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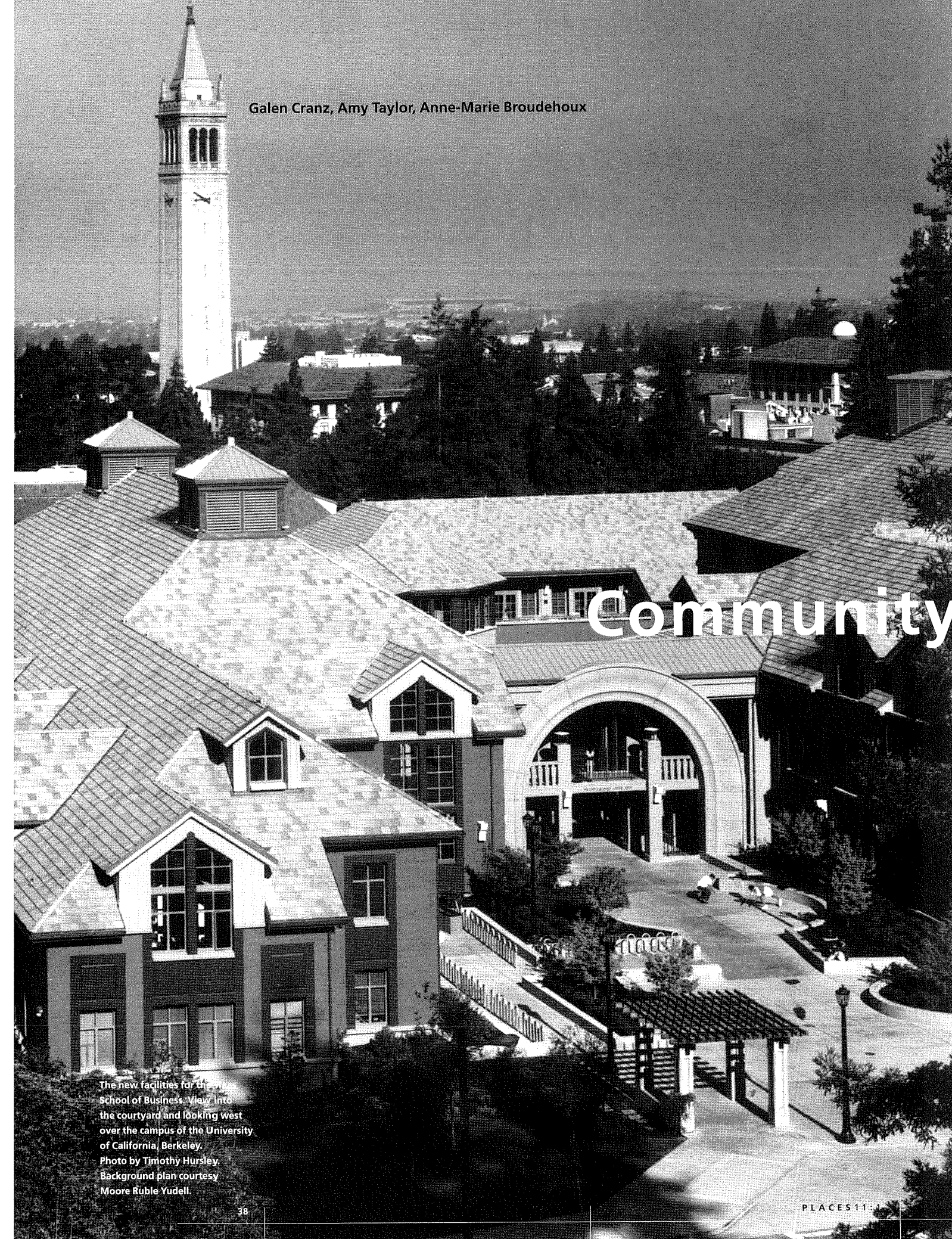
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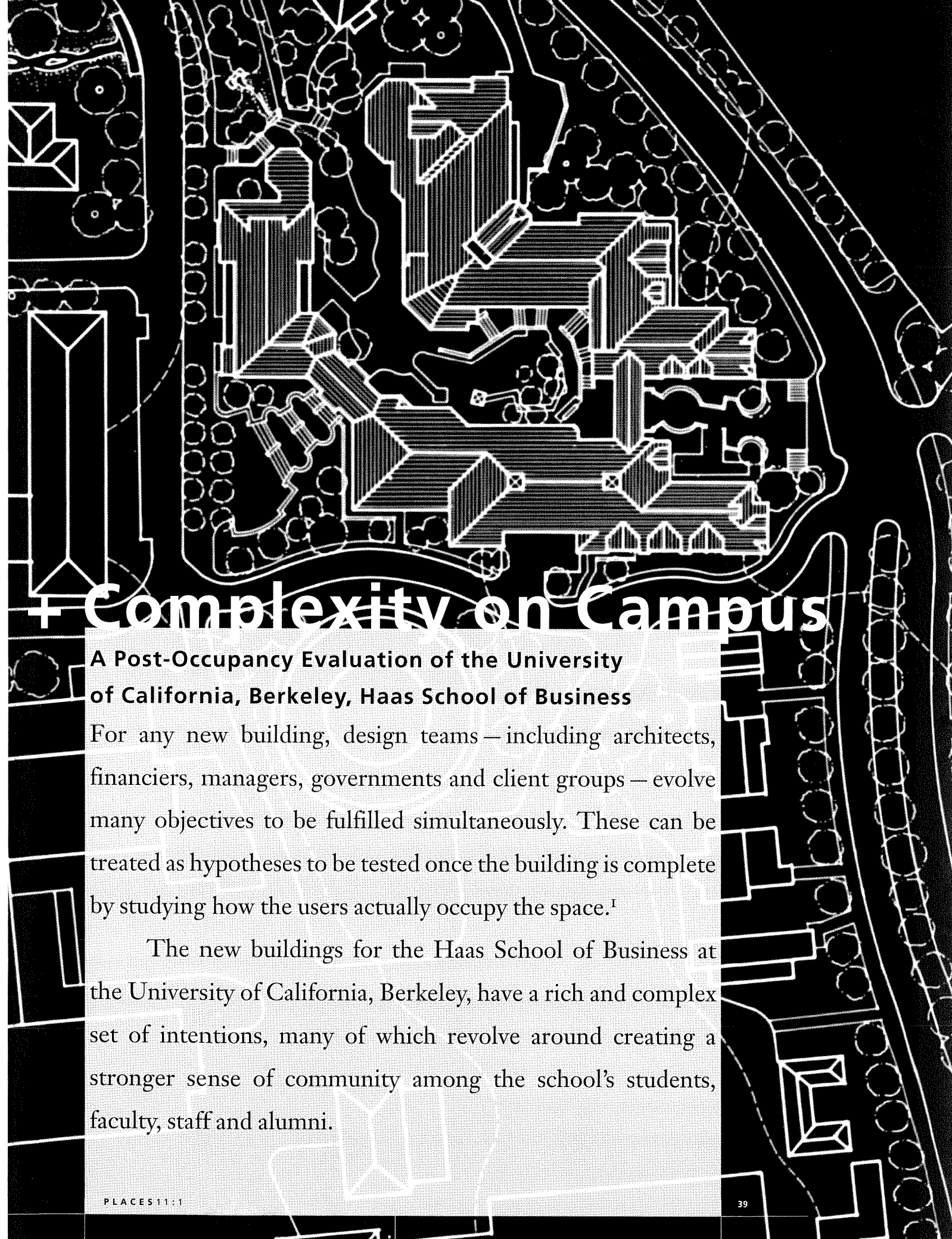
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Community

The new facilities for the School of Business. View into the courtyard and looking west over the campus of the University of California, Berkeley. Photo by Timothy Hursley. Background plan courtesy Moore Ruble Yudell.

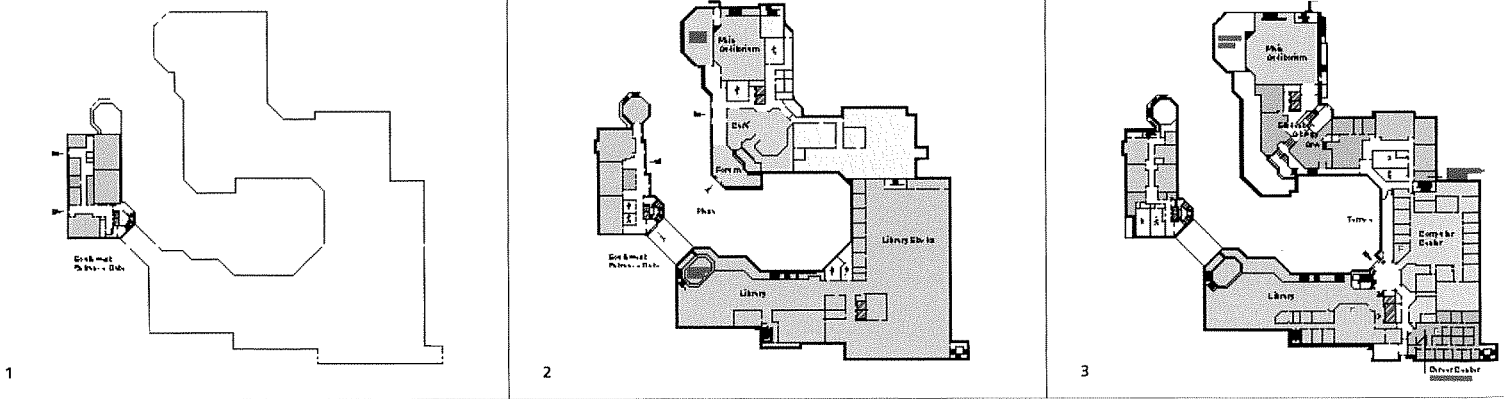


+ Complexity on Campus

A Post-Occupancy Evaluation of the University of California, Berkeley, Haas School of Business

For any new building, design teams — including architects, financiers, managers, governments and client groups — evolve many objectives to be fulfilled simultaneously. These can be treated as hypotheses to be tested once the building is complete by studying how the users actually occupy the space.¹

The new buildings for the Haas School of Business at the University of California, Berkeley, have a rich and complex set of intentions, many of which revolve around creating a stronger sense of community among the school's students, faculty, staff and alumni.



Above: Plans for each level of the Haas school. Graphic by Archer Design; courtesy University of California, Berkeley.

The business school's former home was Barrows Hall, a nine-story, slab-style structure built in 1964. Barrows was considered inadequate for two reasons. Insufficient classroom and office space forced faculty and students to disperse elsewhere on campus. And the building was regarded as unpleasant to work in; offices and classrooms connected directly to the busy double-loaded corridors that served as main circulation routes, leaving no space for informal social interaction. Both of these conditions contributed to the sense that the business school lacked community.

The architecture firm Moore Ruble Yudell worked with the school's building committee to produce three low-rise buildings that are connected loosely around an open courtyard and spill down over a moderate slope, like a campus within a campus. Altogether, the buildings provide 204,000 square feet of space, including classrooms, research centers, student services, offices and a library. The new setting conveys an overall impression of informality and complexity.

We undertook an evaluation in spring, 1996, after the school's new facilities had been open for nearly one academic year.² We identified issues to evaluate by consulting with David Irons, the school's director of public affairs; Professor Fred Balderston, past chair of the building committee; and MRY's Stephen Harby, all of whom explained that the new school had a clear social mission. "From the beginning, both architects and committee have been united in one overarching goal: create a community," Irons said.

Community can be defined in many different ways. According to a behavioral conception, interactions between people may be the actuality of community. According to a more subjective, experiential conception, interactions are the means by which the feeling of community is created. In either case, interaction is key, so it became

a focus for our investigation.

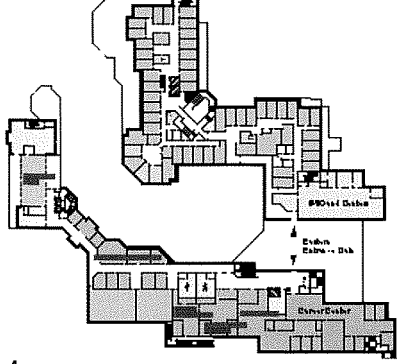
We divided students into several teams, each of which was assigned one of four research methods: interviews, questionnaires, behavior trace analysis and direct observations.³ Their task was to investigate the sense of community within the new school by analyzing several architectural features that were meant to stimulate interaction:

1 Faculty offices In reaction to the experience at Barrows Hall, the arrangement of faculty offices within the the new facilities was intended to foster social interchange among faculty and students. We investigated students' impressions of faculty accessibility as well as physical clues, such as whether the suite layout encouraged faculty to leave their doors open, or whether the inclusion of glazed panels in office doors increased visual connection.

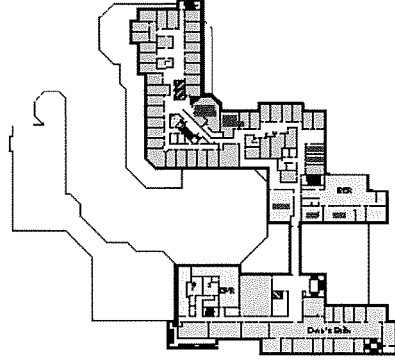
2 The forum and courtyard These spaces, considered the heart of the new school, are located at the convergence of major circulation routes and are designed to foster informal encounters.

3 Informal seating To promote interaction, the building programmers wanted to create informal seating, such as built-in benches and window seats, at different locations.

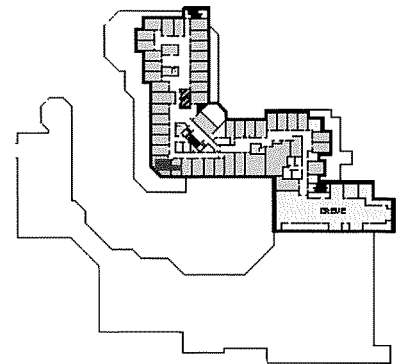
4 Wayfinding Another design goal was to welcome the larger community into the school. We investigated the ability of visitors unfamiliar with the new complex to find their way around it.



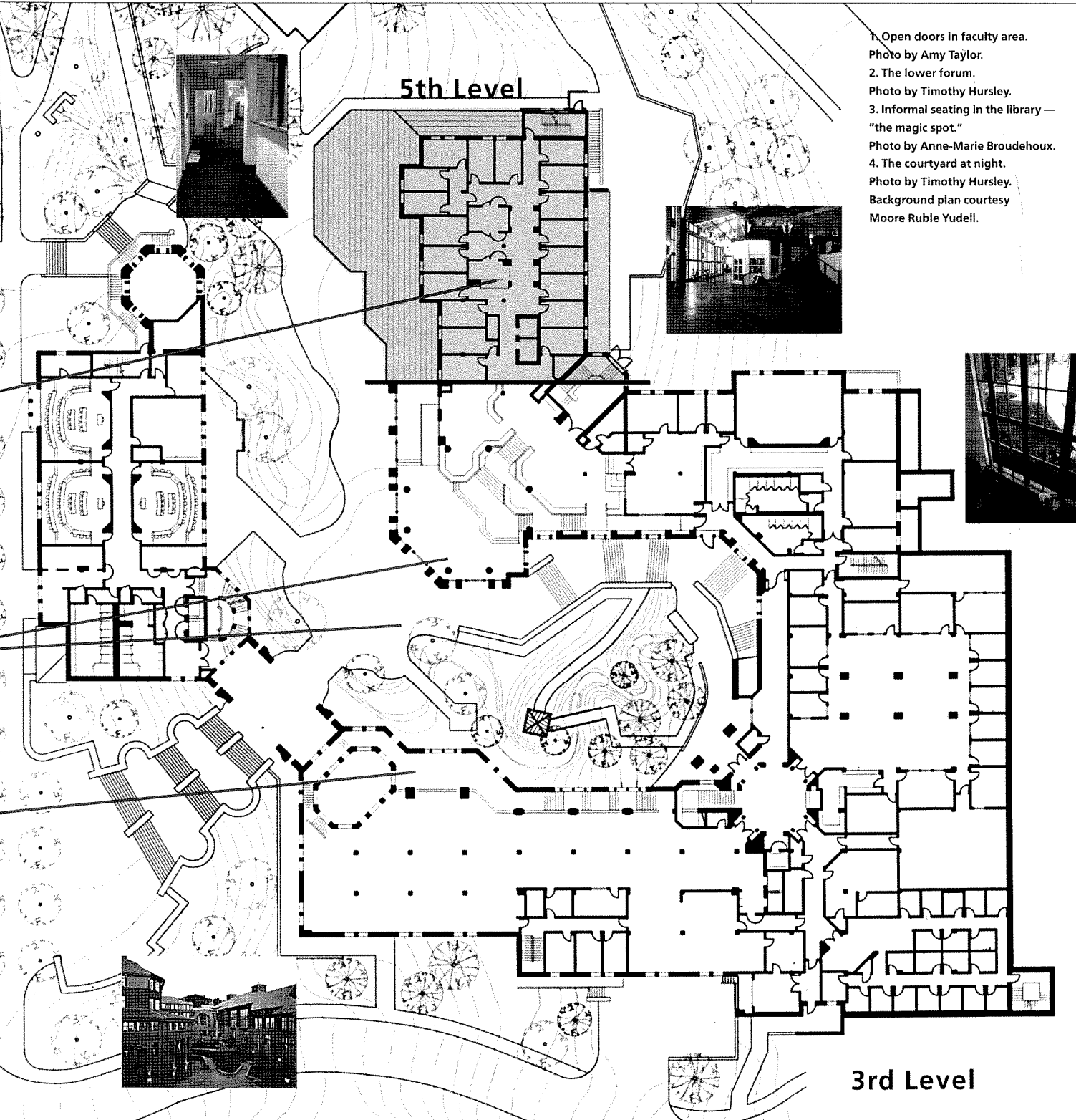
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5th Level

- 1. Open doors in faculty area.
Photo by Amy Taylor.
- 2. The lower forum.
Photo by Timothy Hursley.
- 3. Informal seating in the library —
"the magic spot."
Photo by Anne-Marie Broudehoux.
- 4. The courtyard at night.
Photo by Timothy Hursley.
Background plan courtesy
Moore Ruble Yudell.

3rd Level



The forum (above and right) and the courtyard are popular places for meeting, pausing and working. Photos by Timothy Hursley. However, the east side of the courtyard (below) is shaded almost continuously. Photo by Donlyn Lyndon.

Courtyard and Forum

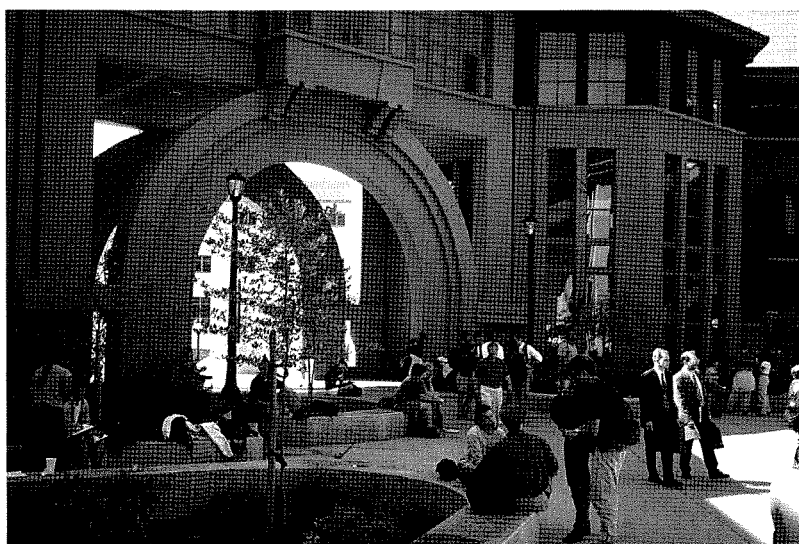
In general, the courtyard design is successful in facilitating chance encounters. Its central location captures a high volume of circulation and increases the chances of regular contact among members of the school. Most students use the courtyard frequently, mainly as a place to rest, socialize or eat. The courtyard was found to be inviting to visitors and well used as a pleasant access route to the rest of the campus.

Student researchers observed that the northern section of the courtyard is very popular, perhaps because it is exposed to sunlight, close to the forum and directly accessible from two building entrances. In contrast, the eastern portion of the courtyard is used much less, perhaps because it is almost continuously in the shade and offers no direct access to the building.



The forum was generally perceived by respondents and student researchers alike as two physically and visually separate entities: the lower forum, which serves as an entry hall, and the upper forum, which serves as the real community room for students. Students appreciate the flexibility of the upper forum, where they study, work on laptops, eat, socialize and occasionally hold nighttime parties. The lower forum is less appropriated by the students and is often empty.

Haas students expressed the need for better visual contact between the upper and lower spaces. Because these spaces are separated, it is hard to wait in one and watch for someone coming, or to pass through and glance quickly to see who might be hanging out. Students would also appreciate seating, public telephones and drinking fountains in the lower forum. Now that a cafe is operating there, more amenities are being offered.



Informal seating

Student researchers investigated the potential of informal seating arrangements throughout the project to facilitate casual encounters. They concluded, in general, that the abundance of seating choices has, indeed, allowed for active appropriation of the space by the Haas community.

The window chairs, on the lower level of the library overlooking the courtyard (referred to by David Irons as “the magic spot”), are a favorite place for relaxing or even sleeping. Most of the people using these chairs said they enjoy the quality of the light, the comfort of the upholstered wingchairs and the opportunity to observe the community in action. Some said they found it difficult to study there because of the distractions



of the activities taking place in the courtyard just outside.

One research team observed that the built-in window seats located along circulation paths inside the building are rarely used for spontaneous, casual, social interaction. Rather, the students rest their bags on the seats while they are waiting to get into classes. Interviews revealed the reasons: students perceived the window seats to be too exposed, too close to the flow of traffic to be good places for socializing or reading. This explains why the seating areas hidden in corners are used more frequently for these purposes.

In the upper forum, movable chairs and tables are greatly appreciated as they allow for groups to form casually and configure themselves comfortably. However, students complain that the chairs are too bulky to allow enough people to cluster around a table.

In the courtyard, benches, planters and low walls provide abundant and diversified seating arrangements from which users can choose. Not surprisingly, more people use informal seating and stay there longer (fifteen minutes on average) than anywhere inside. Some users expressed the desire to have movable tables and chairs that could be used in both the courtyard and the lower forum, which are adjacent to each other.⁴

A gazebo, located in the more shaded part of the courtyard, is used less intensely. Perhaps in the future, when the trees are mature and the gazebo peeks above their crowns, it will become a favored place for introverts and shade lovers.



The new complex has various types of informal seating: the gazebo in the courtyard, window benches and wing chairs in the library. Photo above by Donlyn Lyndon, photos below by Anne-Marie Broudehoux.



How To Grow a

When we interviewed for the job of designing new facilities for the Haas School of Business in 1987, the idea of team spirit was very much on our minds. Our perception of the school as a spirited organization with a keen sense of mission inspired us to prepare one of our most energetic and well-organized presentations ever. After all, we were pursuing clients who knew the value of time, and who gave their students formal training in interviews!

As our collaboration got underway, the idea of team spirit evolved into a richer concept of community, and we saw that the vision of a school community would influence the design in a variety of ways. It became the common theme in three very different sets of influences: the school's program, our design process and our common understanding of Berkeley and the campus as a place.



Students are more likely to greet a faculty member casually if an office door is left open (below right), but most faculty doors are closed most of the day (above). Photos by Amy Taylor. Right: The upper forum. Photo by Timothy Hursley.

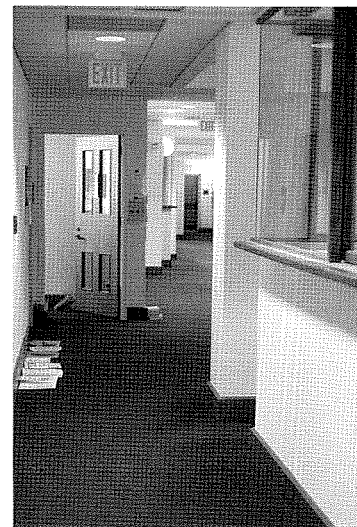
Open Doors

The move to the new complex has had a modestly positive effect on faculty-student interactions. All students surveyed responded that they are more likely to greet a faculty member casually if an office door is left open. While visiting with faculty in their offices, students report that they are more likely to engage in informal conversation, not just official academic matters.

Student researchers observed that doors to offices within faculty suites are open more than doors to offices along corridors. The semi-privacy of the suite encourages open doors, but in busy and noisy areas (near elevators and stairs, for example) doors are more likely to be closed. Regardless of this distinction, most doors are closed most of the time because faculty rarely occupy their offices; after all, office hours are scheduled for only a few hours each week.

Window glazing in the doors allows students to peer into the offices, whether doors are open or not. However, glazing panels in some of the doors are covered with a range of materials, from paper to hanging coats to formal blinds, indicating that some occupants feel too exposed by the visual link through the door. Covering these windows reduces casual and impromptu exchanges between faculty members and students.

Appointment sign-up sheets, hand-outs and informative fliers posted outside the doors of faculty offices indicate that students go to the faculty areas, creating opportunities for social exchange.

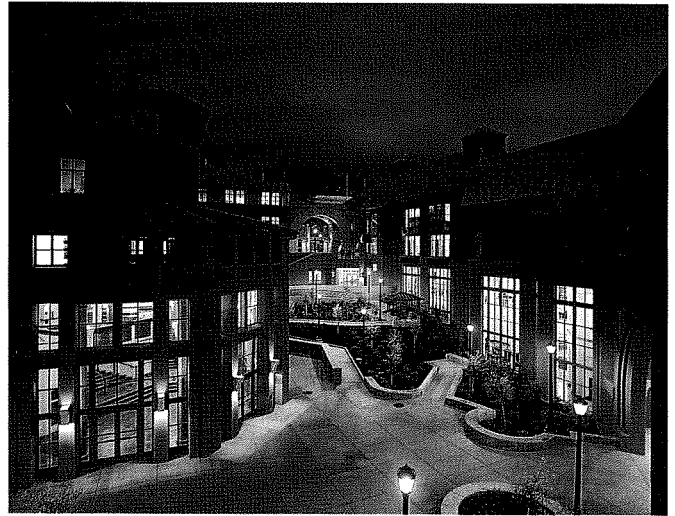


Program: Learning in a Collaborative Setting

An example of the Haas school's educational philosophy is its MBA curriculum. Its focus is the case study of real life business enterprises and their success or failure. The core classes are highly interactive, and the typical MBA classroom in the new building features tiered seating, complete with data ports and interactive media via video projection.

In this modern-day *teatro anatomico* companies like Xerox are laid on the table in a simulation of some critical juncture in their corporate history. Students are called on to propose their own strategies: What do you say Mr. Yamato? Capitalize? Sacrifice profits for market share? Re-structure? Yamato's proposals are fed into Professor White's laptop, which is displayed to the class on the video screen as he jumps from linked spreadsheets to the World Wide Web in search of just the right database. Soon the class begins to see the consequences of Mr. Yamato's approach. The same classroom, with its tiered, wrap-around seating, allows students to communicate as readily with each other as with Professor White, and thus to function as one large team as they work to improve Xerox's fortunes.

This fundamental experience in interactive, group problem solving—the heart of the Haas



were located in the high traffic areas.

As perceived by Haas students, the courtyard and forum are easy to find, classrooms are split between easy and difficult, restrooms are difficult to find and elevators are especially hard to locate. The purposeful location of elevators out of the way contributes to the use of stairways and visible paths, as intended by the designers. But some of those surveyed admitted that when they first arrived at the school, they had trouble finding their classes and gave up and left the building completely.

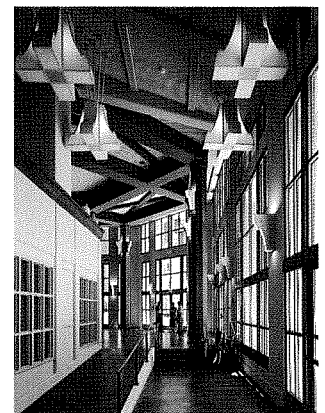
As a test, we asked architecture students to locate two classrooms and the main lecture hall, the Andersen Auditorium, in their first visit to the site. Most students, describing their experiences on a written questionnaire,

reported difficulty finding the assigned destinations. This is particularly telling coming from architecture students, who might be expected to have developed more skills in reading how to move around the built environment.

Several architectural decisions contributed to the disorientation. The architects deliberately chose an asymmetrical ordering; yet examples of a building cascading over a hillside symmetrically or moving linearly along a significant view are not hard to find or imagine.

By separating the school into three buildings, MRY established a circulation pattern that wraps around the central courtyard, which is terraced. Large portions of the building were built under-

Major circulation routes wrap around the courtyard and are visible from it. Photos by Timothy Hursley.



Wayfinding

The implicit theory of social life for which Moore Ruble Yudell is known is that a variety of spaces and settings are necessary to support the many kinds of social interaction that take place in a community. But this strategy, when applied to the sloped site of the new business school, resulted in an extremely complex plan that may have had the opposite impact on newcomers or visitors.

Since our investigation fell fairly late in the academic year, most members of the Haas community already knew how to get around. But visitors stood out as appearing confused or wandering aimlessly. More signage would be helpful to those unfamiliar with the school, particularly if it

ground. Consequently, no two floor plans are alike, and some paths move between buildings while others do not.

For some decisions, such as where to locate the computer center and library, the architects had less precedent to react to or against because computers are relatively new in our culture and we do not yet have a convention for the most meaningful or effective relationship between these two kinds of information resources. Thus it is all the more important that the building convey the location of these facilities with no signage.

In older models of campus planning and design, the library's location would be obvious because of its tall windows. Here, people in the courtyard can easily identify and see into the library, but they must follow a hairpin route into the building, up several flights of stairs and back down again to reach the library.

The residential references in the complex's massing intentionally blur distinctions between large and small spaces. For example, the size of the doorway to the Andersen Auditorium is similar to that of other doors to much smaller spaces, such as offices. Nothing about the doorway indicates gathering. The presence of such a large gathering space is not expressed the wall design, entry treatment or other visual cues, like color. (In fact, the beautiful color palette was used to blur distinctions between parts, where it could have been used as a code to aid orientation.)

One easy improvement would be better sig-

philosophy—is augmented by team projects that are underway day and night in the library and computing center. The forum, with its various lounges and work areas for student organizations, offers a social complement to the curriculum. The forum emerged during programming and conceptual design as a kind of interior “town square” and is home to all student groups. Its lounges are filled with the bustle of chance meetings, lunches, receptions and lectures.

Process: Design as Community Building

The Haas school is composed of a wide range of programs, departments, faculty and student groups, graduate and undergraduate clubs, and staff. As a transition between space programming (already undertaken by ROMA Architects) and schematic design, we staged a series of design workshops that were open to a broad sample of these many constituents. Such workshops provide us with an opportunity to collaborate with those who will occupy the building and allow the more subjective goals of the program to be expressed. For the business school, we wanted to know more about the culture of the organization and what thoughts and images the students, faculty and staff would have as they set about to design the project themselves.

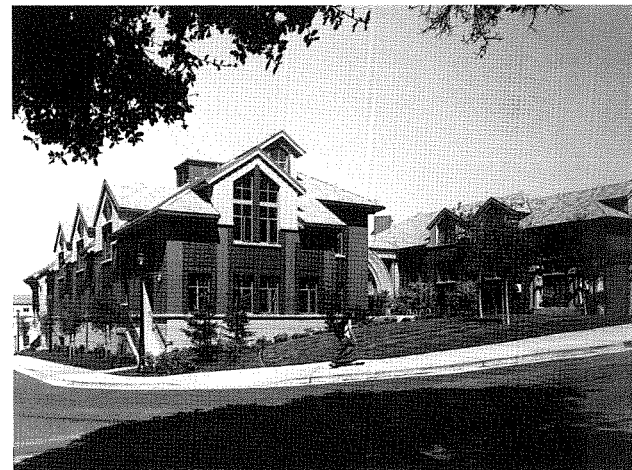
This process had further significance: designing the new school was itself an act of community building. Students, faculty and staff worked as peers in groups of six to ten, using their varied

nage, particularly at the main entrances, where visitors first encounter the complex. At the forum entrance, what looks like it might be a directory turns out to be a list of donors. Informally taped signs show where clarification would be useful.⁵



Above: The buildings' residential references belie the presence of the large auditorium just inside.

Right: The east facade attempts to maintain the residential scale of the street it faces. Photos by Timothy Hursley.



talents as part of a team. Our monthly meetings offered design problems for each team to explore and present back to the group. Participants studied overall siting alternatives, the distribution of departments, special rooms and typical problems, such as how to arrange staff and faculty offices.

The participants' experience with their previous building (Barrows Hall, a high-rise slab with centrifugal rings of offices around a core) left clear impressions of how the school should not be housed. Barrows' circulation scheme was clear, but its long hallways were short on departmental identity and encouraged faculty to keep their doors shut. Workshop participants envisioned the new building almost as a large house, with clustered offices linked by generous stairways to student lounges and the Forum.

For us, the most significant products of the workshops were diagrams that depicted relationships between the major components of the space program. The diverse collection of groups and departments, all of which sought an identifiable address in the plan, were organized into three interconnected buildings, which offered a strong expression of the school's complex community structure. At the same time, there was also a clear sense of the school's overall identity, which we suggested by gathering the buildings around the hierarchic centers of the courtyard and the forum.

As the plan was further developed, we sought to enhance the town square function of these central places by locating shared facilities, such as the

A Role Perspective on Community

On campus projects, faculty and students are often considered the primary users. But what about administrative and maintenance staffs?

Do they also experience the unity of purpose and commonality associated with community? Since the Haas school wants good ties with the business community, does this mean that visitors should also have a sense of community? We asked the student researchers to investigate the way that five different groups — administration, faculty, students, maintenance staff and visitors — experienced community at the Haas school.⁶

Students: One indication of community might be that students spend more time at Haas than that required to attend classes. The research team

that developed this inventive measure found that almost all students spend some time at the school outside of class. Most of this extra time was spent in academic facilities, such as the library or computer center, while some time was spent in the central courtyard, the most sociable of these three spaces.

Yet another measure of community is feeling associated with others via common interests. Regardless of time spent outside of class, some students said that simply coming to the same place to take classes created a sense of community for them. Those students who had experienced the former location in Barrows reported an increase in this feeling.



Almost all students spend some time at the school outside of class, working alone or in groups in spaces like the forum. Photo by Amy Taylor.



Above: A coffee stand has opened in the lower forum, adding needed food service. Photo by Amy Taylor.

Right: The massing of the school responds to the sloping terrain and the creek corridor to the rear. Photo by Timothy Hursley.

Below: Informal seating in the library. Photo by Timothy Hursley.

Haas students themselves said the building's architecture helped create a sense of community. Having classrooms and pathways pour people directly into the courtyard increases the probability of social contact. The feeling of enclosure in the courtyard reinforces the idea of a bounded community. The building itself — its distinctive aesthetic, separate site, grandness — has contributed to the development of "Haas pride." The separateness of the site has given Haas students a sense of destination and belonging, reinforcing their identity as Haas students, not just Berkeley students.

Yet, students remain pessimistic regarding access to their professors. When asked about student-faculty interaction they cited office hours as virtually the only opportunity. Professors are perceived as wanting isolation and privacy. One researcher concluded: "Loitering in areas frequented by students is not a pastime of Berkeley professors, and the Haas design has not changed that behavior." Academic hierarchy has not been overthrown by architecture.

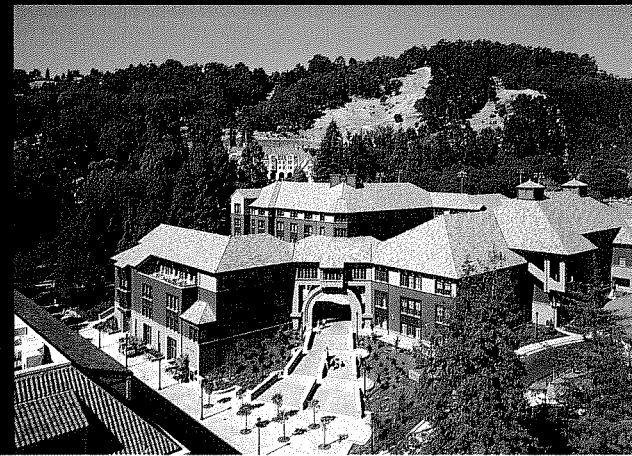
Another caveat regarding architecture: Pre-Haas students ranked their sense of community around 2 on a scale of 1-5. After the move, the average score increased substantially to 3.6. However, the increase may not be all attributed to the design, since the planning and preparation for the new building undoubtedly helped coalesce people around a sense of common purpose.

Staff: Student researchers interviewed nine

library, main auditorium and cafe, nearby. The movement between classroom, office, library, courtyard and forum would establish the daily rhythm of life. The architecture provides a choreographic form for this movement and shapes the experience of community.

Place: Celebrating a Minor Theme on the Berkeley Campus

Community is also very much a matter of the surrounding place—of sharing experiences and values with a particular part of the world. In that sense, the campus and town provided rich resources that we wanted the Haas school to draw upon and extend. At this point, the architects' own sensibilities and judgment—our interpretation of what makes Berkeley a place—come into play. But we also studied images of the campus and neighborhood during the workshops, allowing participants to respond directly and reflect their own values.



administrative staff about interactions between faculty and staff. Surprisingly, they found that such interactions were less frequent at the new facilities than they had been at Barrows. Two interviewees said that they had friends on the faculty, but had made no new friends after the move. In their opinions, this was a direct consequence of the new school's design.

In Barrows the two groups shared a common passage through the faculty lounge to get to the mail room, which was also the copy room and supply room. But at Haas, administrative staff and faculty offices are in different wings; separate lounges in separate wings accommodate separate lunches. Opportunities for informal,



The campus has several distinct architectural orders. First is the Italianate–Beaux Arts fabric of formal plazas and discrete, mostly light-colored buildings. This major theme is complemented by a minor one, of a more regional and somewhat woodier set of buildings, such as the faculty clubs, arranged in close connection to the shady meander of Strawberry Creek. Finally, there is the order of postwar expansion, dominated by a rogues gallery of notoriously unsuccessful interventions.

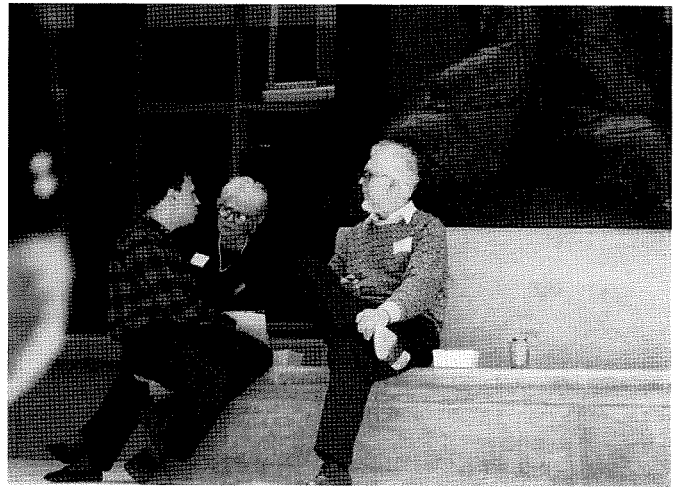
The new facilities for the Haas school belonged to the second order. Despite the size of the program (204,000 square feet), we all wanted the school to make close connections to the Strawberry Creek landscape and to fit responsibly with the residential scale of neighboring houses along Gayley Road. Our strategy was to use the sloping site to hide large areas of windowless space—library stacks, the computer center—while benefiting from the division of the program into separate buildings.

For seismic safety, the exterior walls had to be poured-in-place concrete, and we took maximum advantage of the design of the formwork to establish scale, pattern and surface texture in ways that supported the minor theme. Using these patterns, Tina Beebe's deep-hued color scheme places the Haas unmistakably in the company of the faculty clubs, just downstream, and new student housing, just up the hill. Complementing the texture of windows, ledgers, and battens, there are grand arches and monumental stairs that anchor the Haas in what is, after all, a big campus.

accidental interactions are limited. This separation does nothing to counteract the perception of hierarchy between the two.

Only on level four are faculty and staff offices located near each other in the same wing; here interactions were reported to be as frequent as they had been at Barrows. These researchers concluded that the number of shared facilities should be increased following the example of level four, and that those features that worked at Barrows should be introduced.

Faculty: Another research team directly observed the behavior of faculty on the fourth, fifth and sixth floors of the faculty wing. They were looking to determine where interactions



might occur; in the linear corridors, in the widened corridors in front of clustered suites of offices, in stairways, or in doorways.

They saw most interactions at entrances to stairs and building exits; the faculty lounge and Ph.D. lounge were empty during early afternoon hours between one and three p.m. when they made their observations.⁷

The student researchers liked the irregular corridors more than straight ones, but doubted that the mazelike layout enhances community any more than any other layout might. They concluded that the complex corridors contribute to difficulty in wayfinding, rather than promoting interaction. One student researcher reported that in an hour of observation he was asked twice for directions.

Another observed ironically, "I guess community is developed by lost people running into each other and asking for directions."

Visitors: Another research team studied visitors' impressions by giving them questionnaires, and obtained fifteen responses. The cohesive design of the Haas complex helped some visitors feel connected and relaxed, while others felt it wasn't a friendly place. Most visitors find Haas physically more pleasant than other buildings on the Berkeley campus. Visitors frequently get lost and ask for directions, but they perceive students as knowing where they are going. Obviously, wayfinding issues are a recurring theme, whether in promoting interaction or in disorienting people.



Top: The school wanted its new facility to be welcoming to visitors, such as alumni and the members of the local business community. Photo courtesy Haas School of Business. Above: The facility's complex circulation system makes wayfinding difficult. Photo by Timothy Hursley.



The courtyard (left) and Wells Fargo Room (opposite page) are public spaces whose use can continually be reinvented by the Haas community. Photos courtesy Timothy Hursley.

Maintenance staff: The maintenance staff like the building more for its ease of cleaning than for its looks. Not surprisingly, the maintenance staff have more camaraderie among themselves than with students, faculty, or administrative staff. Opportunities for interaction are limited because maintenance crews work at night; some also find faculty rude. However, some interaction — mainly greetings and salutations — does occur between maintenance staff and students and faculty.

The in-group feeling obviously results from the fact that maintenance staff work together and also because they rest in the staff lounge. Tellingly, one maintenance staff member perceived that they were not allowed to use the central courtyard for resting.

Conclusions

From the students' findings, we can make several inferences:

Community at Haas has taken a step forward and a step backward, but is not the same as it was at Barrows. Common classrooms, enclosure and pathways have increased student-student interactions and increased their self-reported sense of community. But spatial segregation has worked to reduce some spontaneous and informal faculty-staff interaction. In these cases, the architectural design had a significant impact.

Architecture is not all powerful. It cannot create interaction when other rituals or routines

Community is Also Philanthropy

Thinking about the Haas school's sense of community, one can hardly forget the extraordinary fact of entirely private funding for the project. The process of raising money galvanized the alumni and regional business community—could it also have influenced the design? Perhaps it did, by focusing keenly on ideas that characterized the image and purpose of the project.

Almost as soon as the design effort got started, two fundraising mottoes appeared, which were also relevant to the design. "Gateway to Excellence," a reflection of the school's strongly felt mission, suggests that the Haas is a place of passage, of preparation for the future. It also directly speaks to the school's special role as an entrance to the campus.

The other motto, "Campus within a Campus," gets closer to the idea of community. This is of great importance to a school that was previously scattered around the campus. The virtues of having it all within the boundaries of a special precinct have been realized—the Haas school has its own library (shared with the economics department), computer center, auditorium, front porch (the forum) and courtyard gardens, complete with cafe. Each facility is named for its donors, which seems to add another sense of community, a sense of those who came before.

We hope these facilities encourage the Haas community to continue to evolve its own way of

intervene — for example, faculty not being around their offices much anyway, or maintenance staff being scheduled to work at night.

Specific architectural features vary in their effectiveness. The overall configuration unites in the courtyard but divides in the wings, with social consequences. The clustering of faculty offices into distinct suites may encourage keeping doors open, but only when noise and the need for privacy do not override. Benches are a good idea, but possibly overdone, since some are not used; incorporating seating as a stylistic flourish may be wasteful.

Wayfinding in a complex plan is problematic. Where the building has not yet spoken in regard

doing things, in terms of both curriculum and culture. The forum's stairs and balconies make it useful for informal gatherings, just as the Wells Fargo Room, a top-floor lodge for elegant luncheons, would make a delightful small recital hall.

Qualities of place are very much dependent on the ongoing responses of inhabitants, as communities claim and value the buildings and the landscape. If we have been successful, the spirit of community at the Haas will evolve over time, as future generations of students and faculty make imaginative use of the places that the designers, builders and donors have made for them.



to signage, its silence disorients. The designers never aspired to create crystal clear circulation. Getting to an office without being seen is sometimes desired, so many options for circulation has advantages; after all, several prior sociological and architectural studies have taught us that one cannot promote community by taking away privacy. Having to “learn” the building is both a plus and a minus. It disorients but may build participation and a sense of being an insider, hence community.

Notes

1. One purpose of this research is to demonstrate that post-occupancy evaluation studies can be done economically within the culture of professional architectural offices by dividing tasks and integrating them back together within the matrix of a coherent research design.

An employee with a few spare hours can go to the site, make observations, conduct interviews, or administer questionnaires and return them to a central file. Over time, the contributions of different individuals can add up to a significant amount of information about how a building is performing.

In general, the profession has no standard procedure for going back to see how well initial objectives were met by the design after it was occupied. Seldom does anybody pay for such research. Instead, architectural educators and students occasionally undertake this task, using methods largely borrowed from the social sciences.

2. This report is based on research done by more than 90 students, primarily undergraduates, in the University of California, Berkeley, architecture department. The students worked under the direction of professor Galen Cranz in the course “Social Cultural Factors in Architecture and Urban Design.”

3. These methods can be used to cross-check each other. Face-to-face interviews can induce bias, depending on what the respondent thinks the interviewer wants to hear. Questionnaires may be more objective but they limit the spontaneous discussion that can arise in the interview process. Observing behavior and looking for behavior traces have the advantage of removing the researcher from any direct influence on those being studied.

4. William Whyte's research highlights the importance of movable chairs in increasing the use of small urban spaces. See William Whyte, *The Social Life of Small Urban Spaces* (Washington, D.C.: The Conservation Foundation, 1980).

5. The school is installing new signage.

6. Because of the democratic connotations of the word “community,” we chose to include the maintenance staff, a group generally overlooked in both programming and evaluation research.

7. A weakness of this study is that students had to fit their research into their academic schedules. They were able to make observations only within a two-hour afternoon period. We cannot say how much the lounges may have been used at other times.

Credits

Architect: Moore Ruble Yudell, Santa Monica; Associated Architect: VBN Architects, Oakland; Programming: ROMA, San Francisco. Landscape Architect: Abregast Newton and Griffith, Berkeley; Interiors: Simon Martin-Vegue Winkelstein Morris, San Francisco; Lighting: Peters and Myer, San Rafael; Acoustics: Paoletti Associates, San Francisco; Color: Tina Beebe, Santa Monica. Structural Engineer: T. Y. Lin International Engineers, San Francisco; Civil Engineer: Kennedy/Jenks Consultants, San Francisco; M.E.P. Engineer: Gayner Engineers, San Francisco; Cost Estimator: Hanscomb Associates, San Francisco; Contractor: Hensel Phelps Construction, Berkeley.