albi that he had drawn as voids. In the Mikveh Israel Synagogue, had it been built, Kahn's graphic transformation of Albi would literally have been made concrete.

For the mosque that forms the main entrance to the Assembly Building at Dacca, Bangladesh, the design of which was begun in 1962, Kahn returned again to the west tower of Albi (Fig. 9). Here, as at Mikveh Israel, four hollow towers rise at the corners, but this time they are open at the top to allow light to flow down their inner walls.¹⁹ In the extraordinarily moving project for the Hurva Synagogue in Jerusalem, the first designs for which date from 1968, Kahn came still again to the idea of the sanctuary as fortress. He surrounded the square core, a building within a building, with 16 buttress/pylons, square in plan, to be made of stone from the West Wall of Jerusalem. In their hollow bases, the buttresses contained meditation chambers, from which burning candles would illuminate the sanctuary. By 1968, when Kahn began work on this project, the strength of the impression Albi had made on him had begun to fuse with other memories of other buildings. The flat-roofed, compact mass of the sanctuary is now surrounded by spiky towers that rise above the flat roof to challenge the sky;²⁰ the towers of San Gimignano, of Albi, of Richards, of Ronchamp, all join in one work.

The drawing of the cathedral, bishop's palace and fortifications from across the Tarn reveals another aspect of this building complex that seems to have played a crucial role in Kahn's work after 1959—the idea of the building within a building. Although the church and the palace were built over a period of more than 200 years, they have a remarkable visual unity, a unity that Kahn expressed by drawing not only the buttresses of the church, but also the towers of the fortress surrounding the palace as spirals. Before the visit to Albi, the idea of a building

within a building seems to play hardly any role in Kahn's thinking. Afterward, many of the great commissions rely on it.²¹ The sources of this idea are complex, and the experience of Albi cannot be seen as the sole impetus toward such designs. What Albi did offer Kahn, however, was the direct and very moving experience of a building of this type.

NOTES

* Whitney Stoddard has not confined himself to the study of the Middle Ages. For many years he taught a course on 20th-century architecture at Williams College that inspired numerous students to become architects. Of the roughly 150 Williams alumni/ae who are architects, almost all first learned about the buildings of our century from Whitney Stoddard. This article celebrates Whitney's modernity and medievalism in tandem by discussing the influence of one of the great monuments of the Middle Ages on one of the great architects of our age. For this writer, who was introduced to "modern" architecture in that splendid course, this essay is a particular labor of love and esteem.

1. L. I. Kahn, "Monumentality," in *New Architecture and City Planning*, ed. P. Zucker (New York, 1944), 578. A recent bibliography of writings by and about Kahn appears in A. Tyng, *Beginnings, Louis I. Kahn's Philosophy of Architecture* (New York, 1984), 189–91.
2. Although Kahn's precise travels are still unclear, he left Philadelphia shortly after August 17 and returned sometime before October 29. In a letter he wrote on the latter date to Olga N. Valvano, a young architect, he noted that he had received a letter from her shortly before he left. That letter bears his office stamp and the date Aug. 17. Kahn apologized for his delayed response by saying that he had just recently returned from Europe (Louis I. Kahn Collection, University of Pennsylvania and Pennsylvania Historical and Museum Commission, LIK-15/P-15, Building Committee Correspondence—Rochester, April 1959 through December 1960). Kahn attended the 11th and final meeting of the International Congress for Modern Architecture (C.I.A.M.), which took place at the Kröller-Müller Museum in Otterlo between September 7 and 15 (*Het Nieuwe Bouwen Internationaal/International, CIAM, Volkshuisvesting, Stedebouw, Housing, Town Planning*, Rijksmuseum Kröller-Müller, Otterlo, Exhibition, April 3–May 29, 1983 [Delft, 1983], 103). In a letter to the Italian architect Ernesto N. Rogers, dated March 2, 1960, Kahn says that after the meeting of C.I.A.M., he went to Angola, where he was to design the American consulate in Luanda, and then to San Diego to confer about what turned out to be the Salk Institute (Kahn Collection, LIK 64, Miscellaneous, 1959 through). The trip to Albi thus probably took place between Kahn's departure from Philadelphia and the C.I.A.M. meeting. During the same trip through France he also made drawings of Carcassonne and Le Corbusier's church at Ronchamp. Drawings of these two sites appear in *Louis I. Kahn, Drawings*, Max Protetch Gallery, New York, Exhibition, June 5, 1981 (Los Angeles, 1981), pls. 3–11 and 2, respectively.

I am extremely grateful to Julia Moore Converse, Director of the Kahn Collection, for her invaluable help in guiding me through its awesome holdings.

3. Eight drawings of the cathedral of Albi by Kahn have been published. Four appear in *The Notebooks and Drawings of Louis I. Kahn*, edited and designed by R. S. Wurman and E. Feldman

(Philadelphia, 1963), pls. 21–24. These same drawings are also found in *The Notebooks and Drawings of Louis I. Kahn*, edited and designed by R. S. Wurman and E. Feldman, 2nd ed. (Cambridge, Mass., 1973), pls. 21–24, and on a single page in *Louis Kahn, Dokumentation, Arbeitsprozesse*, Eidgenössische Technische Hochschule, Zürich (Zürich, 1969), unpaginated. Another three were published in *Louis I. Kahn, Drawings*, pls. 12–14. The eighth is found in Tyng, *Beginnings*, 24. Our Fig. 1 was pl. 12 in *Louis I. Kahn, Drawings*.

4. W. S. Stoddard, *Monastery and Cathedral in France* (Middletown, Conn., 1966), 301. The cathedral is well illustrated in E. Mâle, *La Cathédral D'Albi* (Paris, 1950). For the bishop's palace and gardens, see L. de Lacger, "Le Château des Évêques d'Albi," *CA*, 92 (1929), 392–425.
5. The eight published Kahn drawings of Albi divide themselves evenly into these two categories. See note 3.
6. Charles W. Moore, in conversation with the author, June 29, 1985.
7. H. Ronner, S. Jhaveri and A. Vasella, *Louis I. Kahn, Complete Works, 1935–74* (Boulder, Col., 1977), 23–25, 28–29.
8. L. I. Kahn, "Toward a Plan for Midtown Philadelphia," *Perspecta*, 2 (1953), 23.
9. Tyng, *Beginnings*, 35–37.
10. Illustrations of all these buildings can be found in Ronner, Jhaveri and Vasella, *Louis I. Kahn*, 67, 94 and 111–17, respectively. Richards was dedicated in May, 1960, a forthcoming event alluded to by Kahn in his letter to Rogers, mentioned in note 3.
11. L. I. Kahn, "Foreword," in *The Notebooks and Drawings of Louis I. Kahn*, 1st and 2nd eds., unpaginated.
12. Ronner, Jhaveri and Vasella, *Louis I. Kahn*, 187–95.
13. See the Kahn letter of March 2, 1960, to Ernesto Rogers, cited in note 2.
14. Ronner, Jhaveri and Vasella, *Louis I. Kahn*, 143–67.
15. This drawing (Kahn Collection, LIK-15/P-15, Building Committee Correspondence—Rochester, April 1959 through December 1960) is undated. From the copious evidence in the correspondence between Kahn and the building committee, preserved in the above cited folder, it seems likely that the drawing was made in December, 1959. Kahn had been appointed architect of the church by early June, but he did not present his first proposals for the building until December 13. These were revised by December 30, when he sent copies of the revisions to Rochester. By February, the round sanctuary had entirely disappeared, because the chairman of the building committee at that point complained that her committee found the inherent squarishness of Kahn's design particularly hard to take. That squarishness the building retains.
16. Ronner, Jhaveri and Vasella, *Louis I. Kahn*, 169–77.
17. *Ibid.*, 221–27.
18. See note 2. One would like to know if Kahn visited Albi or Ronchamp first.
19. Ronner, Jhaveri and Vasella, *Louis I. Kahn*, 251, give a plan of the mosque.
20. *Ibid.*, 379–85.
21. For instance, the project for the United States Consulate in Luanda, Angola, the Unitarian Church in Rochester, N.Y., the Assembly Building at Dacca, the Community Center at the Salk Institute, the Phillips Exeter Library, the Hurva Synagogue. Tyng, *Beginnings*, 70, quotes a passage from an interview Kahn gave in 1972 that expresses his concept of the building within a building very clearly.