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'Splendor Beneath the Grass' in Michigan

Andrea Oppenheimer Dean
American Institute of Architects

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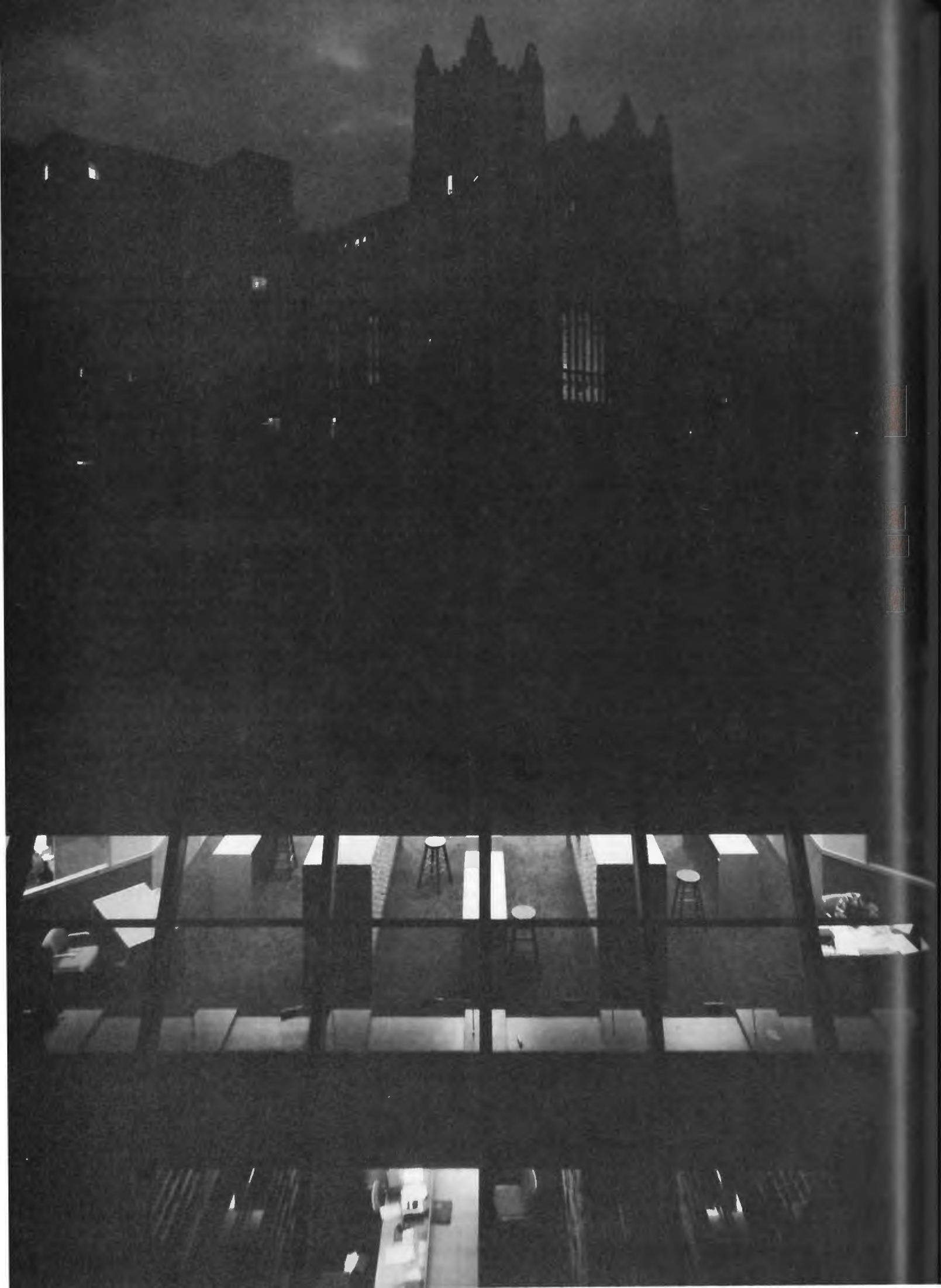
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Cover: Photograph by Timothy Hursley, Hursley/Lark/Hursley, of Gunnar Birkerts' law library addition, University of Michigan.

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'Splendor Beneath the Grass' in Michigan

A law school building brightened by a moat of glass. By Andrea Oppenheimer Dean

This is probably the most esthetically satisfying large underground building to have penetrated American soil, though on approach there's almost nothing—arguably not enough—to see, certainly nothing that says “building.” Gunnar Birkert's 1981 addition to the University of Michigan's Legal Research Building is part of the venerable 1920s Gothicized law school quadrangle, a visually homogeneous complex including library, classrooms, and dormitories. The quad had, as it were, a piece missing at its southeast corner; and it is under this missing element that Birkert buried his building.

The only signal of possible splendor beneath the grass is a low strip of canted glass, topped by a solid bronze rail, that wraps a moat-like strip around the Legal Research Building. By the time you're peering over the rail, the 60-foot-long moat reveals itself as a deep V-shaped trough from which two walls rise upward. The one, sloping from the base of the research building to the bottom of the three-story addition, is limestone; the other, a bronzed window wall, angles from the bronze rail down one story to the base of the trench, and forms the addition's “facade.” The canted glazing admits abundant light, softly diffused on the second and third levels by the limestone wall. Light is also drawn down to the back of the building by a small triangular opening, with the result that in many parts of the addition one sees, or senses, light coming from both front and back, further obviating the feeling of being submerged. The giant window wall also creates the closest possible visual connection to the cherished old library. There are wide, raking views of the original structure against sky and clouds, and yard-wide,

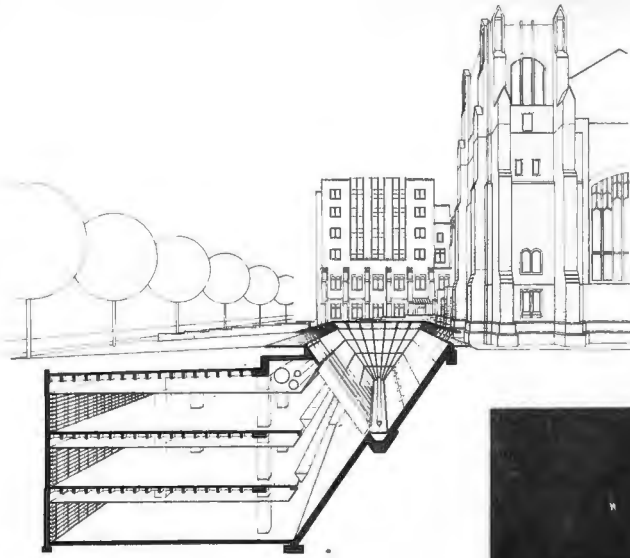
mirrored baffles reflect fractured slivers of the mock Gothic building, slashing through head-on views of it.

The effect is stunning, one that, in Birkert's words, “makes a sort of icon of the mother building.” This is particularly fitting, since the reason for having slipped the structure below ground was to preserve, and avoid doing mischief to, the stately presence of the original.

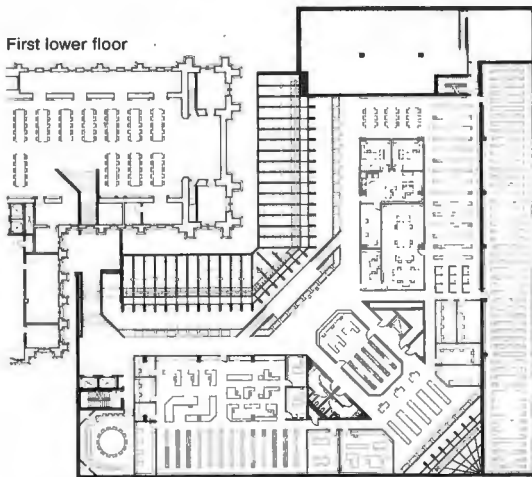
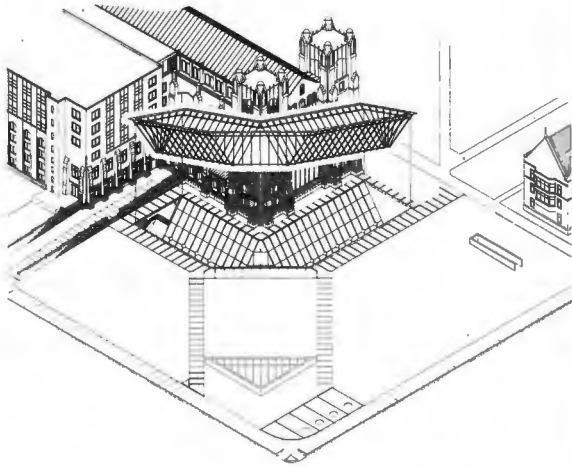
Birkert's first scheme, presented in 1974, was a mostly above grade, cascading steel and glass structure. The library's dynamic and witty director, Beverley Pooley, recalls that “It sent the alumni totally into a tailspin. They were very fond of the original building and told me, ‘You must get a Gothic architect.’ I said, ‘That will be extremely difficult, because he'll be extraordinarily old. And even if we got the architect, who could possibly bid on it?’ Putting it below ground was strictly an esthetic decision. It was apparent that if you put 60,000 square feet above grade it would dwarf or humiliate the existing structure.”

Birkert was more than willing to tuck the whole thing out of sight. He had been intrigued by underground construction since the early '70s, and with help from a Graham Foundation grant in 1974 invented a scheme for a partially subterranean city, in which transportation, utilities, and manufacturing were buried in a great trench. He was, at the time, fascinated by the “megs,” as he says, and by earth-covered architecture's potential for retrieving above ground space and concentrating urban

Tucked in a corner of the Gothicized quadrangle, the law library addition is hardly visible, until one looks down, left.



A V-shaped glass and limestone moat serves as facade and principal design element, bringing in light and views of the 'mother building,' and mirrored baffles perpendicular to the glass create slivered reflections (across page bottom). The most popular seating—and most uncomfortable—is located at the hub of action, overlooking the window wall (right).



Popular stools beside an animated wall.

functions and activities. It appealed also to his intense preoccupation with light. Birkerts has always been attracted by Aalto's work, and, like Aalto, grew to adulthood in a far north country (Latvia) where light is scant and precious. It left him, he says, "with an unconscious desire to make the most of light," a *sine qua non* for underground architecture.

The principal requirement for the library was to add space to the overcrowded Legal Research Building, and bring students, books, and staff into a close working relationship. The old building is a series of warrens where the library's 30 to 40 staff members were scattered horizontally and vertically in stacks and alcoves. The new \$9.5 million structure is L-shaped and designed as a single open space with tray-like floors arranged as balconies overlooking the window area. In front of the window is a grand stairway, which together with the glazed wall, serves as the chief interior design element. The stair angles up and down, with its landings as though suspended at the crook of the L between the limestone wall and balconies formed by the edge of each level.

The busiest areas—card catalogs, offices, and reading areas, are in the center of the top floor, the second level is devoted principally to stacks and carrels, and the bottom story houses more stacks, offices of the university's *Law Review* and journal, plus a triangular-shaped student lounge illuminated by soft, diffused light from the smaller triangular opening. "This is one of the best assembly lines of library technical services that we know of," says director Pooley. "Before, students had to sit in the reading room, use the 20,000 books that we could squeeze in there, and call for anything else from the desk. Now, each is assigned a carrel (already wired for anticipated computerization) can check out books to carrels, store volumes there, and have access to our entire collection of volumes in open stacks."

The library is organized as one vast open space to permit light to penetrate throughout. Stacks, carrels, and reading areas are in the back of the building, away from the window wall. Carpeting here is a tannish-brown, quieter than the deep green in the more public areas near the glass, and even the lines and shapes here are more tranquil than in the front of the building—where most of the action is. The window wall area is highly animated with sprawling views of the "mother building" frag-



mented by slices of it reflected in the mirrored baffles, with the varied angles of stairs (with aluminum, four-part rails), glass and limestone walls, mullions, slivers of mirrors, plus a variety of rich materials—oak, aluminum, green carpet, tan carpeting low on the walls (for protection from bumping book carts), white walls and ceilings, glass, limestone, hanging plants.

Is it too busy? My own feeling is that after concentrating on law books, an activity that taxes the analytic faculties, this abundance of images that allows play for the intuitive part of the brain must be refreshing, if not quite restful. The students would seem to agree.

One piece of evidence is the popularity of the armless, backless stools that line the edge of the balconies and overlook the window wall and all its distractions. Uncomfortable as they must be for any length of time, they are always occupied, and, Pooley says, "Students get here early in the morning to reserve a stool and use it all day." Further evidence is what students say: "I love being able to look up and see the cubist architecture with the mirrors." "It's busy out front here, but there are enough quiet spaces in the back." Some students see the green carpet as too close to Astroturf and visually noisy, but most appreci-





Pleased students—and smiling gargoyles.

ate the architect's attempt to bring in a feeling of the outdoors. Birkerts says that if he had the choice to make again, he would select a gentler green.

In fact, student reaction to the building is almost unanimously favorable, and, as Pooley says, "Law students are not the easiest people to please, and would have picked over this building if there had been serious faults with it." The way they react—thoughtfully—to the addition speaks for it in another way. Generally, people just don't have strong opinions about buildings. The library addition, by contrast, has clearly captured its users' attention; their views are precise and considered. These law students talk about their building as though trained in design.

Staff members are equally pleased with their surroundings. For instance, Margaret Leary, associate library director: "We really like the open stacks, the carrels. The space is light and airy and comfortable, and engenders a good feeling. I don't think enough can be said about what this building, supported entirely by privately raised funds, does for the spirit in the school, especially in Michigan, which is going through hard times right now." And then there's the reference librarian, Bruce Johnson: "We were afraid we'd be trapped in a basement, but I don't feel the least entombed. It's a spectacular setting to work in."

What then of the usual problems afflicting open space with abundant glass, such as afternoon sun, glare, leakage, poor acoustics, and the like? The glass is bronzed, and the fact that students occupy those balcony stools by the window all afternoon would indicate that it's neither uncomfortably warm nor glary. For one thing, "the mother building" to the west shields the addition from afternoon rays, and the baffles reduce direct sun and glare. There are circular crannies punched into the limestone wall that were to serve as planters for ivy to diminish glare and soften the look of the monolithic plinth. So far, only an assortment of scraggly weeds has been willing to take up residence in these porthole-like openings. "If we can coax ivy to grow there, we will," says Pooley, "but for purposes of decoration. Glare is not a problem."

From outside, reflections of the old building, above. Across page, a view through glazed end of trench, limestone wall reflecting light downward, balconies, people, plants, mirrors, more.

The building did leak through the curtain wall, though not through the structure, which is lined with soldered lead sheets. The administration hopes that the leaks have been plugged, but can't be certain until the first fierce downpour or snow storm. A steam pipe running the length of the outdoor trough was meant to melt snow in winter and failed to do so in 1981. Now steam pressure has been increased.

Acoustics *are* a deficiency. A timid voice in the third level lounge can be heard two stories up, and there's little to be done about it. The spaces are carpeted and otherwise acoustically treated where possible. Leary says it is "the price one pays for having an entirely open space with 15-foot ceilings."

The building has another serious, but apparently remediable problem. Its consumption of fuel has been far higher than expected, and, in fact, higher than that of a recently completed above-ground building on the same campus. The university has retained a group of mechanical engineers, to study the issue together with its own staff. According to the university's director of business operations, Jack Weidenbach, "It's our staff's feeling that we're taking in too high a percentage of fresh air. We don't think the building design is at fault." In addition, the law library addition is open far longer hours than had been anticipated, and longer hours than the above grade building with which it is being compared.

There is one further problem. It has to do with mysterious, ghastly noises. Pooley explains: "When the temperature of the air changes, the metal contracts or expands and makes the most appalling, crashing sound, like teams of sledgehammers. They're working on this. More disturbing and less fixable, I think, is that there are vents that go into these ducts that seem to contain pieces of metal, which are so shaped that the whole thing becomes a sort of organ pipe, and when the right speed and temperature are reached a very high-pitched whining sound with great intensity goes off and everybody has to leave. I mean, it's impossible to work."

The building's principal resident spirits, however, are benign. On the second level of the old library is a series of gargoyles, including two that Pooley insists were sculpted to resemble William W. Cook, the donor of the law quadrangle. "Looking up at those gargoyles from the underground addition, one can see clearly that Mr. Cook is smiling," says Pooley. "He appears to be pleased with the new addition to his library." □

