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Essay
9 Image: Today’s Big Man on Campus by Jayne Merkel
Colleges are constructing remarkable buildings to attract new students. The trend has even little schools spending big bucks.

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From the publisher
Dear Reader,
Information and knowledge give people the power they need to make good decisions. Recently, when looking at data from McGraw-Hill Construction Dodge Analytics, we realized that despite some setbacks in the early part of the decade, the higher education sector has recovered quite nicely. And it became clear to us that we can help empower the decision-makers who are in the midst of designing or building college and university buildings. We selected 30,000 architects, owners, and contractors who are working on these projects to receive this special supplement, ARCHITECTURAL RECORD REVIEW HIGHER EDUCATION.

It has three parts. First, we’ve included a special article on trends in higher-ed building design. By listening to ARCHITECTURAL RECORD’s network of professionals and tapping into the rich construction market data provided by McGraw-Hill Construction Dodge Analytics, we show you what to expect in the future.

Second, we’re reprising Building Types Study articles covering three innovative university projects published by ARCHITECTURAL RECORD in 2000 and 2002, and supplementing them with new post-occupancy reviews.

Third, we’re showcasing offerings from manufacturers who make products used in the construction of higher-education buildings. There’s no question that good design is only possible when professionals know what’s available for specification.

We are proud of this supplement, ARCHITECTURAL RECORD REVIEW HIGHER EDUCATION, and we are sincere in our hopes that you will find it to be valuable too.

Laura Viscusi
VP Sales/Associate Publisher, ARCHITECTURAL RECORD

On the Cover: Gwinnett University Center
by John Portman Architects.
Photo by Michael Portman

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College construction has been mirroring society at large, in which a relatively small luxury market caters to high-end clients while huge, big-box retailers serve everybody else. Today, the top schools use inspiring buildings to market themselves to the best students, while those being built at state universities and community colleges are still competing for students and need to be attractive.

Construction of post-secondary institutions is rebounding, mainly at the top and bottom of the economic scale, after setting a record in 2002 with 30 million square feet, then declining abruptly in 2003 because of state budget cuts and endowments' stock market losses.

"Much of the strength over the past couple of years has been the result of the growth in community college construction," noted Burleigh Morton and Richard Branch in a summer 2004 update of McGraw-Hill Construction's Special Sector Study: The New Heights of Education Construction. "Community colleges have become a diamond in the rough of late due to their liberal acceptance policies, lower costs, and more applicable degrees. However, they still account for just 2 percent of total education construction."

The majority of American students attend community colleges, and few the elite universities, yet the elites are receiving unprecedented gifts in the current economic climate, and have more to spend than all colleges combined. According to "Rich College, Poor College," an article in the December 2004 BusinessWeek Online, "Last year, twenty institutions received $6.2 billion in donations—more than a quarter of all donations to higher education. The trend is driven largely by an increasing concentration of wealth in the U.S., which has swelled the ranks of the most affluent Americans," who have doubled their "annual giving in the past decade."

In 2003, Harvard garnered the most—$565 million, or $28,300 for each of its 20,000
Recent work at the University of Cincinnati includes the College Conservatory of Music (above) and the Steger Student Life Center (right).

students—while Palm Beach Community College in Florida, more typically, raised just $800,000, or $36 a head. "While gifts and endowments cover 37 percent of Harvard's $2.6 billion annual budget, donations alone provide just 8 percent at the average U.S. university, and less than 3 percent at community colleges," the article explained.

"Higher education is becoming more and more a two-tier system in which the top universities turn away ten applicants for every one they accept, while universities farther down are struggling just to fill seats," Robert Frank, an economics professor at S.C. Johnson Graduate School of Management at Cornell University, told BusinessWeek.

That inequity is reflected in building programs, and both trends encourage architectural ambition. Private donors like to give money for buildings, so elite universities are adding onto professional schools, creating high-tech laboratories and renovating historic structures. Schools that do not have the luxury of turning applicants away are building well-equipped dormitories and accommodating student centers to make themselves more attractive than their competitors so that they can fill all the seats they have.

The projects featured in these pages are all intended to make campus life more appealing, even though each of the three schools that built them is competitive. A decade ago, prestigious schools competed by building exciting gymnasiums; today, student centers and arts centers seem to be the carrots. Weiss Manfredi recently completed an alluring stu-
dent center at Smith College in Northampton, Massachusetts; Ricardo Legoretta is building a dramatic one for the University of California at San Francisco; and the Polshek Partnership just finished the contextually Modern Monika A. and Charles A. Heimbold, Jr. Visual Arts Center at Sarah Lawrence College in Bronxville, New York.

Enhancing the quality of the college experience is a goal on all campuses today, and that extends beyond the facilities themselves to master planning and coordination between individual architects and buildings.

The University of Cincinnati is now known for hiring "signature" architects, but what is most impressive are the ways those
Robert A.M. Stern Architects is designing the renovation and expansion of McKim, Mead & White's Baker Library at the Harvard Business School.

architects have deferred to one another, existing buildings, and a master plan by Hargreaves Associates. Henry Cobb's expansion of the College Conservatory of Music converted a historic gymnasium to space for vocal and theater performance and an existing mid-rise dormitory to music practice rooms, then tied the five-building complex together with a grand curved courtyard. While renovating the neo-Federal Tangeman University Center nearby, Charles Gwathmey and Gregory Karn, of Gwathmey Siegel, echoed those curves in zinc-clad additions. Buzz Yudell and Mario Violich, of Moore Ruble Yudell Architects & Planners, played off the curves of the CCM and University Center when they designed the Joseph A. Steger Student Life Center. And Morphosis’s Thom Mayne followed suit when he created the curves of the classroom wing of his Student Recreation Center.

Gwathmey Siegel opened up the interior of the University Center with a gigantic, light-filled atrium focused on the old football stadium and Morphosis’s new Student Recreation Center on its north side. Leers Weinzapfel Associates' Visitors Center also leads to the stadium; the room in which prospective students are prepared for tours looks right into it and onto Bernard Tschumi's Varsity Village (which used to be called the Field House). It is only now, with all these buildings completed—or about to be—that the fruits of the efforts of university architect Ron Kull and the members of the university’s Design Review Board (architects David Niland, Jack Hoddell, John Senhauser, and

The Polshek Partnership is restoring Louis Kahn's Yale University Art Gallery with the kind of care that is usually reserved for antiquities. This photo shows one of the galleries as it was before work began.
Many architects must work with awkward recently constructed buildings. TKE Architecture took over a drum-shaped courthouse (which they describe as “tired and architecturally ill-conceived”) and created new quarters for Hofstra University’s School of Education and Allied Human Services (above and right).

Michael McInturf, landscape architect Eric Doepke, and former dean Jay Chatterjee are really visible.

On campuses with significant historic building stock, coordination can be even more complicated. Robert A.M. Stern, whose firm designed the Smith Campus Center at Pomona College discussed in these pages, is working on two projects at Harvard that deal with already-existing buildings in very different ways.

“At the Harvard Business School, we have extended the Georgian vocabulary that goes back to McKim, Mead & White’s competition-winning scheme from 1926,” explained Stern, who is dean of the Yale School of Architecture. “Although on the Business School campus there are buildings in other architectural styles, there aren’t too many, which is why its campus has such a remarkable coherence, and why its alumni have such great pride in the clear mental picture that they identify with. It’s not just the style of the buildings, it’s the urbanism that goes with that style: the organization of the campus, the relationship of outside spaces one to each other, coherent path systems, and so on.”

Harvard Law School, Stern noted, is a “totally different story. Its first major building was by H.H. Richardson, in his characteristic Romanesque style—Austin Hall, 1884; the great Langdell Library that dominates the Law School portion of the campus is a great Beaux-Arts building—Shepley, Rutan & Coolidge, 1906. Walter Gropius added his historically important, and admired but not beloved, quadrangle of [International Style Modern] dormitories and classroom buildings in the 1950s. Benjamin Thompson did a number of buildings in the 1970s that were more about what Benjamin Thompson was interested in than about the Law School.” So Stern sees his job, on the northwest corner of the Law School, as a matter of planning “for new construction in the short term, and in the long term for a more coherent urban vision for the campus. Our building can’t look like the Harvard Law School, because the Harvard Law School doesn’t look like any one thing. But it can learn from those buildings that precede it and also work with the campus’s currently compromised open space to produce a new heart for the Law School.”

Planning to increase undergraduate enrollment, Princeton has hired traditionalist Demetri Porphyrios to build a sixth residential college in the Collegiate Gothic style predominant on the campus. Porphyrios is a London-based Princeton graduate who designed additions to Magdalen College at Oxford and Selwyn College at Cambridge, England. The 290,000-square-foot, $110 million project will open next year. But new science buildings at Princeton are aggressively forward-looking. The 2003 Lewis-Sigler Institute for Integrative Genomics and Carl Icahn Laboratory, by Rafael Viñoly, contains a sculpturesque conference room by Frank Gehry, who is also designing a new interdisciplinary science library with a “sculptural bridge” to nearby buildings.

Pioneering buildings for pioneering sciences and traditional ones for housing may make sense, but what if the “historic” building
stock is Modern? At the Mies van der Rohe–designed campus of the Illinois Institute of Technology in Chicago, Rem Koolhaas designed a student center that challenged the august masterpieces with wit and irony while enlivening the campus. Helmut Jahn added bold Modern dormitories that recall traditional South Side low-rise apartments with indented courtyard entryways. Jahn’s 570-foot-long State Street Village has a gentle, curved roofline made of corrugated aluminum panels that wrap around glass walls protectively and strikingly while respecting the fabric of the neighborhood.

When Mies’s IIT campus and the first Modern buildings on the Yale University campus were constructed, the idea was not to reinterpret historic buildings nearby. Louis I. Kahn’s 1953 Yale University Art Gallery contrasted starkly with the 1928 neo-Gothic gallery next door by Egerton Swartwout. But today, when Kahn’s building is almost twice as old as Swartwout’s was when it was built, the Polshek Partnership is restoring it with the kind of care previously lavished on antiquities. The entire three-story glass curtain wall is being replaced—approximating the original as closely as possible—and the original movable pogo panel partitions are being restored. This is being done as part of the university’s master plan for the Yale Arts Area, which includes renovation of Paul Rudolph’s Art and Architecture Building; Deborah Berke’s conversion of the Jewish Community Center to the Yale School of Art; and a new History of Art building by Richard Meier.

Very few schools have masterpieces of Modern architecture like the Yale Art Gallery, or resources like Yale, which has the second largest endowment in the nation. Much more common are campuses with ugly, awkward, Modern buildings, such as the drum-shaped courthouse that Long Island’s Hofstra University acquired to convert to quarters for its new School of Education and Allied Human Services. TEK Architecture of New York City felt free to hack away at what it considered a “tired and architecturally ill-conceived building” with an almost invisible entrance, radial plan, and “confusing concentric circular corridors.” TEK cut a wedge into the structure, making the entry

Grimshaw is designing Rensselaer Polytechnic Institute’s new $141 million, 203,000-square-foot Experimental Media and Performing Arts Center (above and below). It is custom-designed for artists, scientists, and engineers who want to use the latest technology to make boundary-crossing artwork.
inviting, and filled it with light, color, and movement.

A certain playfulness is characterizing even high-tech projects, such as the Massachusetts Institute of Technology's new $300 million Strata Center for Computer, Information, and Intelligence Sciences, which was designed by Frank Gehry and named for Maria and Ray Strata of Analog Devices, who gave $25 million toward it. Private gifts are playing an increasing role at MIT, which used to get two-thirds of its research budget from the federal government but now gets only 37 percent, and at

John Portman Architects designed the dramatic circular Gwinnett University Center (above and left) to offer access to higher education to 7,000 mostly nontraditional Atlanta-area students. It is intended to give a sense of community to commuting students who learn mostly from home.

major public universities such as Michigan and Virginia, where, as BusinessWeek noted, "gifts and endowment income outweigh state appropriations" now.

Privatization fosters freewheeling experimentation, such as that embodied in the Rensselaer Polytechnic Institute's Experimental Media and Performing Arts Center, designed by Nicholas Grimshaw's and opening in 2007.

Fresh thinking is not confined, however, to wealthy public and private schools. John Portman Architects designed the dramatic circular Gwinnett University Center to offer access to higher education to 7,000 mostly nontraditional students in suburban Atlanta. The advantageously sited 110,000-square-foot, three-story, $22 million building was among the first in the nation "designed specifically with the intent that 25 percent of the student body will be studying online," according to the architects, yet the Center is intended to foster a sense of community for the faculty, commuting students, and those who usually learn from home.

The Gwinnett University Center is both the beginning of a trend and the first in a larger complex, as the architects explain: "[The Center is] currently a satellite facility for a consortium of institutions of high learning. Ultimately, the master planned campus will be built out with more than 15 buildings to serve over 20,000 students, and this signature building will become the academic center of that new stand-alone university."

When the Internet was new, the future of the campus was uncertain. Now that online learning has been institutionalized, the institutions that facilitate it are physically growing, as are those that are both rich and poor. At this point, the architects are the beneficiaries of trends at both ends of the academic and economic scales.
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Postgraduate Studies

IT'S BACK TO SCHOOL AS WE REEVALUATE THREE CAMPUS PROJECTS THAT WERE INTENDED TO KNIT TOGETHER HISTORIC STYLES, PROMOTE INTERACTIVE TEACHING, AND ENCOURAGE THE SENSE THAT THE ACADEMY IS A COMMUNITY.

By Jayne Merkel

In light of recent interest in campus planning and student centers, we are taking a second look at three projects published in Architectural Record several years ago. Robert A.M. Stern Architects' Smith Campus Center, at Pomona College in Claremont, California, drew inspiration from historic buildings on the campus and resurrected a fine but neglected master plan. William Rawn Associates' Stowe and Howard residence halls, at Bowdoin College in Brunswick, Maine, set the stage for a new era in residential life and for a new quadrangle for future buildings. Tod Williams Billie Tsien Architects' Mattin Center, at Baltimore's Johns Hopkins University, created links between the heart of the campus and surrounding streets with a place where students could develop interests in the arts while getting together outside of class. All three projects were specifically designed to draw students in, facilitate collegiality, and foster new relationships and friendships.
Smith Campus Center
Pomona College, Claremont, California

ROBERT A.M. STERN ARCHITECTS DESIGNS AN ACTIVITIES COMPLEX THAT ANCHORS A CAMPUS AND REINFORCEs ITS CACHE OF HISTORIC BUILDINGS.
By Susan Doubilet

Architect: Robert A.M. Stern
Architects—Robert A.M. Stern, FAIA, principal architect; Graham S. Wyatt, AIA, project partner; Adam Aruzskiewicz, project architect; Diane Scott, project architect; John Cays, senior assistant; Kyo Banai, Rebecca Laubach, Tonia Long, Lenore Passavanti, assistants; Damion Phillips, Christopher Powell, Cynthia Smith, interiors; Robert Ermerins, landscape associate
Client: Pomona College
Consultants: Syska & Hennessy Engineers (MEFP); Nabih Youssef & Associates (structural); PSOMAS and Associates (civil); Carter, Romanek, Inc. (landscape); Integrated Lighting Design (lighting); Charles Salter and Associates (acoustical)

Program
In 1991, when Peter Stanley first arrived in Claremont, California, to assume the role of Pomona College president, he sensed a problem on the campus. As in many typical Southern California communities, people retreated to the periphery after hours, leaving a void at the center. "The college has an extraordinarily diverse student population," Stanley says, "but back then, people didn't mingle except in classrooms."

To solve this problem, Stanley and the college trustees decided to demolish the existing bunkerlike student union building and construct a new campus center. To draw staff, faculty, and visitors, as well as students, the complex was programmed to meet a broad variety of functions.

Many of the college's buildings date from the early decades of the 20th century, including structures by architect Myron Hunt (the Classical Bridges Hall of Music, known as Little Bridges) and by Sumner Spaulding, whose work has a Spanish cast. These structures were sited following a 1913 campus master plan prepared by Hunt. The plan, based on Beaux-Arts methods, set out a strict grid governing building axes, entrances, and pathways. It also subscribed to Thomas Jefferson's ideal of an "academic village" with a central lawn, called the Marston Quadrangle, flanked by pavilions.

Desiring a state-of-the-art facility that would look "as if it had always been there," the college administration selected Robert A.M. Stern Architects, a firm experienced in designing academic buildings and renowned for dressing them appropriately and contextually.

Solutions/Intentions
"I don't buy the idea that today, with the Internet, college campuses are outmoded," says Stern associ-
The south-facing courtyard is framed on three sides by three two-story pavilions (opposite and this page). Besides functioning as a circulation hub between wings, the courtyard serves as a social gathering spot throughout the day and evening. The architectural style of the complex—Spanish Colonial in feeling—relates well to existing campus buildings.
The double-height forum (left, top) is a public antechamber serving the existing ballroom, which was renovated by Stern. The well-appointed lounge (left, below) was designed as a student “living room,” with glass-paneled doors allowing passersby a glimpse into the gathering place.

“forum” that serves as the antechamber for the existing Edmunds Ballroom, which is surrounded by the new building. On the loftlike second level, much of the space is allocated to meeting rooms and offices that can be reconfigured as administrative needs change.

Wyatt talks with excitement about the significance of the site within the master plan. “Stanley discerned the lack of a compelling center on the campus, but he didn’t quite realize the spectacular opportunity afforded by the last available site on the central quadrant. We were able to incorporate three axes into the center.”

The style of the new pavilions, with a spare Spanish sensibility, fits into the campus seamlessly. Roofs are pitched, with tiles produced by the same manufacturer as those cladding the existing buildings. The ground-floor colonnades present a flattened Moorish profile, while the pilasters on both floors are Doric. The two-story entrance rotunda fronting the western pavilion is designed to respond in dignity and scale to Little Bridges, which faces it across the landscaped quadrangle.

The center is easily accessible, with entry from any side, at a number of points. Stairs and corridors are roofed but open-air, framing views of the central courtyard, campus, and two-story “forum.”

As with the college’s earliest buildings, the walls of the Stern structure are board-formed poured concrete, an expensive feature the architects urged the college to incorporate. “It meets and surpasses current earthquake requirements,” says Stern. “And it ‘breathes,’ as the roofs over the open-air circulation spaces shade the windows of the air-conditioned rooms behind them.”

Commentary
The south-facing courtyard was the most glaring (literally and figuratively) problem of the center, until Stanley added four potted trees. “The courtyard badly needed softening as well as shading,” he explains.
Metal banisters and railings, custom chandeliers, exposed wood beams, and finely detailed masonry impart a spare Spanish Colonial sensibility to the public forum of this new building.
The Smith Campus Center, which replaced a barn-like student center, has fallen prey to a dilemma that confronts all buildings that facilitate change: It delights those who were ready for something new and annoys those who liked things the way they were—even though it was planned over a five-year period by a committee of administrators, faculty, and students.

Art history professor George L. Gorse, who served on the committee, said he was “most impressed with how Robert A.M. Stern’s Modern Spanish Mission style relates to key buildings, in particular Little Bridges, by Myron Hunt in 1915, the ‘gem’ of the main Marston Quad. Stern tried to draw together Hunt’s Pomona College plan of 1908-14 with a Classical building—the original 1903 library, now [used for] economics and politics—at the head of the quadrangle and the Spanish Mission buildings at either side with open colonnades.”

Gorse is particularly happy with the Center because “from the 1920s, Pomona strayed away from the Hunt plan,” and the architects brought it back into focus. “Bob Stern and his junior associates came many times in the early phases and went through the special collections at the Honnold Library, looking through old photographs of the buildings and grounds. They made a special effort to know and read the history of the college and its campus. When the Smith Campus Center was dedicated in 1999,” he continued, “Bob Stern gave one of the most illuminated overviews to the history of the campus that I had heard, and I study the campus in my own teaching, at Pomona, of architectural history.”

Neil B. Gerard, the associate dean of students who manages the Smith Campus Center, has made changes to the Center, but he, too, appreciates “its beauty and certain architectural elements, like our signature round windows.” He considers them “wonderful additions to an already beautiful campus. Robert Stern did an excellent job fitting the Campus Center to the campus and tying the existing north-south and east-west axes... Stern not only placed the building correctly, he carefully matched shape, finishes, and color with the surrounding structures.”

And yet, Gerard said, “the Campus Center was altered almost immediately following its opening.... The formal furniture was replaced with comfort furniture. A meeting room was quickly converted to a TV lounge; couches and overstuffed chairs were added in several other spaces. In each of the first three years of operation, interiors were softened, color was added, art was installed.” One reason changes were made is that the budget did not allow all the spaces to be built out immediately, so some casual rooms that the students were used to having were either unfinished or difficult to reach.

“I was surprised by students’ negative reactions,” said Gorse. “I realized how different my perspective is as an architectural historian. I look at it as a beautiful building and very satisfying to use for my teaching in the main theater—a lecture course in the history of art.” He also likes the faculty and student restaurants.

The Campus Center took the place of a student center that was designed specifically for student use, and the students had trouble accepting a new type of facility. Architect Robert A.M. Stern pointed out that “it was always the dream, going back to when Mr. Smith [the
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donor] was an undergraduate, to have a campus center that would bring together faculty, administration, staff, alumni, and students. Although the location was excellent for a student center, and had been the site of a student center since the 1930s, it was also at the most visible intersection of the campus, where guests to the college were most likely to arrive and get their first impressions. The challenge was to create a place where students could take the last hurrahs of youth, but not out on display for arriving dignitaries.

Stern, too, is “happy with the way [the Center] fits into the campus and carries out the spirit of the original plan, and meets the complex agenda of circulation and symbol at a crucial corner of the campus. I’m also happy with the way the building was realized as a tectonic object, with the level of quality of the exposed board-formed poured-in-place-concrete walls, one of my few experiments with that material, which has been the tradition at Pomona from the very beginning. The third thing about the building that I take pleasure in,” said Stern, “is the way we were able to minimize the amount of space that required heating and cooling, treating many of the passageways as open-air loggias, arcades, and the like, which allowed us to get much more building than one might have imagined for the budget, and a finer building, one that really responds to the local climate, with its tremendous heat in the summer—the arcades stay cool—and the relatively benign winters.”

However, noted Gerard, “a portion of the patio on the north side of the Coop Fountain was enclosed, expanding the room, adding space and openness. Banquette seating and couches were installed. A new stairwell was added, connecting the fountain to the recreation room directly above it.”

The architects had planned for change by creating unfinished shell space. “The spaces that were fitted out are also by and large fairly flexible, so if one restaurant doesn’t work, just like in the commercial world, it can be replanned,” Stern said.

Still, as Professor Gorse explained, “Some of the game rooms, and pub, were not furnished,” so temporary offices for faculty whose buildings were being renovated were constructed in the unfinished part of the basement, changing the whole nature of the center.

Added Gerard, “As the need for surge space has been met, we now get to finish the building by converting those offices back into Campus Center space. Instead of looking only at the lower level, it was decided to reconsider the entire building and look at all of the services and programs that exist, as well as those that we would like to add.” Plans are to create a living room/family room/den—one large room where students can hang out, and to make more multiuse spaces “where we can increase the serendipity of the interactions of people’s lives.” A new committee of faculty, students, and administrators also wants to provide views to showcase the activity level of the building, and to add an art gallery space to replace one that is being lost on campus.”

While they are at it, they want to create better connections between the Campus Center and the part of the campus to the north of the building where two new academic buildings are going up now—the way the architects so masterfully did between the Smith Campus Center and the parts of the campus to the south.

**LESSONS LEARNED**

- Studying the history of the campus can help architects revive valuable lost traditions.
- Getting used to changes in use can take some time.
- Time-tested building techniques can be revived.
- Unfinished shell space provides administrators with a variety of options over time.
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Mattin Center
Johns Hopkins University, Baltimore, Maryland

TOD WILLIAMS BILLIE TSIEEN ARCHITECTS DEMONSTRATES A PRINCIPLED APPROACH FOR FITTING MODERN FORMS INTO THE LANDSCAPE.
By Suzanne Stephens

With its design for a new creative arts center at Johns Hopkins, Tod Williams and Billie Tsien Architects confronted evidence of a strong case of Jeffersonitis, a condition affecting much southeast American campus architecture. The campus's two existing quadrangles, characterized by the type of neo-Georgian brick-and-white-trim architecture of Thomas Jefferson's University of Virginia, date back to 1914, when the first buildings of a master plan by Parker and Thomas, of Boston and Baltimore, were finished.

A third quad-in-the-making seems to be maintaining the loyalty to the vocabulary. In such a setting, a Modern building can look as if a UFO landed among the halls of Ivy. Williams and Tsien, however, demonstrate that a Modernist approach can give a campus a new identity without destroying its character.

Solution/Intentions
The site for the arts center occupies 1.5 acres of a slope at the southeastern end of the campus, edged by a main thoroughfare on the east side, a power plant to the west, and a densely wooded sculpture garden that belongs to the Baltimore Museum of Art on the south.

Tod Williams and Billie Tsien developed a scheme with three wings, in which two branches spill gradually down the slope as it drops 32 feet in grade. The third short wing, for a theater and café, in effect bridges the two on the upper side of the hill, creating an open piazza in the area enclosed by the angled arms. The brick buildings, with a series of stairs, ramps, decks, and interior passages that connect various painting and digital arts spaces as well as dance studios, act as exterior gateways, interior pathways, and meeting places for students coming to the center. "We wanted to create both a nexus for student interaction and a connector to various activities," Williams explains.

The poured-in-place-concrete structure and its retaining walls at the base of the buildings gradually give way to steel square-tube columns and beams and sand-blasted, double-paned glass walls at the top. But the dominant brick material bears a strong resemblance to the kind Alvar Aalto employed in his Town Hall at Säynätsalo in 1952.

Architect: Tod Williams Billie Tsien Architects—Tod Williams, Billie Tsien, principals in charge; Betty Chen, William Vincent, project architects; Kyra Clarkson, Leslie Hanson, Andy Kim, Jennifer Turner, Paul Schulhof, Nina Hollein, Peter Arnold, project team

Consultants: Severud Associates (structural); Ambrosino DePinto & Schmieder (mechanical, electrical, and plumbing); Whitney Bailey Cox Magnani (civil); Mahan Rykiel (landscape); Renfro Design Group (lighting); Acoustic Dimensions (acoustical); 2 x 4 (graphic)

Size: 50,000 square feet
Cost: $13.6 million
Completion date: 2001

Sources
Structural steel: Jarvis Steel
Masonry: Potomac Valley Brick & Supply Company
Exterior wood-molded red brick: Boral Brick Company
Exterior custom-glazed brick: Castaic Brick
Chinese Northern Black granite: Walker and Zanger
The long arms of the art center follow the slope of the campus’s edge, with a short portion acting as a bridge element at the top, where stairs lead to the upper campus (above right). A terrace (not left) at the end of one building provides space for outdoor painting.
Two kinds of brick are used for the center, both of which show a certain affinity to that of the older Johns Hopkins architecture. Although most of these neo-Georgian buildings are built of Flemish bond, Williams and Tsien chose a ruddy, solid, running bond, but with the rough wood-molded texture of the university's original brick. Alternating with the solid red brick is an extruded brick, custom-speckled with a gray glaze to pick up the dark color of the headers in the university's Flemish bond.

On the upper level of the center, translucent glass introduces natural light to the interiors through manipulations of section that recall the architects' Folk Art Museum in New York [RECORD, May 2002, page 202]. The horizontal extension of space, however, emphasized by changing floor planes and angled walls, brings an arresting variation to the theme.

Commentary

The center fits into the landscape with an ease that should increase with the passage of years, as the masonry walls acquire a patina of age and more landscaping grows in. Right now, even though the brick has a rich, red crusiveness, whole swaths of it seem unremitting—it cries out for ivy. Williams and Tsien are aware of the need for additional landscaping, especially on the slope at the perimeter of the center, as well as in the piazza at its core.

Nevertheless, both outside and inside the buildings, the interaction of horizontal and vertical spaces and the variety of materials work to great effect. The luxuriant textures and tones of the interior materials, such as Chinese Northern Black granite, honed for the walls and flame-finished for the floors; cherry wood slatted wall panels and seating; and light green ceramic tile, enrich the spaces. “We believe in a Ruskinian reliance on natural materials,” says Williams. “Our architecture may be different, but not the principles.” Although the rooms for dance or music may not have the same pizzazz as the circulation spaces, they serve as calm endpoints for this dynamic choreography of planes and surfaces.
Vertical slices of space open up the interior, where changes in floor, wall, and ceiling planes are emphasized by rich materials and colors. Cherry wood panels, Chinese Northern Black granite, and green ceramic tile are seen in the digital arts/dance building (right and top right), while the music and art studio building is marked by a Finnish plywood mural (opposite) and a bright yellow ceiling over the student activity offices (above).
Post-Occupancy 2005
Mattin Center,
Johns Hopkins University, Baltimore

By Jayne Merkel

At a time when many colleges are building new student centers and some are building arts centers to improve the quality of life on campus, Johns Hopkins University’s decision to do both at once seems prescient indeed.

One of the things the architect in charge of the project, William Vincent of Tod Williams Billie Tsien Architects, likes best about the Mattin Center is the innovative program. It is “really interesting because it proposes a student center based on the arts; instead of using fast-food courts or large-screen sports bar-type spaces, Johns Hopkins decided to use the arts as a catalyst to bring students together in a social situation. Painting, dance, drama, and music performance become the focus for gathering and recreation.”

The architects are also happy, notes Vincent, with “the way the building has integrated with the campus,” both because of its sitting in the landscape and because it “filters” students walking from the public street toward the center of the campus.

That placement may be one reason Tim Nugent, an architect with the Office of Facilities Management who was involved toward the end of the Mattin Center’s planning, believes it to be “an absolute success”: It “offers something for any student who wishes to practice and develop their artistic talents. From painting, playing musical instruments, acting, dancing, studying photography and digital technology to providing office space for the Student Life (Greek organizations).”

When they are there, Vincent said he and his colleagues “like the sense of containment and community that the bent arms of the building create. When you are in one ‘arm’—say, in the painting studio—you can look across and see people moving up along the inclined walls or working in the opposing ‘arm’ in the digital arts studio. For a building of approximately 50,000 square feet, it is surprisingly intimate.”

When asked how the Center has been altered over time, Mary Ellen Porter, the director of Parent Programs, replied, “We added an interior wall in the Digital Media Center to create a separate work space, and turned one of the Digital Media workrooms into a soundproof recording studio. Other than that, I don’t think anything has been changed.”

Vincent said that if he could have done one thing differently, he would not have put “the Digital Media Lab within a glass box.” It was problematic because of glare on computer screens, he explained, although “most of this problem has been remedied with the use of Solarveil window shades.”

Porter, who was assistant director of Student Services when the Center was planned, said, “I would flip-flop the locations of the Digital Media Center and the student work/office areas. That would put the students immediately across the hall from the administrative staff who work with them, and put the Digital Media Center in an area where sunlight does not present issues for the computers.”

Jim Miller, the director of Design and Construction, said he would “include more unprogrammed social space that is warm, soft, and comfortable. Such ‘hang-out’ spaces are invaluable in building campus community and fostering positive interaction between students, faculty, and staff.” William Vincent, however, believes that it is usually “better to make spaces more particular to their actual uses. In that way spaces or rooms have a special character. All-purpose spaces often seem to have no purpose.” He said that most of the rooms at the Mattin Center “are essentially about being changeable; that is, art studios, a black-box theater, and dance and music practice rooms. We believe that they can accommodate whatever the user needs them to accommodate.”

He noted that “the black-box theater could also have been a bit larger, but is working well at its current size.” Porter thinks it’s just fine: “We love the building overall, but the black-box theater and attendant spaces and the dance studio work particularly well for student use. The large music rehearsal room also works very well.”

She is also happy with the material choices and the casual gathering spaces: “We deliberately used a lot of hard materials—CMU, slate, tile—that would hold up well to extensive hard use by students. We did the same with the recreation center building on campus soon after the Mattin Center was completed. We also included casual gathering spaces, both inside the building and outside in the courtyard. That might be the biggest trend I’ve seen—students seem to crave spaces for casual relaxation between classes with small groups of friends, with a nearby Starbucks or equivalent where they can get a quick bite to eat.”

Miller thinks the most important thing in campus planning is “keeping the focus on the campus as a whole rather than on an individual building. There has been a trend to use celebrity architects to design showcase buildings on many university campuses. While this may serve some institutions well, these buildings can be divisive in their egocentric nature and thus can fail to contribute to the greater campus community.”

LESSONS LEARNED
- An arts center can become a magnet for student interaction.
- Digital media labs are best kept in the dark.
- Check out new offerings in durable natural materials. More become available all the time.
- Views from one activity area into another create a sense of community.
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Howard and Stowe Halls
Bowdoin College, Brunswick, Maine

WILLIAM RAWN ASSOCIATES DESIGNS TWO DORMITORIES THAT SERVE AS A LINK BETWEEN HALLOWED HALLS AND SITES FOR FUTURE GROWTH.

By Elizabeth Arcuri

Program
Bowdoin College's wooded campus occupies an enviable location in coastal Brunswick, Maine. The 200-acre campus evolved in two main stages: Colonial-to-late-Victorian-style buildings rose from 1820 to 1900 around a quad. The second burst of construction, from the 1920s through the '60s, produced buildings that were stylistically diverse but nearly all small-scale, clad in red brick, and low in profile. William Rawn, FAIA, designer of the campus' first new residence halls in three decades, calls the historic campus "elegantly integrated."

Solutions/Intentions
In shaping the new $5 million dormitory complex, Rawn sought to fit the project into the texture of the campus while creating an initial link to a proposed second quad. A crucial design requirement was to encourage student interaction.

Between the completion of the residential Coles Tower in 1965 and Stowe and Howard Halls in 1996, life at Bowdoin was in flux. In response to student requests for more varied housing options, the college built off-campus apartments and converted single-family houses for student use. Bowdoin increased its enrollment by moving from a men's to a coed institution, fine-tuning its curriculum, and recruiting.

Elizabeth Arcuri is a facilities programmer and lives in New York City.

Architect: William Rawn Associates—William Rawn III, FAIA, principal; Clifford Gayley, AIA, associate principal/project architect; Victoria Beach, John Upton, Lindsay Crawford, Randy Whinnery, Sean Wang, project team
Client: Bowdoin College
Consultants: Carol R. Johnson Associates (landscape)
Engineers: LeMessurier Consultants (structural); TMP Consulting Engineers (mechanical)

Size: 40,000 gross square feet
Cost: $4 million (construction)

Sources
Exterior cladding: Morin Brick
Concrete: Northern Design Precast
Load-bearing walls, precast plank floors: Strescon Ltd.
Roofing: Maine Roofing Services
Windows: Traco
Ceilings: USG
Wood flooring: Kaswell & Co.
Conveyance: Otis Elevator Company

Two side-by-side dorm buildings, with distinctive yet complementary facades (left), create a massing that defines one border of a new quad. Entries at each corner of Stowe Hall (opposite) facilitate student access while orienting the structure toward all directions within the campus.
aggressively. By the early 1990s, the student body had nearly doubled, to 1,400 (and is projected to reach 1,550 by decade’s end), sharpening the need for additional housing. “It was a pivotal time to initiate a movement to bring students back to campus,” says Bowdoin president Robert Edwards, who supported the idea of developing a residence hall with an emphasis on community.

The project guidelines required the new dormitory site to serve as a link between the historic quad and the athletic fields, and to define the first edge of what will become a new south quad. Practical concerns dictated a building site on the eastern edge of the existing quad. To further define the border of the new quad, the architects chose to construct two dorm structures with distinct forms to underscore their different roles.

The four-story Howard Hall is a long, gable-ended structure. A vertical "ripple" effect, created by ground-to-gable bays, presents an expressive facade to pedestrians. Alternatively, the cubic form of six-story Stowe Hall is rotated to act as a beacon addressing many directions simultaneously. The visual focus of an entry at each corner, together with large windows that allow for natural ventilation and daylight, gives the building eight faces: four diagonal and four orthogonal.

**Commentary**
The two buildings form a knuckle between the main quad and the edge of the new quad, and permit a range of future build-out options. Both residences also foster a sense of coeducational community. Instead of a first-floor sitting room, a small dining area and kitchen can be used for study groups by day and snacking and socializing by night. Suites, composed of double rooms that share a living area and bathroom, face one another on wide corridors running the width of the building. Unless doors are shut, students can see from one suite into the next. The corridors’ extra girth encourages sociability.
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Post-Occupancy 2005
Howard and Stowe Halls
Bowdoin College, Brunswick, Maine

By Jayne Merkel

As I look back over the eight years since their completion, I am struck by how the Stowe and Howard residence halls have become enduring paradigms for how dormitories can create a strong sense of community on a campus,” said project architect Clifford Gayley of William Rawn Associates. “They shaped our subsequent designs for residence halls at Swarthmore, Amherst, Grinnell, Trinity, Northeastern, and Dartmouth, totaling more than 2,540 student beds.”

Stowe and Howard halls also established new paradigms—both socially and physically—at Bowdoin College. By their location and orientation, the new dorms paved the way for future building on the northwest corner of the campus. And the building program helped define the character of campus life.

“Did we study what we did in the 1990s that asked, ‘What kind of residential life do we want to have?’” explained Robert Edwards, who is now retired but was president of Bowdoin when the dormitories were built. He and his colleagues realized that if they were going to abolish fraternities and discourage apartment living off campus, they were going to have to put something else in place. Edwards himself was directly involved, as was his wife Blythe. They worked closely with the architects and students as they created “the first step toward a new residential order. Bill [Rawn] brought mock-ups of his rooms into the campus center so that students were able to come by and comment,” Rob Edwards explained. Because of student comments, they put up two small buildings instead of one large one.

But on one point, the students were overruled. “There was a great push by the students on the committee for a full kitchen in each suite, and we fought that,” the former president said. “We told them, ‘We want you, as part of your education, to meet with and be with other students.’”

“We were always aware that this was essentially a Federal-period campus for 400 students,” Blythe Edwards said. “The college had a series of nineteenth-century dormitories which had no social space. I think that is one of the things that drove students to fraternities.”

Bill Rawn had a lot of ideas about how to remedy that situation.

“At that point in his design career, he was very big on eight-foot-wide corridors,” Blythe Edwards noted. “Rob and I thought they looked like hospital corridors. Also, we were committed to doubles—two doubles and a living room—and we didn’t want to waste space on corridors.” The architects came down to seven feet as a compromise. Now they think that is just about right “to create a vibrant community,” explained Gayley. “Common hallways were designed as primary gathering spaces on each floor, with natural light and window seats at each end and with ample width. We made them seven feet wide; we found that five feet was too narrow, and eight feet was too wide.”

“Color was also a factor,” Blythe Edwards noted. “One of the goals was to make it warm and cozy with creamy yellow walls and warm wood.” Gayley added, “Flanking each ground floor entry, common areas with continuous floor-to-ceiling glass walls serve as welcoming beacons connecting the residence halls to the broader campus.”

The architects and administrators agree that one of the most successful aspects of Stowe and Howard halls is the way they opened the campus up to expansion. “Our design efforts for this project included a conceptual master plan for the South Quad of the campus, with up to ten new buildings projected,” said Gayley. “Our two buildings defined the leading edge of this future quad along a major path between two parts of campus, the historic main quad and the athletic field.” The Edwardses noted that the planning was done in conjunction with the landscape architect Carol R. Johnson, who opened up the planted areas, too.

“There wasn’t enough room for the footprint that Bill had designed,” Rob Edwards explained. “When he realized the problem, he said, ‘What if we did this?’” He built a curve into one dorm, rotated the other, and made them two different heights, “so that you not only solved...
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the space adjacency problem with a rather nice old fraternity house, but by giving somewhat greater verticality, he created a kind of resonance with the big Stubbins building. At least now it has a reference point.'

The high-rise Coles Tower was an anomaly on the historic campus before. But by adding a six-story building and a four-story one, Rawn Associates mediated between the Tower and its historic neighbors.

"The canting of the building was extremely important," Blythe Edwards said, while Rob mentioned the, "two transverse walls all the way across the campus. We were determined that they should be extended. There's quite a lovely bend in it now. The new dorms by [architect] Kyu Sung Woo are almost in an L with the second of Bill's dorms."

Clifford Gayley is pleased with the way his firm's dormitories "balance 'memory and invention.' While these buildings are decidedly Modern with their taut, cubic forms, they 'speak Bowdoin,' relating directly to the simple, elemental shapes of historic buildings that embody the Bowdoin campus. We are encouraged that after eight years, these buildings feel fresh, even timeless."

"If there is one thing that I took away," said Rob Edwards, "it is how important it is to build with quality, with granite and wood and moldings. You're saying to the students, 'We expect you to be grown up.' In these buildings, we got value at relatively low cost because Bill [Rawn] worked very closely with the general contractor and Bill Gardiner."

Gardiner, who is also now retired but was director of facilities management at Bowdoin when the dormitories were built, explained, "It was one of the first projects where we adopted our 'team approach.' Thinking of a three-legged stool, we considered the architects and our contractor, Ouellet Associates Inc., to be two legs of the stool. Our in-house facilities construction management group, headed by the late David D'Angelo, was the third leg. We stressed the fact that each group had to work together and share in these processes—just like the three legs of the stool must work together—in order to achieve the best design at the best cost. Both had to be achieved within our budget and the time frame.

"Our CM group had to make sure our in-house building committee—with students, administrators, faculty, and other involved persons—responded in a timely manner to the need for design decisions," Gardiner continued. "Likewise, the CM group had to secure decisions from within the facilities staff on housekeeping, equipment, and materials issues." At one point, "all the principal players, including the key mechanical and electrical subcontractors, met in Rawn's office in Boston for an entire day and literally built the buildings on paper. Floor-to-floor heights, sizes of openings in floors and walls, critical intersections of mechanical and electrical systems, etc., were all determined in a challenging yet cooperative manner.

"The net result of this effort was a project completed on time and under budget with no change orders—a unique event in my 45 years of involvement with construction projects."

LESSONS LEARNED

- Building with high-quality materials gives important signals to students.
- A team approach involving all parties in the building and planning processes can save time and money.
- Well-planned new buildings can counteract previous mistakes (such as building a high-rise tower on a historic campus).
- Carefully sited structures can set the scene for new quadrangles.

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More comfortable lectures
American Seating and Steelcase have launched the Cachet Swing-Away, an ergonomic fixed lecture series product for the education market. The height-adjustable, fully articulating Swing-Away automatically self-centers and is available with optional cushions for seat and back. The Cachet Swing-Away is 99 percent recyclable by weight and is GreenGuard indoor air quality certified. American Seating, Grand Rapids, Mich. www.americanseating.com CIRCLE 102

Sea-loving students
When HKT Architects of Somerville, Massachusetts, was commissioned to design the new Storer Building at the Massachusetts Maritime Academy, the firm included lots of glass to be sure students had a great view of their surroundings. Vistawall provided its CW-250 curtain wall system, FG-2000 storefront system, 4500 concealed vents, and wide stile doors for the academy building. An architectural feature of the building is made up of three rows of 7" structure channels in front of the main radius curtain wall. Vistawall, Dallas. www.vistawall.com CIRCLE 104

Brainy carpet designs
Theory is a new modular, renewable carpet collection by Milliken Carpet and Cannon Design for educational interiors. With names like Dewey, Mad Professor, Pop Quiz, and Eureka, the patterns range from loose, organic "thoughts" to definite structures. Seven colorways range from light to dark, drawing inspiration from campus architecture, the classroom, and the energy of student life. The patterns are available in various scales to help designers coordinate spaces as small as student dorm rooms and as large as auditoriums. Milliken Carpet, LaGrange, Ga. www.milliken-carpet.com CIRCLE 103

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