

Places

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**A Quarterly Journal
Of Environmental Design**

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N. John Habraken

Place Debate: Milton Keynes

Looking at Cities
Allan B. Jacobs

Two Place Tales
Lawrence B. Anderson
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**Two Poetry Gardens:
Giving a Voice to the Genius Loci**
Frances Butler

**Mexicali Revisited:
Seven Years Later**
Dorit Fromm and Peter Bosselmann

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Caring about Places: Architecture

Architecture, the deliberately made physical structure of place, creates opportunities for people to position themselves in space, in time, and in the order of things.

To choose one's position in space is one of the continuing ubiquitous pleasures in life, a pleasure that we seek instinctively throughout the day. To be next to something (someone), to be above or below, behind or in front, inside or outside, are existential conditions that give distinct qualities to our actions. To look out over, to shelter within, to rest against, to stand up to and to face directly are actions we can imagine, actions with generic significance that we all understand. To be able to choose among such conditions is part of being able to be human. We should imbue our buildings and landscapes with occasions for choice. Functionalism and determinism, not modernism, prescribe specific limited actions in a building—for whatever good or evil purposes—and deny, thereby, the expressive potential of relationships between people and things.

Of course we do more in a building, in life, than stand about. Architecture, properly done, enables us to reflect upon our position, to imagine our relationship to the building, not just to act it out, and to see the acts of others reflected in a building's form. Architecture has the capacity to nurture our attention, to bring things to mind, to strike associations, and to reward curiosity. Architecture gives us places to inhabit, to make a part of our lives.

To take position is a figure of speech used more often with ideas than with

things. We “take position” on the issues of the day, align ourselves for or against the large scale forces and purposes of society. Architects and architecture do that, too. And we should do it deliberately. How our buildings provide choice for people, what attentions they nurture, whom they serve, and to whom they can belong, are cultural and political questions of consequence. The positions we take on those questions are embedded in the places we build and give rise to their form. We consider it necessary for architecture to bring attention to people and to place: to make places that are filled with opportunities to choose, that are visibly related to human actions, that sustain detailed attention, that can belong to those who use them, and that are related always to the larger place of which they form a part.



Donlyn Lyndon

Reflections on the Founding: Wurster Hall and The College of Environmental Design

Sally Woodbridge

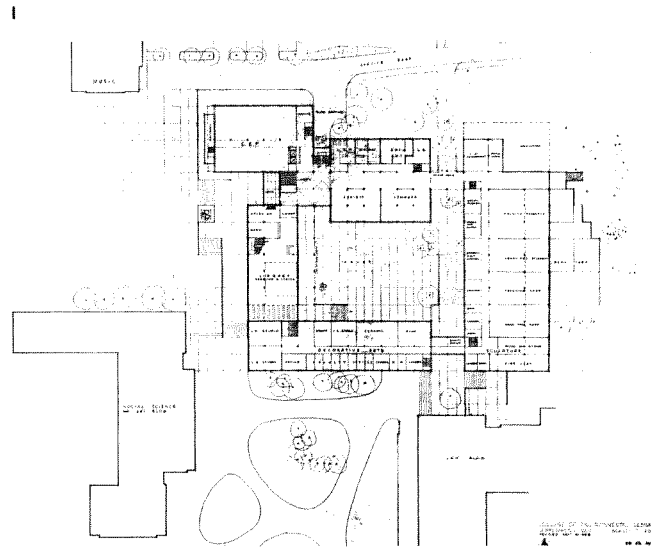
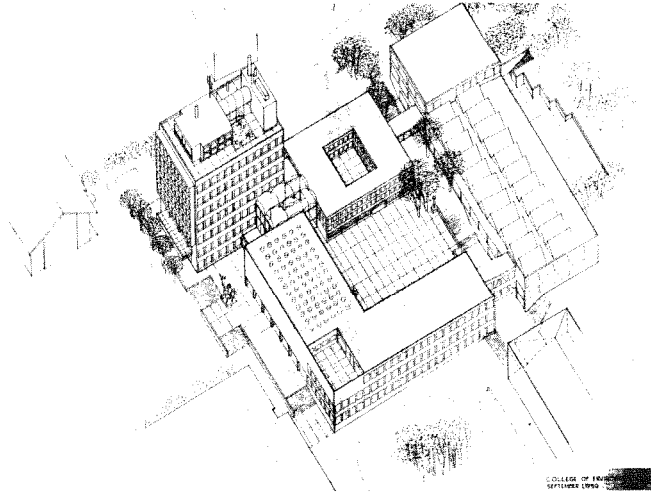
"I wanted it to look like a ruin that no regent would like. . . . It's absolutely unfinished, uncouth, and brilliantly strong. . . . The Ark, for instance, is a ripe building; it has been lived in; it's been used, it's been beaten up and everything else. It's arrived. Our building will take twenty years to arrive." William Wilson Wurster, 1964, Oral History in the Bancroft Library

William Wilson and Catherine Bauer Wurster Hall is now twenty years old. The College of Environmental Design, for which Wurster Hall was built, is five years older. Yet, the question of the building's arrival in William Wurster's sense of being seasoned, of achieving an old-shoe fitness, remains open and is a subject of debate in this anniversary year. Why was the college conceived? Why the name? How was the building programmed and designed? These questions are worth pondering because this was not just another college on the University of California, Berkeley, campus, but the world's first educational institution to be dedicated to the study of "environmental design."

The vision that prompted the college took shape during the closing years of the 1930s and the early 1940s. This crisis period brought professionals together in unaccustomed ways to consider new strategies for the future. One example of this kind of collaboration was the Farm Security Administration, a Depression-born federal agency with a regional office in San Francisco where young architects, landscape architects, and engineers collaborated to design new communities for California's migrant farm workers. Among the architects was Vernon DeMars, who later participated in the design of Wurster Hall.

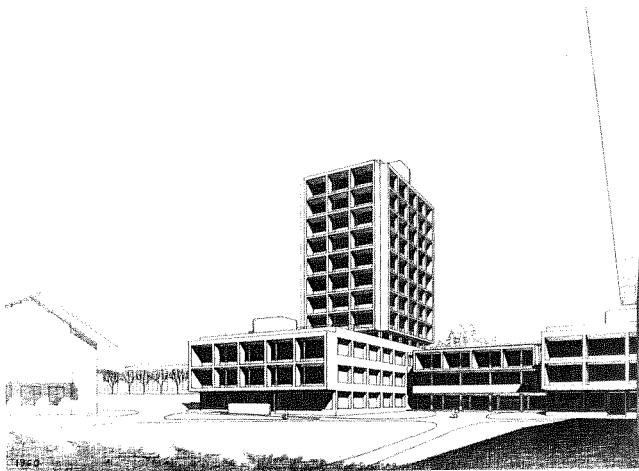
All photographs by Rondal Partridge are courtesy of Donald Olsen.

All other illustrations are courtesy of the author.



1 An early scheme of September 1959.

2 Ground floor plan of September 1959 scheme.



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3 Perspective of the scheme developed by Donald Olsen, May 27, 1960.

In the fall of 1939, a group of San Francisco architects, landscape architects, and city planners formed Telesis.¹ According to Francis Violich, a founding member who later had the first joint appointment on the faculty of landscape architecture and city and regional planning in the College of Environmental Design, Telesis members believed in “the use of a comprehensive and planned approach to environmental development, the application of social criteria to solve physical problems, and the team efforts of all professions that have a bearing on the total environment.” The organization expanded to include lawyers, artists, photographers, civic leaders, and other concerned citizens; it also inspired a similar organization in Los Angeles, which used the same name. Through the 14 years of Telesis’ formal existence, the membership actively applied its philosophy to planning and development issues confronting the metropolitan area around San Francisco Bay. Following World War II, the group’s members were absorbed into the mainstream of professional practice. Several of them joined faculties within the University of California system.

If the concept of environmental design took shape collectively over a period of time, the idea of a college dedicated to the concept belonged chiefly to William Wurster. By his own account,

he had this idea in mind well before coming to Berkeley, as Dean of the School of Architecture, in 1950. The idea of one administrative entity for professional fields that dealt with the physical environment made good sense to Wurster whose professional and personal life had been laced with close associations with landscape architects and city planners as well as with members of his own profession, architecture. Though Wurster had not been an active participant in Telesis, he took what its members were doing very seriously. He also began to take seriously Catherine Bauer, a housing expert of national reputation, who was a visiting lecturer in the University of California’s School of Social Welfare from 1938–1939. In 1940 they were married and moved to Cambridge, MA, where Wurster spent 1942–1943 as a fellow in Harvard’s Graduate School of Design. From 1944–1949 he served as Dean of the School of Architecture at MIT where he persuaded the members of the architecture faculty and the Institute’s administration to recognize the School’s city planning division as a full-fledged, coequal department. Its name was then changed to the School of Architecture and Planning.

Meanwhile, back in Berkeley, the studies carried out in the 1930s and 1940s toward establishing a Department of City Planning finally bore

fruit. The Department, established in 1948 with T. J. Kent as Chairman, was housed in a temporary building. A year later, when Warren Perry resigned as Dean of the School of Architecture, Wurster succeeded him. Kent and Wurster were good friends who shared an interest in the mutuality of their respective fields. Their close collaboration was crucial to the founding of the College of Environmental Design.

Wurster's first thoughts about the college are not part of the College's records. By the time he wrote the following statement in a booklet announcing the College of Environmental Design's first programs for the fall and spring semesters of 1960–1961, he had had more than a decade to compose his thoughts. "Each of these departments (City and Regional Planning, Landscape Architecture, and Architecture) developed independently [on the Berkeley campus]. But all three of them, with their many distinguished graduates now scattered all over the world, have played important roles in one of the great revolutions of our time, the effort to integrate practical needs with science, technology, and art in the design and organization of the man-made environment, an international movement to which California has made important contributions in all three realms. . . ." For Wurster the movement was

ongoing, its force unifying. "As the responsibilities in each professional field have been broadened and deepened, the need for mutual contact and understanding has become more apparent."

Though the concept of the college implied an interdisciplinary structure, there was no intention of training an all-purpose professional who would address the environment as a whole. The task was more to strengthen the departments and the liaisons between them through joint appointments and interdisciplinary courses. The students would, thus, have the opportunity to mix and match studies in their chosen areas while, as Wurster hoped, being part of the whole picture in the natural way that physical proximity implied.

The picture took a while to compose. Jack Kent recalled that after William and Catherine Wurster returned to Berkeley in 1950—she as a lecturer in the City and Regional Planning Department—a luncheon group was formed to discuss issues of the built environment. The group met once a week and also went on field trips led by members from the different fields. Kent observed: "We got together in the best of all possible ways because no one was pushing a special point of view." Some members of this informal group also belonged to the Faculty

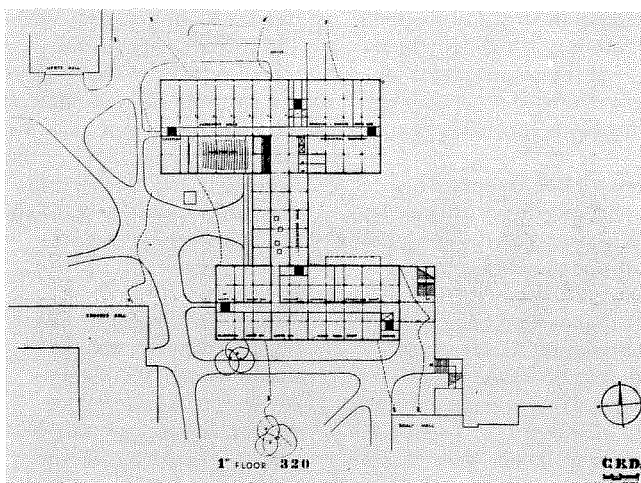
Group in City and Regional Planning, which had been given the responsibility of governing that department during its formative years.

Soon after assuming his academic duties at Berkeley, Wurster wrote to President Sproul suggesting that Architecture, City and Regional Planning, and Landscape Architecture should be linked together. Sproul responded by writing to Jack Kent: "... wondering if we really wanted to do this thing since everything was going so well." But since Kent thought the idea warranted discussion, he suggested the formation of a committee that would be composed of members of the three departments and designated by the acronym, ACPLA. The committee met regularly for four years, but in spite of considerable interest in grouping the departments in a new college, no one took responsibility for any definite proposal. Finding that nothing had changed when he returned from his first sabbatical in 1955, Kent agreed to put together background reports from the different departments, to crystallize the proposal, and to write the necessary legislation for consideration by the departments and by the Academic Senate. In 1956–1957, Kent's chairmanship of ACPLA resulted in "A Proposal to Establish a College of Environmental Design," which was submitted to the Chancellor's

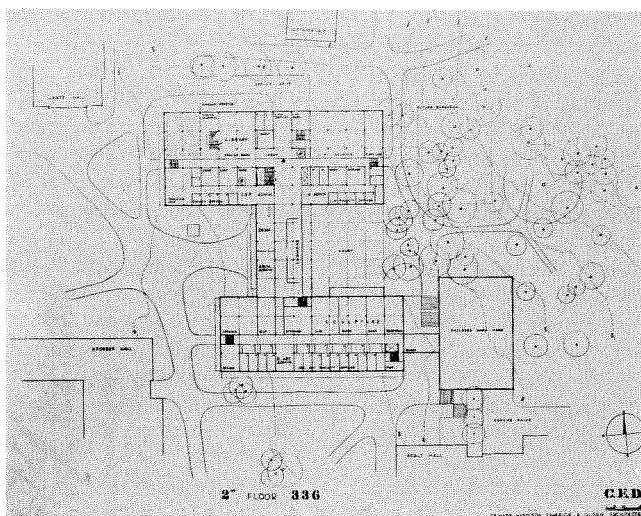
Review Committee in April 1957. The proposal contained reports from the three departments that, in addition to presenting histories of the fields and descriptions of the University's work therein, evaluated the advantages and disadvantages of the proposed college.

Architecture was the only department that noted "no disadvantage of collaboration serious enough to warrant its inclusion in this report." Architecture, the oldest department—it had been in existence since 1906 and was designated a college in 1957—had by far the largest number of students and faculty. As Dean, Wurster had first joined the undergraduate department with the graduate School of Architecture to create a college. To combine City and Regional Planning and Landscape Architecture with Architecture in some mutually acceptable manner was a reasonable strategy for gaining University recognition for the design professions as a whole. However, the other departments were wary of being subsumed, of having their own distinctive professional fields subordinated to the older and larger field of architecture.

Also, all three departments had ties to other disciplines in the university. Landscape Architecture, which was housed in Agriculture, was related to that field as well as to Forestry and to Conserva-



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4 First floor plan of May 27, 1960, scheme.

5 Second floor plan of the May 27, 1960, scheme.

tion in somewhat the same way that Architecture was related to Structural Engineering. City Planning had an even more ramified nature beyond its two main branches of Physical Planning and Public Administration. Research and development in the social science fields were of critical importance. At the time, more than half of the eight faculty members came from academic backgrounds without design orientation; some were especially concerned that joining up with the design fields would be misunderstood as a move away from their fields of interest. Thus, though the name of the new college was important, the perception of this issue was different from what we might suppose today. Although Architecture's report does not mention the name, the reports of both Landscape Architecture and City and Regional Planning make a special point of it. The former proposed: "That a name for the new college be chosen which is indicative of the common goal and function of the three departments rather than of the departments themselves." The latter stated in a lengthy paragraph the hope that "Our new building will be designated from the outset as the Environmental Design Building rather than by the name of the department that happens to have the largest faculty and student body. We are aware of the fact that this may not be considered by some to be a matter of

major importance, but we think that it is essential that the equal status of the three professional fields be clearly expressed."

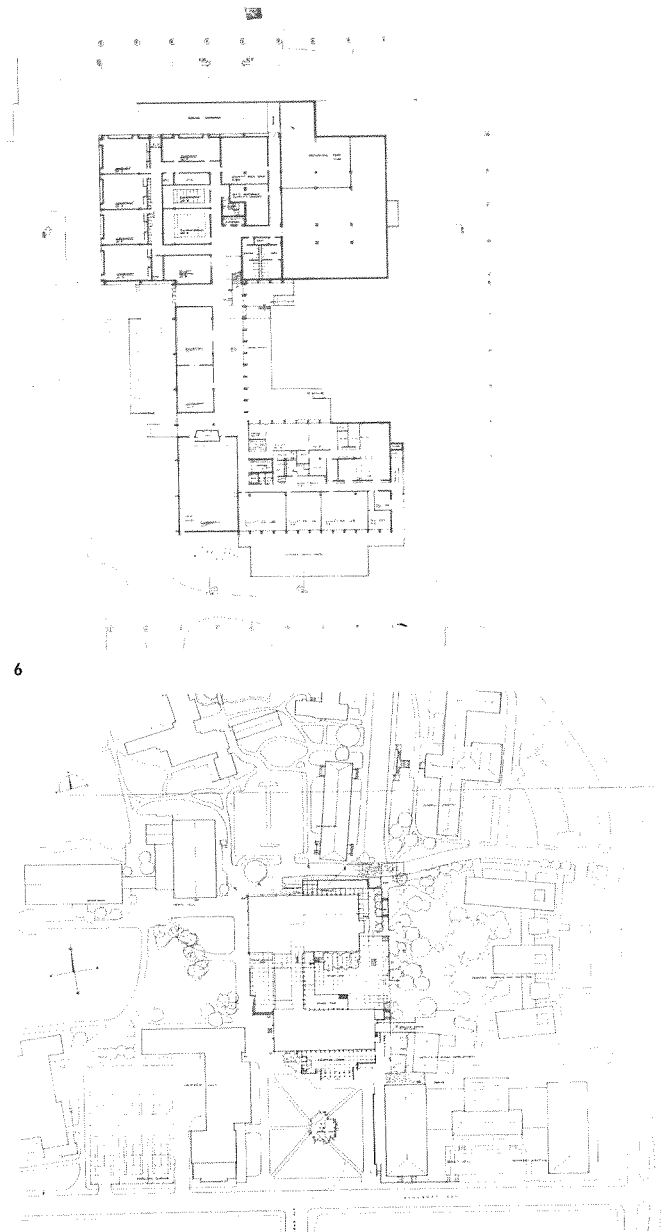
Actually, Jack Kent had proposed the name for the College; it had often been used by the Telesis group and was descriptive to its former members. However, it held no historically accrued values for the majority. Within the College of Architecture, the mere mention of the term "environmental design" was greeted with hoots and snickers. Professionals in the outside world were aroused to such indignation at the thought of leaving "Architecture" out of the name that Wurster felt constrained to set up what he called a Professional Committee to meet with him and with the faculty about matters of mutual concern. When it turned out that what the committee considered to be of mutual concern was principally the organization of the new college, Wurster disbanded the committee. But before he could do this an historic confrontation took place at the Claremont Hotel in Berkeley during which members of the profession voiced their disapproval of the name and of other aspects of the college.

This uproar had the effect of reversing William Wurster's previous opposition to the term "environmental design," which both he and Catherine

thought pretentious. Finally, when no one suggested another name, it stood by default. This hurdle out of the way, the legislation worked its way through the various committees in 1956–1957 and came to the floor of the Academic Senate in 1959 where it was approved. The issue of the name surfaced for the last time with proposals for the new building. A memo to the faculty from Wurster, dated October 12, 1961, had as its subject: “Name, if any, for the Environmental Design Building.” In the memo Wurster discussed two possible names that had been suggested to him, John Galen Howard and Bernard Maybeck. No names relating to the other disciplines were mentioned. The memo closed by stating: “This action should never be a hasty one and the proposal is to let the matter go now as it is with no man’s name, but these words might start the thinking and discussion.” In hindsight, Wurster’s failure to muster another name for the new building seems prophetic. Upon his retirement in 1963 the building was named for him and for Catherine.

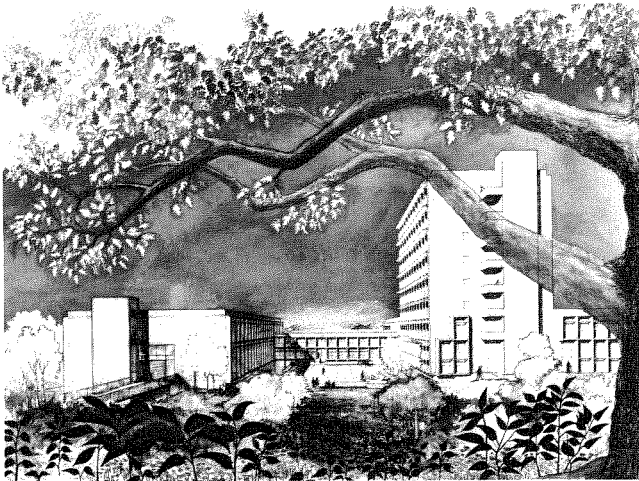
To design an educational environment for the professions whose work concerned the design of the physical environment was no ordinary architectural challenge. Wurster approached it with a zeal that came not only from the opportunity at hand but from the memory

of a building project that he had orchestrated during his deanship at MIT. Student research directed by Lawrence Anderson and Vernon DeMars, then a visiting professor, led to a faculty housing project sponsored by the New England Life Insurance Company. When the University and the Company asked Wurster for advice on architects for this important project, he replied that he had hired the brightest and most capable architects for his faculty at MIT. As a result, Vernon DeMars, Robert Kennedy, Carl Koch, Ralph Rapson, and William Brown, Jr., were made architects for the project, now called 100 Memorial Drive, which was to be a 12-story apartment building for MIT faculty. Wurster then left his brightest and best alone to produce the design. But, as DeMars recalled, because no one was put in charge of the project, no one took the lead for fear of being judged a prima donna. After some thundering on Wurster’s part, the team finally got to work—but not in a wholly collaborative way. When a consensus was reached, Rapson was delegated to draw up the final scheme, which eventually produced a building that has been written about extensively and has won several awards. The painful beginnings were forgotten; the results persuaded Wurster that a team of unlike-minded architects could produce a brilliant scheme.

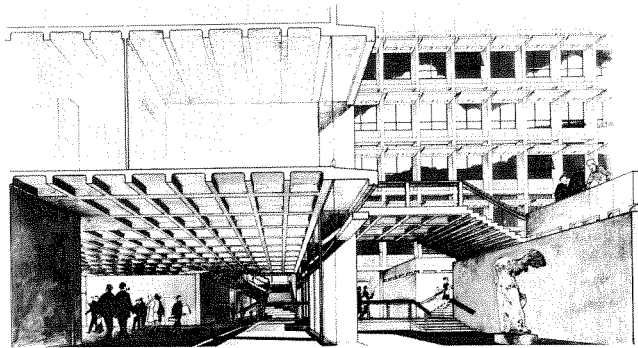


6 Ground floor plan of the November 1, 1960, scheme.

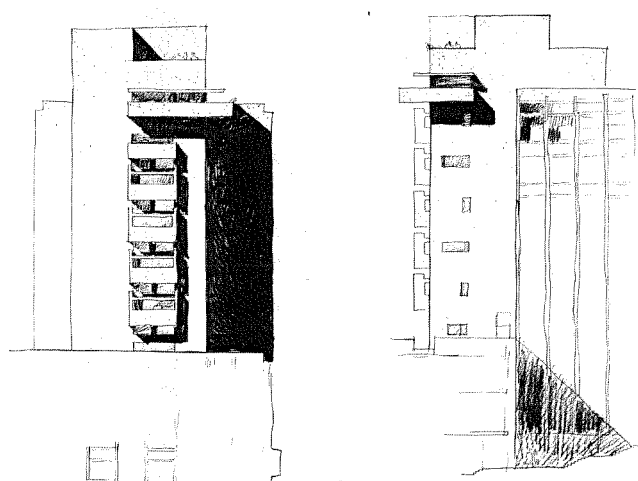
7 Site plan for the September 1960 scheme.



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In the late 1950s the question of architects for the new college building arose. By then DeMars had become Chairman of the Architecture Department and had an office with Donald Reay in Berkeley. With Donald Hardison they had won the competition for the University's new student union complex. DeMars was an obvious choice for the team of architects Wurster was assembling for the Environmental Design Building. Two other strong design talents on the faculty were Donald Olsen and Joseph Esherick. Both men had small offices; Esherick's was slightly bigger. From Wurster's point of view it was important that the three had totally different points of view. He distrusted unanimity and constantly stressed variety within the architecture faculty. He wanted "strong people, each with a different slant . . . the school should present a rough place with many cracks in it." DeMars conjectured that he and Esherick were chosen for different degrees of humanistic leanings; Olsen represented the formalist perspective that would correct any overly romantic tendencies. In the beginning Donald Hardison was on the team because, as Esherick put it, "Bill didn't think any of us was competent to do the construction drawings." In respect to this judgment, Wurster had cause for caution. The project description, at an estimated cost of \$7,077,000, contained an

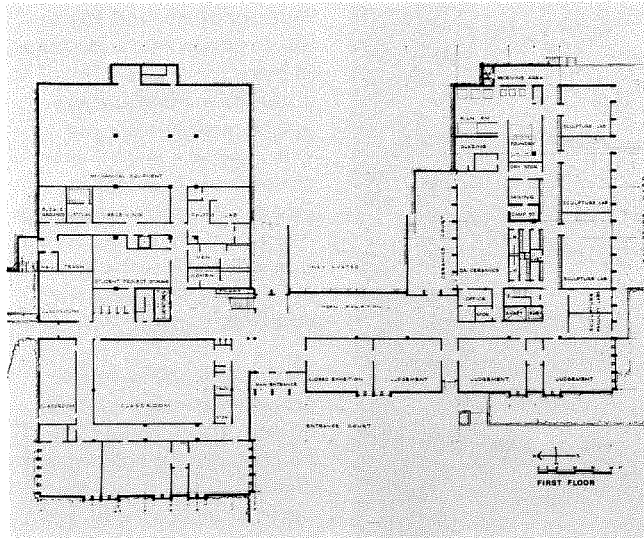
assignable area of 137,972 square feet.

According to the first Chancellor of the University, Clark Kerr, who became President in 1958, the administration was reluctant to approve the appointment of three faculty members for the design of a major building. Design by committee had inherent difficulties in achieving consensus, which could be compounded because the architects would not have the useful immunity to inside pressures that non-residents enjoyed. Wurster argued successfully that not to hire the faculty team would represent a no-confidence vote in the skills of the department at the moment when they could be used most appropriately—and, besides, it was a unique opportunity.

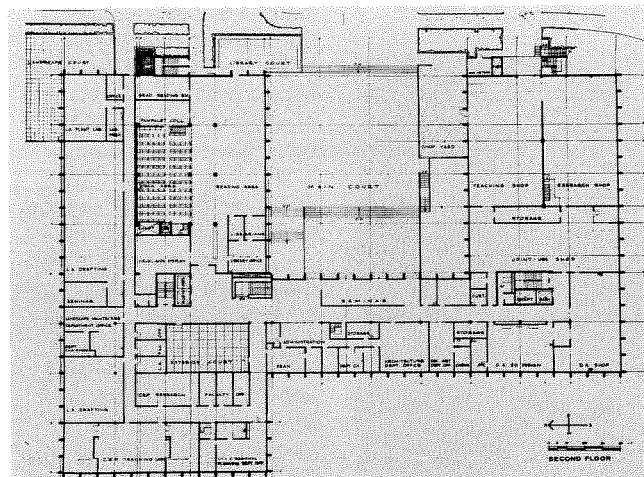
The Chancellor appointed a Faculty Building Program Committee to advise the architects on departmental needs. The members of the committee were Francis Violich (City and Regional Planning), George Simonds (Architecture), H. L. Vaughan and Robert Tetlow (Landscape Architecture), Lucretia Nelson (Decorative Arts), and Helen Worden (the University's library system). Louis DeMonte, the campus architect, served as the liaison between the faculty committee, the team of architects, and the University's Vice President of Business Affairs, Elmo Morgan, who was the official

client for the building. Serving as both an administrator and an architect, DeMonte ran what he recalled as pretty much a three-ring circus.

The 137,972 square feet allocated for the building was apportioned to the departments according to the needs stated in their programs. These programs resulted from intense bargaining that went on both within the departments and among the faculty representatives. Issues of location and space had to be resolved within a context of decisions that included the site of the building and its place in the overall campus planning process. In the 1956 Long Range Development Plan, major new campus developments such as the student center, the art museum, and dormitory complexes were located on the south side of the campus, which contained few buildings of large scale or importance and more open space than the north side. A priority was to encourage the consolidation of campus precincts devoted to related disciplines. Music, Art, and Anthropology had found homes in the southeast corner of the campus. A nearby site was under consideration for the art museum. While a member of the Campus Planning Committee, Wurster had come to believe that the new college would benefit from physical proximity to the humanistic disciplines of Art,



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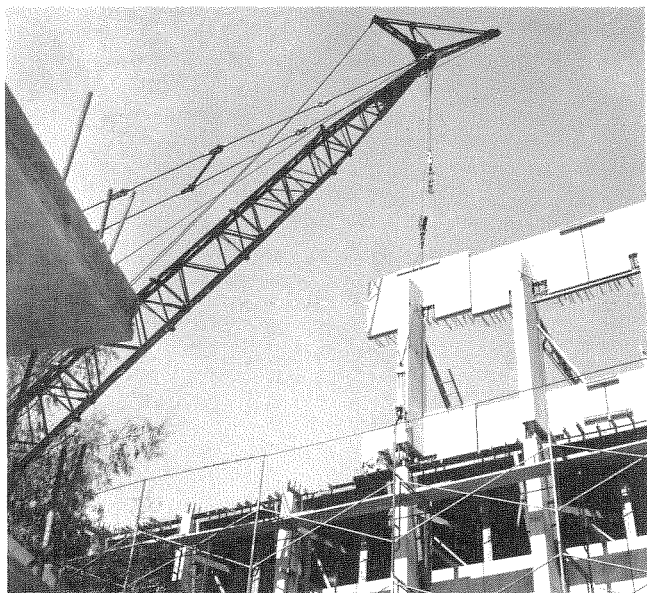
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8 Rendering by Dimitri Vedensky of the September 1960 scheme, view from the east.

9 Entrance lobby of the September 1960 scheme. Rendering by Dimitri Vedensky, showing also an exterior ground level court, omitted later.

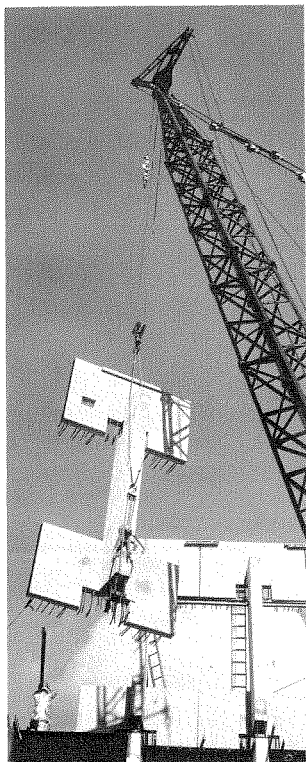
10 Studies for the tower element with balconies at each level.

11, 12 First and second floor plans of building as built.



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13, 14 Construction photos, 1964, showing precast units lifted in place. (Photographed by Don Aron)

Anthropology, and Music. More important, a site large enough for the new building could be made if College Avenue, which then ran through the campus, were closed and some miscellaneous structures and tennis courts were removed. By the time the architects were chosen, the southeast site had been decided.

To preserve the open space necessary to the park-like setting of the campus, the Long Range Plan also stated that buildings should only cover 25 percent of the land. Because this decision made tall buildings inevitable, the campus skyline became an issue. Locating high-rise buildings or tower elements became a new concern. The southeast precinct of the campus was a logical location for a tall building that would mark the gateway to this newly important area.

Wurster strongly favored the tower element. He and others also considered a courtyard imperative. One of the most cherished parts of the old Architecture building, called the Ark, was the brick-paved court where social and ceremonial occasions took place. The new court was intended to express continuity with the old setting, to be the symbolic heart of the new college building.

The team of architects and the faculty building committee went to work in the fall of 1958. Judging by the

recollections of those who were involved, the two years of biweekly meetings resembled the deliberations of the representatives of clans that had agreed to occupy the same turf but wanted the internal boundaries made clear. At first, the architects and committee wrestled with the problems of how and where to allocate space for the departmental components. Both Architecture and the Library wanted locations on the north side of the building, the former because of the desirable exposure for the studios, the latter to avoid the damaging effects of sunlight on the books. The Department of Landscape Architecture also favored the north side because of the adjacent open space that could be laid out in demonstration gardens. (This idea had to be abandoned because of the siting of the Melvin Calvin Building in the area.) One of the paramount issues was the location of department offices. While grouping the offices together expressed the spirit of the college, the departments also wanted their faculty offices and support spaces close by. The discrepancies in size between departments resulted in a plan that, even if it had worked in other ways, was unacceptable to the smaller departments because they would all have been lined up facing Architecture.

Gradually, in the course of protracted committee

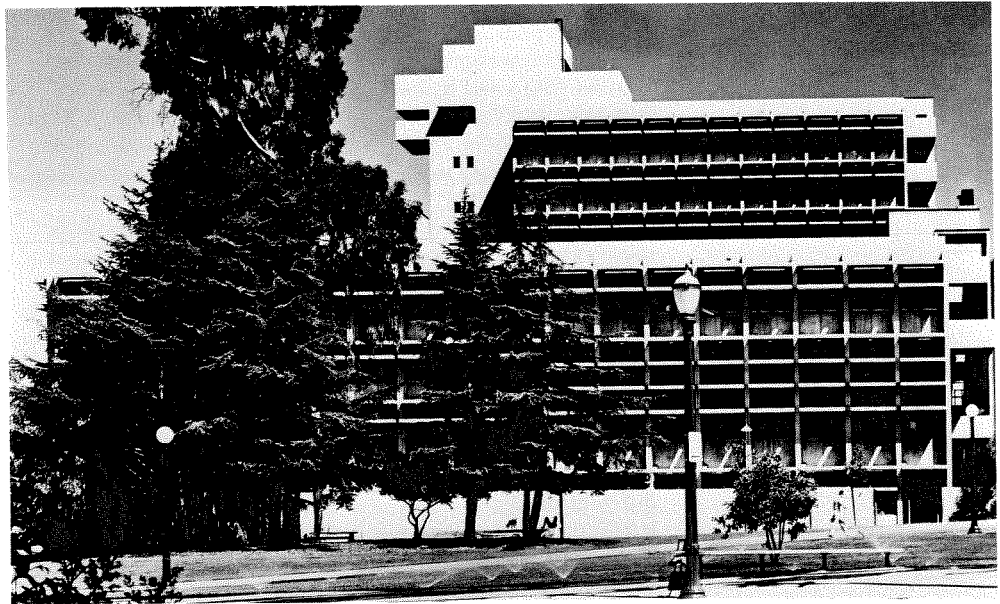
discussions, the plan took shape. The most articulate committee members, Lucretia Nelson and Helen Worden, won acceptance for their plans while others were never as clearly formulated. Issues of department identity came up so often that Esherick suggested that the college issue departmental tee shirts.

Among the architects consensus was equally elusive. As with the project at MIT, DeMars recalled that it was not clear whether any one member of the team should take the initiative in the design process or whether they should all participate equally. Although Wurster was aware that the three architects had very different perspectives, he did not see this as an impediment to production. "At least," he said with inscrutable satisfaction, "they can work at cross-purposes together." Though Wurster did not participate formally in the design deliberations, he was the *éminence grise* whose wishes were taken seriously.

The two years of meetings to determine the building program produced a number of schemes—Esherick estimated about 20. Not all were developed in any detail. An early scheme in September of 1959, drawn up by DeMars, shows the building as a set of differently scaled and articulated blocks around a generous court. However, this one and others



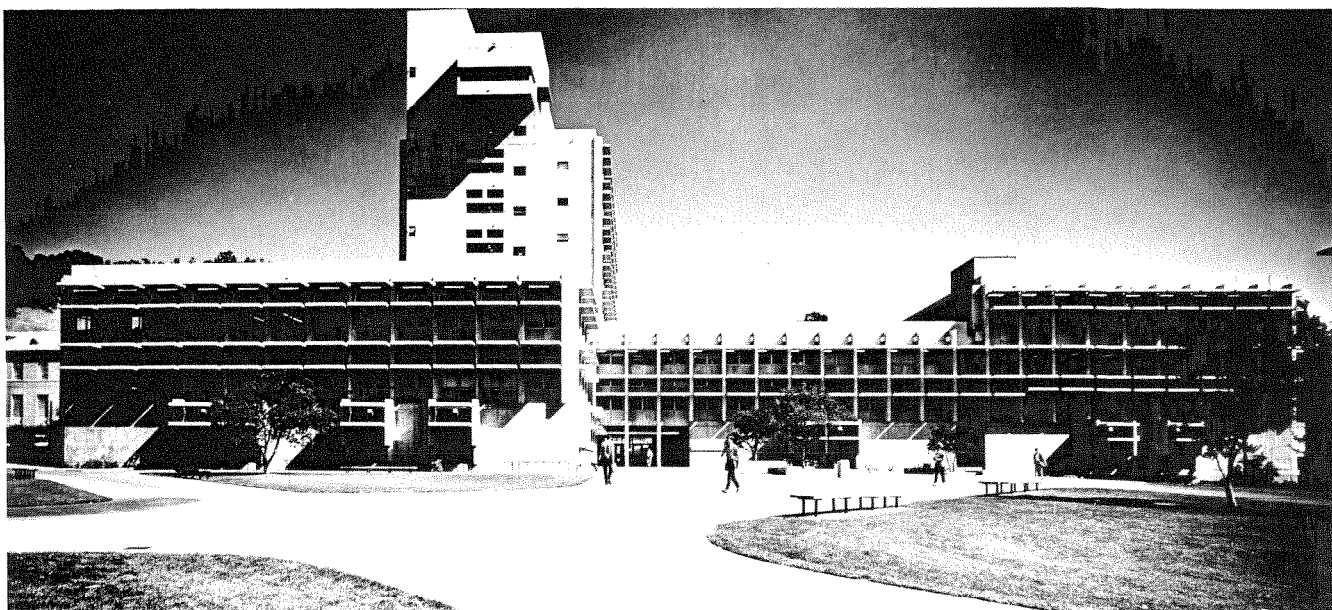
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15 View of Wurster Hall from the southwest. (Photograph by Rondal Partridge)

16 Wurster Hall 1965, from the south. (Photograph by Rondal Partridge)



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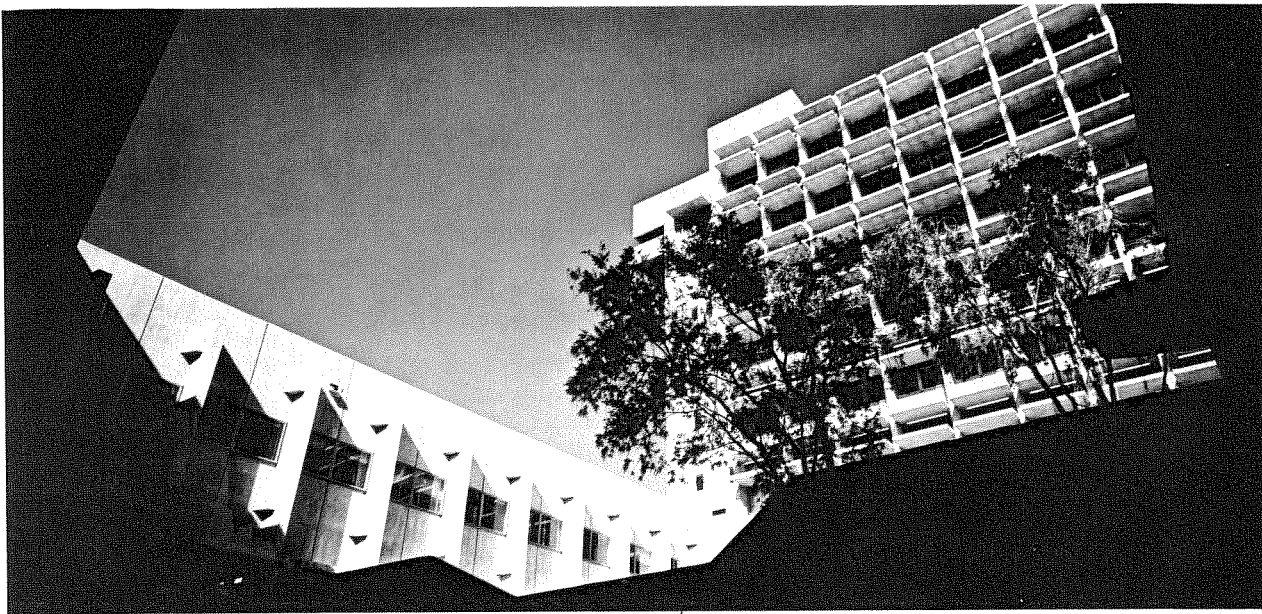
proposed by DeMars failed to find favor because they exceeded the site boundaries. About this time because DeMars' duties as Chairman of the Architecture Department were consuming most of his time, the task of creating a plan to express the program was given to Donald Olsen and to Joe Esherick. As Esherick recalled, the committee meetings over how to mesh the parts of the program together had produced mostly frustration for the architects. "The way I saw it was that everyone was using words very differently; that is, we each had different perceptions and our means of expressing them were so different that we ended up talking about entirely different things. . . . So I tried to develop a common language with Don Olsen so that he and I would know what we were talking about. Don and I saw the planning issues as fairly concrete in terms of getting people through the campus and of the proper orientation of the elements of the building. Vernon, I think, tended to take a more formal or picturesque view."

In the next series of schematic plans, Olsen and Esherick focused on the issues of circulation and orientation. One scheme, which had the studios, shops, and service areas in a big square-tower element, worked well because it had a core for the elevator and stairs with considerable space around them. A large seminar room with a balcony occupied the top floor. This arrangement was especially dear to Francis Violich who thought that designers and planners should have access to a lofty view of the environment both near and far. "But," Esherick commented, "in addition to not working in other ways, it was a kind of dumb, square tower. Bill said square towers were ugly so that was the end of that." Though progress was slow, major pieces of the plan were falling into place. The department office locations on the second floor were settled. City and Regional Planning, Landscape Architecture, and the Library were on the north side. The Dean's office had a central location immediately accessible to the stairway

and to the entrance from the court; Architecture was next door in the next most obvious location; and Decorative Arts was down the hall to the south. Classrooms and studios were near department offices except for the Architecture studios, which were stacked up in a tower on the north side to get the proper exposure. The sculpture studios, which along with the Decorative Arts Department were part of the new building, occupied the south side of the building. The last major space, an auditorium to seat about 200, had still not been firmly anchored. Wrestling with pieces of the puzzle, Don Olsen finally settled on a schematic plan that was acceptable to everyone involved.

Missing from this solution were two elements that DeMars had tried to incorporate in the beginning. The first was a grand stair hall, a two-story space that, he felt, would be conducive to sociability. He also pressed for a landscaped atrium near the stairhall to enhance this meeting place. In retrospect, DeMars

17 Wurster Hall 1965, from the west. (Photograph by Rondal Partridge)



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supposed that these ideas were too romantic for the times; his colleagues were not sympathetic. "In fact," he recalled, "the more I tried to push the ideas, the meaner and meaner the stairhall and atrium got." Then there was the issue of brick paving for the court. "We could have afforded brick, but, beside being sentimental—the court of the old Ark had been paved with brick—it was judged incompatible with concrete. So we have honest asphalt."

With approval of a final plan in 1960, design development could proceed. But because Donald Hardison had resigned from the team by this time, the question of finding an office to produce the working drawings arose. Although the University had previously questioned the capability of a small office, the advantages—in terms of continuity and rapid progress—of having the work done in the office of one of the principals were conclusive. Esherick took charge and organized a staff consisting of Richard Peters, Chester Bowles, D'mitri Vedensky, and Victor Torres,

with George Homsey as the project manager. Weekly meetings were held with all the architects, but the design process proceeded largely under Esherick's direction.

The building began to take shape. The decision to construct it of concrete inside and out reflected both economic considerations and the aesthetic of the times. As often happens within the subculture of architecture, the architects were reacting to another building, the Yale School of Architecture, which had been designed by Paul Rudolph. This building had prompted the comment, according to Esherick, that "you couldn't even go to the men's room without having a spatial experience." For Wurster such prescriptive design was anathema; he made his point loud and clear. "I want you to design a ruin," he would say, pounding the table for emphasis. Wurster's idea of a "ruin" was a building that achieved timelessness through freedom from stylistic quirks. While Wurster Hall has been categorized generally as a Brutalist design, the archi-

itects protest that the Brutalist aesthetic did not cause their preoccupation with consistency in the use of materials and forms. Their rigorous approach was more in sympathy with Louis Kahn's ideas of how a building might "become what it wanted to be." Unfortunately, as Esherick recalled, "We didn't have the money, as Kahn did at the Salk Center in La Jolla, to do fantastically controlled concrete work. Also, the technology of color control in concrete was not what it is today. We were dealing with an unprecedented amount of concrete. We had to have all the cement as well as all the aggregates come from one place; it's just not good for the integrity of the structure to change."

In designing the building's structural system, the architects relied on the advice of their structural engineer, Isadore Thompson. Both precast and poured concrete were used. The precast, which contains some lightweight aggregate, was used in the sunshades and the main exterior walls. Two-story, precast sections

18 Wurster Hall, courtyard looking northwest. (Photograph by Rondal Partridge)

were lifted into place while concrete was poured for the floors, the roof, the elevator enclosure, both ends of the tower, and the east end of the south wing. The poured elevator and stair towers became the shear elements used for seismic bracing. Because a building of this size had never been constructed, using precast elements, dimensional control above three stories was problematic. Yet, this aspect of the structure succeeded, while another, steam-curing the concrete to save time and to reduce the number and expense of the forms, resulted in a crazed surface that is unattractive when wet.

As for the interior, Esherick acknowledged that "Of course we were thinking, probably unfairly, of a building for architects and forgetting there were a lot of other people in it. We also assumed that it was inappropriate to design something with a number of specialized environments because people's attitudes and ideas change. So we tried to deal with such facts as the sun and wind. I regret that we didn't have the money to make the library more special and that, at the last minute, we had to make the auditorium a deduct-alternate, which meant that it was never scheduled to be built."

One aspect of the design that has been generally misinterpreted is the exposure of the

ductwork and of the other mechanical equipment. Far from being an expression of style, the exposure was a means of avoiding the tunnel-like corridors that a dropped ceiling could produce and to obtain the effect of a high ceiling in the rooms. Esherick designed parts of the system. "Getting the duct work neat and orderly was something I did because the mechanical engineers didn't have any spatial sense about it. With the ducts down the corridors, we could just put the stringy stuff in the rooms. In the studios the main distribution is in the center so that you have the feeling of a higher space around the periphery." Having the mechanical equipment exposed also made maintenance easier, and was useful, to some extent, in teaching.

When new, the mountain of concrete was crisp and, in the main, well-received as uncontestedly contemporary. Wurster got his wish—no regent liked it. In fact, Donald McLaughlin, who had served on the Campus Planning Committee with Wurster, remarked—apropos of the elegant renderings D'mitri Vedensky had made: "They should not have disguised that building with trees." Clark Kerr, then President, recalled being shocked by the relentless, stark repetition of concrete forms. Much earlier, during the design development phase, Louis DeMonte

recalled teasing Esherick by asking whether it took that much concrete in the sunshades to cast a shadow. At first DeMars also questioned the unremitting use of one material, but later concluded that the concrete horizontals gave the building a sculptural unity consistent with its character. Esherick chiefly regrets the University's judgment that the building was free of maintenance. Such weak points as the caulking were never checked or repaired.

If, as many think, the building has not aged gracefully, there is no single cause. Certainly, its capacity to withstand neglect and intensive use is appreciated. Though it has been beaten up, it has kept the uncouth quality that Wurster so admired; it has not become comfy like the lovable old Ark. As for fashion, the pendulum has now swung to the other side. Nostalgia for the palmy days of rich materials and ornament now prevails.

If Wurster Hall has weathered but not mellowed, it still reflects, perhaps all the more so, William Wurster's prescription: "A school should present a rough place with many cracks in it." Perpetually unfinished, Wurster Hall is an open-ended and provocative environment for teaching and questioning. J. B. Jackson put it well:

Where beauty has to be sought out and extracted

from a reluctant environment, the arts often seems to flourish best; wherever it exists in profusion and variety it is likely to be accepted as a condition of daily existence, a kind of birthright calling for no special acknowledgment. American Space, 1972.

Extracting beauty from the environment is what the College of Environmental Design is all about.

The General from the Local

N. John Habraken

The following text is a reedited version of the author's keynote address for the 8th International Forum of the European Association for Architectural Education, Newcastle upon Tyne, England, April 13, 1983.

There used to be a time, not so long ago, when students from developing countries were admitted to western European and North American schools to learn things the western way. Both teachers and students were convinced that this was a good thing to do: developing countries could best develop by applying the western ways. There was no alternative.

We have lost that innocence. On both sides we know now that the issues are much more complex. It is not just a question of transfer of knowledge, skills, and technology from one place where there is plenty to another where more is needed.

In developing countries westernization is seen as a mixed blessing at best. Among the younger generations there is a renewed interest in their cultural heritage. They see how local customs and forms disappear rapidly to make place for an image of western affluence, well-being, and power that stands for the state of "being developed." Others in the western world share their concern. Is there a way, we have come to ask, to be developed and yet not westernized?

At the same time architects from developed countries have become involved. Professional expertise has gone international and much of it has to do with the Third World. Consultants of all kinds come with government aid programs, with commercial projects, and at the request of local authorities. In such contacts clarity and simplicity are sometimes lost. The dilemmas of the Third World architect who

returned to his country after a western education are now shared by many of his colleagues in Europe and the United States.

It is, however, not only in Third World relationships that the western architects and architectural educators question their responsibilities and their role. Within the context of the western European tradition itself questions are raised as well.

Indeed, one could, with a little effort, advance a plausible argument that we have no business to educate people from other cultures, that we had better first deal with our own problems. I am opposed to that idea of retrenchment for reasons that I will explain, but you may agree with me that we are far removed from the happy times when we felt that we had something indispensable to offer to those who had the misfortune to be born in another part of the world.

Of course architectural education in the West cannot ignore the Third World. There are many good reasons of political, economical, ethical, and even philosophical nature to say this. Not in the least there is the practical expectation that a growing number of western students in architecture will, in the course of their careers, become involved with Third World questions either directly or indirectly. It will not hurt at all when they can study with Third World colleagues with whom they may work in the future.

But I believe that there are other reasons for connecting western

education to Third World problems. These are of a more intellectual nature and they have to do with the future of our profession as a whole. *I firmly believe that our profession will only have a future if it can deal with a profound and central question that comes from an interaction between architects from both sides of the world.*

I am talking about the following question. What is generally valid and generally applicable in the field of architecture? A profession can only be a profession when it shares certain principles, theories, and methods that it holds as valid and useful in all circumstances and in all places. What are the shared principles, theories, and methods in architecture? If we cannot answer this with a reasonable degree of consensus we will not have a profession and we will continue to lose credibility in a rapidly changing world. *This* question, which I hold to be fundamental, can easily be ignored in a homogeneous culture where practice is in harmony with its context. It becomes unavoidable, however, when such practice is confronted with a different cultural context. The best reason that I can see for the education of Third World students in European schools is that such education forces us to sort out what is universally valid and applicable in architecture. It makes us define the field. It is good for architecture everywhere.

The making of buildings and settlements is, by definition, a local affair. Architecture is the making of the right building at the right

moment in the right place. It is an act that can never repeat itself in the same way. It is intimately connected to local conditions, customs, climate, culture, and resources. We are interested in the enormous range of possible contexts, the variety of social, cultural, technical, and economic conditions within which architecture must come about. What can we bring to bear in all circumstances and all places that may be helpful and effective?

When this question comes up, as it inevitably does when one contemplates the state of architecture today, I often think of another discipline in which the tensions between the local and the general must be relevant too. I refer to agriculture. There is nothing more local than the raising of crops. To farm is to attach oneself to a piece of land. Certain plants only grow in certain places. To make them grow the farmer must know the place. Architecture, the art of settlement, is like that. It is not only that the building must serve local needs. This functional argument is much too limited. The building must be built by local workers, it must perform in a local climate, it may use local materials, and it must honor local codes. Therefore, it must be nursed into existence in harmony with all these factors. A successful project is cultivated locally. But the act of building is also an instance in a continuous process of change and renewal by means of which built environments live and prosper. If this analogy with farming is acceptable, what then, we must ask, may the cultiva-

tors of the built environment share dispersed as they are across the far corners of the world?

Agriculture is a professional field. It studies the nature of plants, their properties, metabolism, and chemistry. It also concerns ways of cultivation and their relation to local conditions. It must also have to do with the exercise of appropriate judgment in time and place. It may be that other families always seem to be happier than one's own, but I tend to think that we have not come that far yet in architecture. We have not yet separated that clearly the local from the universal. Unlike the farmer, who, I suspect, knows what he is doing, the architect is often confused about his role in the world. We like to debate a variety of images of what an architect is and what he does. We think of the architect as an artist, a reformer, an organizer, a mediator, an orchestrator. We borrow from many fields: science, sociology, psychology, technology, linguistics, economics, and, most recently, anthropology. But who and what are we ourselves?

Let me offer my simple conviction. I believe that the architect's business is built form. He must understand it and be capable of organizing it. To be sure, the built environment is a social artifact. Everybody understands it in an implicit way. It does not exist by the grace of architects but will exist as long as people inhabit the earth. Built form is not our exclusive product but it is the subject of our expertise. The architect may be more sensitive to built

form than the layman and he may be very skillful in its manipulation but these qualities are not enough to establish his expertise among the many other professionals who have an impact on the built environment. It is also necessary that he understand form in an explicit, codified way; understand the deployment of materials in space, the organization of space itself as a vehicle for behavior, for power, for territorial organization, for self-expression, and for collective coherence among people. In this way the general must emerge from local experience.

This professional understanding of form, it seems to me, must come to us in two major ways: we need, first of all, *theories* that formulate this shared understanding of form. These theories must explain to us the *behavior of form* under the pressures of habitation and social interaction in the context of technology, climate, and topography. Through the continuous shaping and re-shaping of such theories the large amount of facts already available about built environments can become comprehensive and useful to the architectural profession. In time our theories may point toward new questions and help focus a search for new data. They may contribute to the general study of human settlements that we share with other disciplines.

Second, there are ways of working. *Methods of design and form manipulation* can be developed and studied. We can learn from a comparison of methods and can seek general principles as well. Methods

are, of course, related to theory. Implicitly or explicitly they rest on theory. They link theory to practice as they shape the processes taking place. The application of a method tests its underlying theory. Shortcomings of methods lead to new theoretical work. Hence the international discourse that we seek must lead toward theory and methodology. I have argued that in the comparison of different local problems we will find what we share in our professions. I will try to make my point by applying it. Let us consider the educational needs of a Third World student in architecture with those of his fellow student from a western country.

To begin with there is what can be called the question of conflicting values. Our Third World student—we all know—is torn between the values of the western world as these are reflected in products, styles, and criteria that he learns about, and the indigenous spaces, forms, and materials that represent his own tradition. Chances are, when he comes home to practice his profession, his position is not shared by those he must work with or wants to work for—regardless of what that position may be. The ramifications are many. Background, religion, family, peer group, economic means, career expectations, and political motivations all contribute to the inescapable awareness that the world of architecture is not one of homogeneous value.

Our western student will not operate in a world of homogeneous value either. I do not mean to say

that the West does not have different cultures and traditions, but even the architect who stays within his own country finds himself trying to operate in at least three separate value systems at the same time.

There is, first of all, the professional world: the peer group system. It manifests itself in magazines and other publications, at professional conferences, and especially in our teaching. It is a double-edged sword. On the one hand, it demands that our student becomes a “leader” in the eyes of his peers. There is only true prestige and glory in the eyes of the profession itself. He is expected to look down on bureaucrats, lawyers, and technicians who are believed to hamper quest for architectural excellence and is encouraged to treat clients and users with benevolent paternalism. On the other hand, he must obtain this professional glory by finding his own “voice.” Above all he must be original. To be good in architecture is to be different, or at least to be part of the latest development. The worst is to be accused of doing something already done by someone else.

When this student enters the world he will find that his client is unaware of the values within the architect’s profession. He has his own notions about good and bad. The client today, moreover, is seldom the user of the building. The users themselves may have their own value system that is different from that of client and architect. I do not have to elaborate further. The western student will never operate in a homogeneous value system either.

It is useless, obviously, when considering an educational program, to try to decide what is the right value system. It is also foolish, obviously, to try to create an artificially homogeneous value system in a school. Most of our educational system as well as our professional skills still stem from a distant past where a homogeneous value system shared by all parties involved could reasonably be expected. Because we refuse to see the discrepancy between this professional tradition and today's reality we fall hopelessly short in professional and educational effectiveness. It takes a confrontation with the problems of the Third World to acknowledge this discrepancy.

Some may argue that technology is an even more important aspect of the relation between developing and developed nations. When we talk about development we think about technology. We believe that our culture need not be superior to another. We want to live in a world of different cultures. But what really separates nations is their control over technology. Western European technology has triggered the serious imbalance with which we now must deal in the world. We know the devastating impact that can come from a single-minded application of new technologies on the subtle but vulnerable ways in which traditional materials and building systems are integrated with house form, life-style, and climate. We know how people can suffer from well-intended attempts to modernize the built environment.

Some argue that inevitably modern

technology will take over from traditional ways and that a price must be paid. Others argue that technology is basically neutral: that any form can be made in different ways and that performance has more than one solution. There is no reason, from that point of view, to condemn technology as long as one knows it well and contains it. Still others argue that technology consists not only of materials and engineering principles but of ways of working that are inevitably linked with forms of organization and, therefore, with social structure. Hence import of technology is import of social structure that is inevitably disruptive.

There is, of course, truth in all these positions. We are only slowly beginning to understand the complex relationships between ways of making, social organization, and cultural value. One thing, however, is clear. The architect who operates in developing countries will not operate in a homogeneous building system. His abilities of form making cannot depend on just one way of building.

But his colleagues in the West have already wrestled with this problem for a long time. The age of industrialization brought a proliferation of materials and building techniques. The architect and the engineer parted long ago. I believe that there is a causal relation between the ideology of abstract form in modern architecture—the international style—and the proliferation of new materials and ways of building that took place in the beginning of this century. But this is

not the moment to explore this interesting connection.

Because of that ideology, however, we have been able to avoid the problem in theoretical and methodical terms. The question of form making in a technically diverse world is clearly felt yet remains unexplored. There is no explicit, rational debate. Architectural education has not come to grips with the issue either. There is the design studio and there is the building technology workshop. They have no common theory of form making and remain in an uneasy relation to one another as do the architect and the engineer.

In the western world we have been able to circumvent the problem for much longer than we can rightly afford to. In the Third World we can no longer ignore it. To teach our student from the Third World we must come to grips with an issue that is equally important for his friend in Europe.

It is not uncommon that we come to see our own problems better when we first study those of our neighbors. The case of mass housing is another example. In Europe particular socioeconomic conditions coupled with a rapid increase of the urban population and the devastation caused by World War II brought forth extensive deployments of repetitious blocks composed of uniform units. They were the result of the belief that the good environment for the modern citizen could be provided by massive infusions of capital, expertise, and centralized organization. The

underlying ideology was that decent living for all was, first of all, a matter of professional responsibility: a gift from those who “knew” and “could” bestowed on those who were “unable” and “ignorant.”

This was a powerful dream. However, it was a typically technocratic dream and when transported to developing countries its futility as a general solution became painfully clear. No government, no matter how rich, can provide ready-made dwellings to all its citizens. The only hope for decent shelter for all is to encourage people to develop their own. For some 20 years now in Latin America, the Middle East, and the Far East, and more recently in Africa, architects and other professionals have been involved in a slow and difficult learning process. They have come to share the basic understanding that a built environment must be cultivated first of all by those who inhabit. People have always built for themselves, but they need professional help. This worldwide experiment entailed a radical change of professional attitude vis-à-vis the built environment because the western European model, which was taught for so long in architectural schools, was diametrically opposed to the idea of gradual cultivation.

The case of mass housing is a good example of a problem in which the experience of many in very different locations around the world seems to lead to a consensus among experts about some general principles. The western student will benefit from study of what is done in some Third World countries and what is

advocated by such international agencies as the World Bank. His Third World counterpart would learn from alternative approaches that are now tried out in the West.

We can now see the central issue with which the architecture profession must wrestle if it wants a future for itself. The question of conflicting values, the problem of a variety of ways of building, and the issue of housing for the masses are each part of a conflict of two professional models. The first model is the one that we have inherited from the western European architectural tradition. In this model the architect is seen primarily as the maker of the exceptional product, for an exceptional occasion, and for exceptional use. Even in residential construction it sees the architect as the maker of monuments: buildings that by their very existence must transcend time and must symbolize special values. In this traditional model the architect shared his client's values. The user was not known as a separate power, and skills and trades operated in a homogeneous technical system known by all. This professional image may have been appropriate in the past, but today it offers a hopelessly obsolete model.

The alternative model sees the architect engaged in the cultivation of the everyday environment that was taken for granted in the past. In this model the result is not static but must change and grow over time. It is not an exception to but reality itself. It is full of meaning but not a symbol for society. This alternative model of the professional

role is based on the awareness that monuments will eventually grow in a healthy built environment, yet that a healthy built environment can never be made out of monuments. This simple truth has been revealed to many of us but it is still not generally understood. European architects were the first to declare their concern for the quality of the everyday environment. The Chartre d'Athenes architects saw everything that was built—the dwelling, the factory, the railroad station—as important and worth their attention. However, the sad reality is that we never examined the attitude necessary to deal with the everyday environment. We continued to approach all these new and exciting problems as we approached the problem of building the exceptional. Classic symbolism was replaced by technological symbolism and is now traded for historic reference. Avant-gardism, form ideology, and, above all, peer-group approval remained the yardsticks for professional esteem. They are still, when all is said and done, the formal criteria in education. We may have abolished the beaux arts way of working, but we have not abandoned the dream of professional achievement as it was enshrined in the academy. Our genuine concern for the built environment as a whole is not matched by our behavior, methods, or skills. The reasons for this ambivalent attitude are, of course, part of the broader dilemma of modern professionalism: when does expertise nourish the common good?

We must ask ourselves whether we can afford to be confused much

longer. But I believe one thing is certain. The challenges of the Third World will bring forth a new practitioner more in tune with the intelligence, sensitivity, and understanding necessary to do a good job for the everyday environment. The new role model will come into its

own. It will be equally valid for the architect in the developed countries as it is for his colleague in the Third World. The question of course is *how* it will come about.

Will the Third World eventually produce this new architect in spite

of westernized education or will it be the result of a joint effort to deal with the realities of the built environment rather than with the dreams of an obsolete profession? Who, indeed, will learn from whom?

Place Debate: Milton Keynes Passing in the Night:

Public and Professional Views of Milton Keynes

Jeff Bishop

Introduction

Although the earlier British New Towns are perhaps the best known abroad, a brash newcomer, Milton Keynes, has been gaining visibility in the last few years partly through the actual substance of what its guiding spirits have been attempting to achieve and partly because of its own aggressive self-advertisement. It seems strange to describe Milton Keynes as a newcomer because it is already more than 12 years old, but it is only in the last few years that enough substance has surfaced to permit some sort of sensible comment on the place both now and in its ultimate form. Comment is, indeed, beginning to appear in a variety of settings, much of it very critical and all of it based upon professional (using that term broadly) judgments of success and failure. In the midst of this, The Milton Keynes Development Corporation (MKDC) has been living up to some of the original aims by undertaking many forms of evaluation and monitoring—some focused not upon professional reactions but upon the reactions, attitudes, and aspirations of the residents.¹ What is more, already some examples of policy and practice are changing as a result of the outcomes from this evaluative research. This article describes (almost in story form as the dynamic of the work was very important) one of the pieces of monitoring work that has *altered* policy and also has some

fundamental implications for research and for planning and design theories generally.

The last comments above are extremely important because the work to be described was *not* an academic project, although it must also be judged by these standards if some of its implications are to be accepted. The project was, in fact, conducted for *and* with the MKDC by the School for Advanced Urban Studies at Bristol University, and this author in particular. The genesis of the project came with a realization by several members of the MKDC Planning Directorate (set up more as a policy unit than for physical planning) that there was a major mismatch between the form of the New Town as proposed in the Master Plan of 1970² and the current (1979) layout. This mismatch was assumed to be the reason for several problems circulating around the various implementation groups in the Corporation—especially planners and architects. The Corporation wanted to check these assumptions but it did not want to undertake the work alone. The Corporation felt the need for some sort of outside consultative link to a group who might bring in some fresh and challenging ideas. The brief can, hence, be seen to be impossible: to produce direct practical outcomes to feed into future planning but also to generate some more basic, one might almost say theoretical, criticism. Because the School for Advanced Urban Studies

makes great claims for its abilities to make such links, it was approached for the work.

Setting the Scene

At the outset the substantive research brief was very mixed, apparently very random and apparently not tied to obvious implementation changes. After some questioning it appeared that the issues were merely hunches in the minds of very many people and yet they could be grouped together into two broad sections—one on aspects of overall urban form (later called city structure) and one on housing estate layout and house design (later called house form and layout). The latter will not be covered here except inasmuch as the overlaps beyond the crude labels are obvious. The early assumption was that the research would focus on residents' views and that some form of interviewing would be appropriate. The more important decisions about method came, however, during discussions about the balance of the team and the ways in which results were to be fed back into practice. The team ended up well-balanced between Milton Keynes and Bristol, with one architect, three planners (of differing backgrounds), and other staff with relevant nonprofessional training. An early decision was to avoid the conventional research process in which the team goes away, does the fieldwork, presents a weighty tome of

results, and departs with the fee. Several tactics were devised to improve the final effect of results on practice: in general, to overlap fieldwork with dissemination and transfer "ownership" of any results to the practitioners. The major vehicle for this was a very successful steering committee of people from many implementation departments who did not just stay in touch but affected content, came to interviews, helped to change tack when necessary, and gradually took the emerging conclusions on board and back to their staff in a way that would have been impossible for any outsider to achieve through a conventional "Report of Findings." (In one case some results were even incorporated into proposals before the final conclusions had been written—a worrying prospect for the purist but a sign of success for the team.) Other more basic policy changes did occur and will be described later.

The final choice of methods was, superficially, quite ordinary. No completely new techniques were introduced, although the use of housing estate modeling in the other main section was rather unusual. The main approach could best be described as *corroborative*. This approach emerged from several concerns: first with the range of issues to be tackled, second with the theoretical susceptibilities of almost all standard methods in perception research, and third with a

need to sustain interest with a wide variety of people during, what were certain to be, lengthy interviews. In the city structure section we, therefore, did the following:

- Map drawing of Milton Keynes as a whole
- Showing, on blank paper, the "area in which you live"
- Delimiting neighborhood on a prepared map
- Recognition of photographs taken at various locations in Milton Keynes
- Description of instructions for a visitor arriving in Milton Keynes to one's own house
- Verbal description of the pattern of usage of facilities
- Verbal description of patterns of friendships
- Description of a route from home to shops (or other location)
- Verbal comment on previous environments
- Verbal comment on overall feelings, reasons for moving, aspirations, etc.
- Comments on Milton Keynes as a whole (this question is described more fully later).

The interviews were undertaken with 210 people in 150 households from 10 estates scattered around Milton Keynes. Most household types were covered, around 50 percent of the sample were in private houses and 50 percent in public. A special group of newcomers was selected to follow the settling-in process; this

group (who soon ceased to be dealt with specially) eventually comprised one-third of the sample. The car ownership rate was slightly above the average in Milton Keynes.

Before moving on to the results it is essential to set the scene in terms of Milton Keynes as a place, and (for the benefit of readers unfamiliar with British New Towns) the development of New Towns in general. By the time of the Milton Keynes plan, there was considerable emphasis on social and economic planning, but a physical plan was also essential. This mixture of objectives—both physical and social—has been at the heart of debate about ideal cities and new towns for centuries, even if memory causes us to focus in too strongly on formal images. It still surprises many Britons to discover that one of the founding fathers of the British New Towns movement, Ebenezer Howard,³ actually concerned himself far more with social, political, and, especially, economic issues than with physical form.

Milton Keynes is, in fact, almost the last of a line (given current government attitudes) for Great Britain where, since 1946, 28 major New Towns have been started and, in many cases, finished. Earlier initiatives such as Letchworth are important, but the main thrust came after 1945, building very strongly on ideas of tackling

urban decay, removing social problems, offering air and space to city dwellers, and, generally, avoiding the often iniquitous effects of laissez-faire city development (such as proximity to heavy industry, poor transport, and lack of public open space). The powers that go along with New Towns are considerable and should not be underestimated. Power over land is an essential key and *all* land in any designated area can, if necessary, pass through the hands of the controlling body, the Development Corporation, thus offering the chance to dictate every single land use and its relation to others. Also of central importance is the status of Development Corporations. They are not elected bodies and are nominated by central government. Hence, they are not accountable to the local community and can exercise the considerable control necessary to implement any Master Plan over a period of some 20 years.

Not surprisingly, since 1946 there have been phases and fashions in New Town planning. It is valuable to see the way in which some ideas are now bouncing back into currency after being dropped at one time or another. It is conventional⁴ to divide the progress into three waves: Mark I New Towns, Mark II, and Mark III. However, some boundaries between them are rather blurred. In the early years with Mark I Towns such as Harlow and Stevenage, the overall pattern

was clear and simple: clusters of housing were arranged in neighborhoods around centers, with one major town center (in the center), radial roads, and mostly peripheral industrial estates. This was a period of very low car ownership, especially among public housing renters to whom the New Towns catered primarily. In this period and in the time of Mark II (Towns such as Cumbernauld), one other emphasis was on forced self-containment, although in the second wave, as car ownership increased a much greater emphasis was placed on roads and transport systems. While the rigid neighborhood concept began to be overlaid with principles of wider use of facilities and improved access, local centers, relatively high density, and walking routes retained their significance. The greater emphasis on the car led to complex systems such as underpasses and level-segregated shopping centers, and on often totally separate systems for public transport.

Although by the time of Milton Keynes it had become difficult to detect common trends, Milton Keynes is a Mark III New Town. The thrust for changes, however, came from commonly perceived problems: an increase in private home ownership, car ownership, mobility, and pressure for choice, flexibility, and adaptability over time were all themes in the 1960s. Industry had also become less intrusive and,

so, the careful arguments for zoning had begun to erode in favor of adaptations of basic grid systems that could be infilled in a variety of ways, none of them deemed as restrictive and determining as the old “neighborhoods.” To some extent architectural fashion had changed away from the rather cozy style of the early New Towns (inherited from the Garden Suburbs movement) towards an approach that emphasized both “extremes” of truly rural design (Milton Keynes was to be a “Green City”) and truly urban (high density and unambiguously modern).

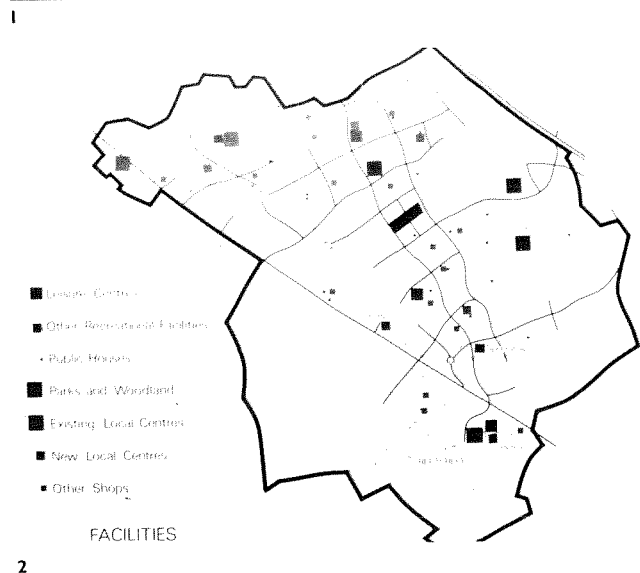
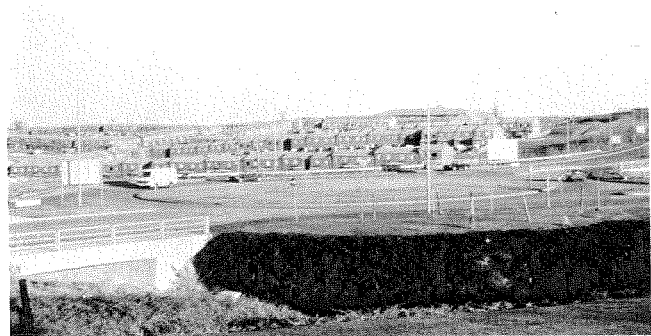
Thus, the scene was set for something that would undoubtedly seem very different from the early days of Basildon and even the middle years of Runcorn, although, as I have suggested, some themes such as “neighborhood” were found to be very resilient. Milton Keynes found itself a niche and picked up some of these themes in particular ways, as follows:

1 The Plan emerged from a critical 1960s revaluation of the (assumed) determining and inhibiting effects of the “Neighborhood” concept. Led directly by the ideas of Melvin Webber⁵—personal mobility, “community without propinquity,” and so forth—the plan proposed several ways of encouraging these and avoiding neighborhoods. These included a grid-road

system with a spread of major facilities, local facilities along grid squares to encourage road crossing, overlapping catchment areas, and the careful construction and naming of estates to avoid links with road patterns.

2 There was an attempt to break the traditional stranglehold (in Britain at least) of high-density, built-form dominated urban design approaches⁶ by producing a primarily “green” city. *But* the emphasis was still to be on overall form and coherence at the “city” scale, with a final population that at one time was to be 250,000. (At the time of the research, the population was around 80,000.)

At the time of the research the first diagram would still be relevant at one level, but the second had been replaced by a very practical procedure of building each separate grid square on its own to the design of a distinct team. The changes to the Master Plan were either purely pragmatic or had happened by default, but they were significant enough to suggest that perhaps the original plan should be reestablished. The basic arguments for this, which also formed the research brief, were that the *separate* development of *individualistic* grid squares had produced a problem of *divisiveness* and *isolation* for the residents, that the city as a whole lacked any *overall*



1 A typical view of a housing area.

2 Diagram of overall plan

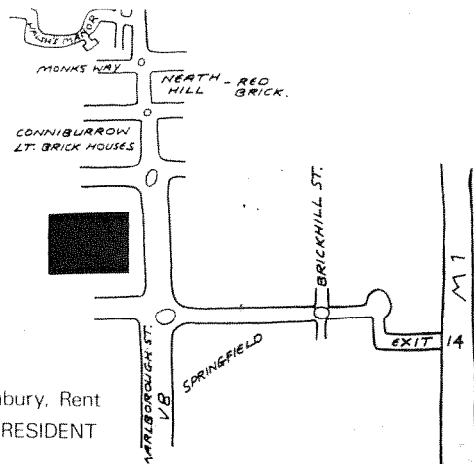


4 Freehand map of Milton Keynes

The team was perhaps aware of these ideas—and knowledge of the literature, especially that on the image of cities, navigation, urban knowledge, social patterns, neighborhoods, and so forth⁹ all supported the feeling that something had gone wrong and required remedial action. The research was designed to confirm these hypotheses before finalizing actions; some, such as infill housing and more landmarks, had *already* been sketched out. It is not giving away the punchline too soon to say that something almost the opposite was found, which makes the fact that this alternative became policy all the more remarkable.

The story could well have been very different because the early results appeared to confirm some of the hypotheses about lack of coherence and divisiveness. A glance at a fairly typical freehand map of Milton Keynes as a whole would certainly seem to suggest that there is little overall image and that the basic perception is indeed one of a “patchwork.” No traditional landmarks are shown (there are not any!) and each grid-square is detached from its neighbor.

Do you think you
are living in a city?
(If No) Does this matter to
you?
Is it anything if it is
not a city?



7 Directions for visiting friends

7b The center—a major landmark

a line around your neighborhood” question was used, along with another requesting people to draw what they could of the area in which they live. The former question was interpreted (as was discovered by asking *respondents*) as related to social aspects of a local area—i.e., where friendships and social contacts are made. Not surprisingly, given the village notion, this was fairly strongly bounded by the grid-square. However, the latter question produced “maps” that were very rarely bounded by the grid-square, largely because respondents interpreted the question as being about the more functional aspects of life such as shopping and sports facilities. It began to seem that, although residents had an *image* of Milton Keynes as a series of villages, they were *using* it as a city, in a very mobile and pragmatic way. So, having lost the neat notion of a city in image terms, the team found itself left with another apparent inconsistency between image and use.

Here again was a direct challenge to many urban theories, in particular to the concept of *congruence*, i.e., that people need to conceive of a place as a city in order to use it as such. The residents appeared not to have any problems, were extremely happy with Milton Keynes as it was, wanted it to stay that way, and, generally, coped very well with the theoretical anomalies. This

prompted the team to ask themselves who was right: the residents or the theorists? Certainly the residents’ notions appeared quite consistent and operable. Could one find a model to explain this? The answer, which did not take long, emerged again from reference to current ideas on rural planning in Great Britain. One shibboleth of planning and design theories is the idea of contrast between the tidy, neat, self-contained, small village in a landscape and the large, functionally interdependent, complex city.¹² (Suburbs are, of course, to be decried because they offer the worst of both worlds.) In real life, however, this tidy notion of the village is long dead (if it ever was alive), replaced by a pattern quite similar to that demonstrated in Milton Keynes. As the economics of shopping have changed, so butchers, bakers, and other small shops have closed in many villages; development has coalesced settlements into a (sometimes) almost continuous belt; and personal mobility has lessened dependence upon the small village. At the same time (in Britain at least), the “Save our Village” movement has grown, determined to hold on to and sustain the traditional image of the self-contained unit—in *image* terms. In reality, therefore, in a large swath of Great Britain the model of separating image from use is already the norm—and a highly attractive one at that. To close

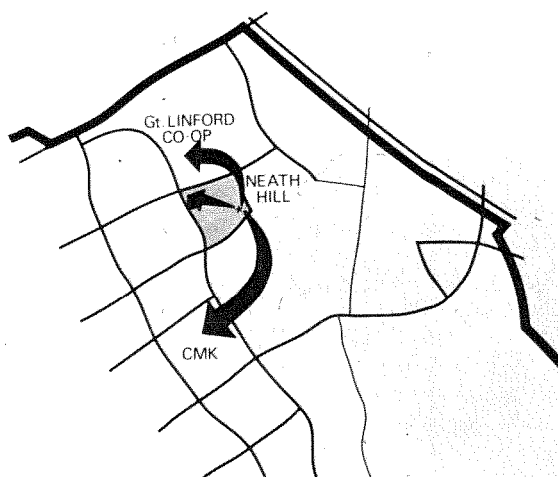
the circle finally, one can even lay the ghost of the size notion for cities to rest because the research team managed (with no problem at all) to locate an area of Great Britain immediately south of Bristol where a population equivalent to that of Milton Keynes lives in a physical area identical to that of the New Town, with several villages, one small town, and a fringe of a larger urban area similar to Bletchley near Milton Keynes.

The Link to Policy—and to Theory

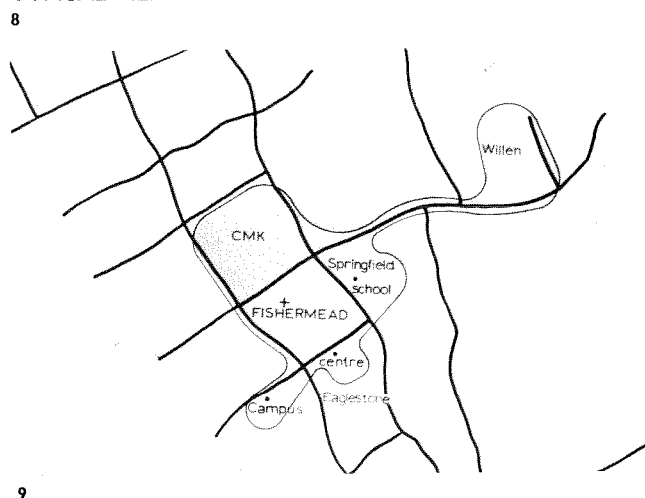
With these results and concepts in mind, the team had to persuade the Steering Committee first and the policymakers second. The first was quite easy—the Committee was very excited about “their” idea—and one crucial gambit, more than any substantive argument, persuaded the policymakers. In one sense Milton Keynes has *succeeded* for its residents but *despite*, not because of, the planners and designers. The policymakers could, therefore, build publicly on the success while privately coping with the 180 degree change in planning emphasis—away from coherence and towards pluralism. Although this appears to play down the power of the results themselves it is realistic. However, it can be argued that the whole process with the Steering Committee and elsewhere had paid off so well that its effects were

barely noticeable. In the end a policy change stated that future developments should seek to retain those qualities currently admired by *the residents*, to enhance them, and to add other elements when they do not detract from existing features. Little detailed guidance was given except to re-emphasize the ways—such as gaps between estates—in which the admired features could be achieved. The team wished to avoid a precise design-guide because, as residents themselves argued, there were many ways of achieving certain effects. Indeed, one current benefit of Milton Keynes is its diversity.

This brings the story up to date, except to add—as was the case from 1976 to 1980—that a policy is not necessarily a guarantee of an outcome. What actually appears on the ground will be very interesting to see. Incidentally, an opportunity was created to feed the research results back to the residents who not only contributed to them but to whom they truly belong. The reaction was very positive, although there was some scepticism about the idea that the Development Corporation would take notice. The implications for theory and practice should now be obvious. The residents have demonstrated that there can be consistent and operable models that confound some of the more simplistic ideas of mainstream academics and practitioners. In parti-



8 TYPICAL NEATH HILL RESIDENT'S USE OF SHOPS



8 Typical resident's use of shops

9 Diagram showing resident's home

cular, the traditional ideas about overall coherence, tight-knit form, landmarks, and interconnectedness begin to seem irrelevant. Perhaps only visiting architects got lost in Milton Keynes and only their own planners searched for a single overall form. The word “simplistic” was used deliberately because two recent developments—one in theory and one in practice—offer more considered views of “urban” form. The first is the revaluation that is going on within parts of British rural planning—away from the traditional model known as “Key Settlement Policy” in which facilities are concentrated in *one* town in an area. While this development has been gaining importance for almost 30 years, several county planning groups have recently moved more toward what is sometimes called a “cluster” principle which, at some levels, is strikingly similar to the pattern found in the Milton Keynes Plan (by default of course).¹³ The theoretical advance comes from the person most often quoted in all the work on urban form: Kevin Lynch. His latest book *A Theory of Good City Form*¹⁴ finishes with a glimpse of Lynch’s personal “utopia” derived from the theories in the main part of the book. There are striking parallels between this utopia and Milton Keynes—that is, the Milton Keynes that the residents inhabit and that I hope will now be fostered and enhanced.

- 1 Milton Keynes Development Corporation, *Residential Design Feedback* (Milton Keynes, England: Development Corporation, 1975).
- 2 Milton Keynes Development Corporation, *Milton Keynes Master Plan* (Milton Keynes, England: Development Corporation, 1970).
- 3 Ebenezer Howard, *Garden Cities of Tomorrow* (London, England: Faber & Faber, 1965). First published 1902.
- 4 Peter Self, *New Towns, The British Experience* (London, England: Charles Knight, 1972).
- 5 Melvin Webber, “The Urban Place and the Non-Place Urban Realm,” in *Explorations in Urban Structure*. Edited by M. Webber. (Pittsburgh, PA: University of Pennsylvania Press, 1964).
- 6 Gordon Cullen, *Townscape* (London, England: Architectural Press, 1961).
- 7 Philip Opher and Clinton Baird, *Guide to Milton Keynes* (Oxford, England: Oxford Polytechnic, 1981).
- 8 Steen Rasmussen, “Open-Plan City,” *Architectural Review* (September 1980), pp. 141–143.
- 9 Donald Appleyard, *Planning a Pluralist City* (Cambridge, MA: MIT Press, 1976).
- 10 Donald Appleyard, *op. cit.*
- 11 Brian Goodey, *Perception of the Environment*, Occasional Paper 17 (Birmingham, England: Centre for Urban and Regional Studies, 1971).
- 12 Essex County Council, *Design Guide for Residential Areas* (Essex County Council, 1974).
- 13 Paul Cloke, *Key Settlements in Rural Areas* (London, England: Methuen, 1979).
- 14 Kevin Lynch, *A Theory of Good City Form* (Cambridge, MA: MIT Press, 1981).

Signals and Response: A Reply to “Passing in the Night”

John de Monchaux

The development of Milton Keynes offers physical planners and designers a remarkable opportunity for evaluation, research, and scholarship. The planning process for the new city itself generated a trail of evidence on attitudes, ideas, and arguments that went into the making of the plan. The two volumes of the plan itself and the ten supporting technical supplements are part of this evidence.¹ The Milton Keynes Development Corporation (MKDC), in advocating the plan, committed itself to a program of monitoring and evaluation that would “allow the Corporation to measure the success of plans and policies and therefore provide a basis for future action and any new decision which this requires.”² As a part of this monitoring and evaluation program, from time to time the Corporation has undertaken and published surveys of resident attitudes and comments on the capacity of the plan to respond to social and economic change.³ And Milton Keynes as a new town is host to a range of vigilant and informed scholars at the Open University who have offered their own commentary and counterproposals.

Not only does the development of the new city provide an opportunity for scholarship, but also the plan itself states the imperative for study and examination. In the foreword to the plan, written by Lord Campbell,

Chairman of the MKDC in 1970, the intention is stated as “the Plan shall lay the foundations upon which an organic process of development will grow and become a living reality as the people who come after us plan and build for the future. . . . and as the needs of those who live in it change [there will be] a continuing process of research and consultation between the Corporation and the citizens of Milton Keynes.”⁴

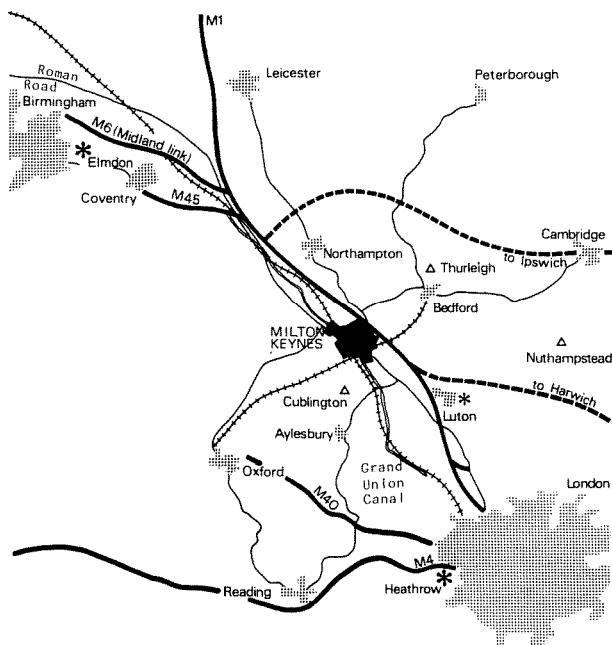
On the face of it, Jeff Bishop’s article elsewhere in this issue would seem to be simply a desirable and welcome part of this process. His description and analysis of resident attitudes in Milton Keynes, however, is presented in such a way as to indicate that he has really missed some important and fundamental principles of the plan itself, not least of which is that research be an integral rather than a challenging part of a process of development expressly intended to avoid any fixed and inviolable end design.

Some question always lies behind research, and the appropriate framing of that question is an important key to successful research. When the question—whether before or after the event—is linked to policy its association with policy issues has to be clear. Bishop frames his question around what he describes as a perceived mismatch between “the form of the New Town and the

proposed Master Plan” and ends up asking: “Do the public who live in these places (British New Towns) share the perceptions, values, and attitudes of those who plan them?” The question has some sociological interest and the answers may bear upon the way professional organizations develop their own value frameworks—compatible with or distinct from those of client groups, for example—but the policy point of the question is obscure. If the answer is “yes,” in what way is that better than if the answer were to be “no,” and does any practical action emerge from either answer? If we acknowledge that there are good political as well as professional reasons for knowing how far planner and planned for differ in outlook (putting aside for the moment its relevance to the issues Bishop goes on to deal with), we see that Bishop gives us only one-half of the picture. We may learn something of what residents think, but the values, perceptions, and attitudes of the planner are nowhere documented or compared; and such indirect references as are made imply that irrespective of what they are they are identical over time, place, and individual. Certainly the planners of Milton Keynes must include the development corporation and consultant team responsible for the plan for Milton Keynes as published in 1970, but the new city’s planners must also include the many

Drawing in Figure 6 courtesy of Derek Walker, Derek Walker Associates, Milton Keynes.

All other illustrations courtesy of Milton Keynes Development Corporation. Copyright 1970 Milton Keynes Development Corporation. Reprinted from “The Plan for Milton Keynes.”



I Milton Keynes is located 70 Kilometers (45 miles) northwest of London. The new city is served by major transport routes of every period including the M1 Motorway, the London-Birmingham railway line, the Grand Union canal, and the Roman road to Wales.

members of the development corporation team that has had the task of preparing structure and action plans within the plan's framework over the last 14 years.

Bishop's article suggests that the planners held "traditional ideas about overall coherence, tight-knit form, landmarks, and interconnectedness" but does not identify which of the city's many planners may have held these ideas or when or in what form they were manifest. He suggests that professional visitors to Milton Keynes may have been concerned with these issues. If so, their concerns, while interesting, do not help us understand any better the relationship between the planners and the planned. Bishop's study seems to indicate that residents do indeed appear to grasp the structure of the city at least in terms of being able to take advantage of the grid roads to give access to different opportunities and to be able to describe their patterns of use of the centers and roads, but it implies that this came as a surprise to "the planners" without explaining who they were and what the basis for any contrary judgments may have been.

Given that we do not know which planners Bishop refers to, we do at least know broadly which "planned for" group he is interrogating: those living in Milton Keynes in the late 1970s—when the city is only in its tenth year

and when despite its many achievements or shortcomings it would be precipitous to describe it as "built." We also know that he asked such residents the question: "Do you think you are living in a city?" Again, what are we to make of their answers, particularly if one does not have a common understanding of why the question was asked or what was meant by a city—at any stage of its building program.

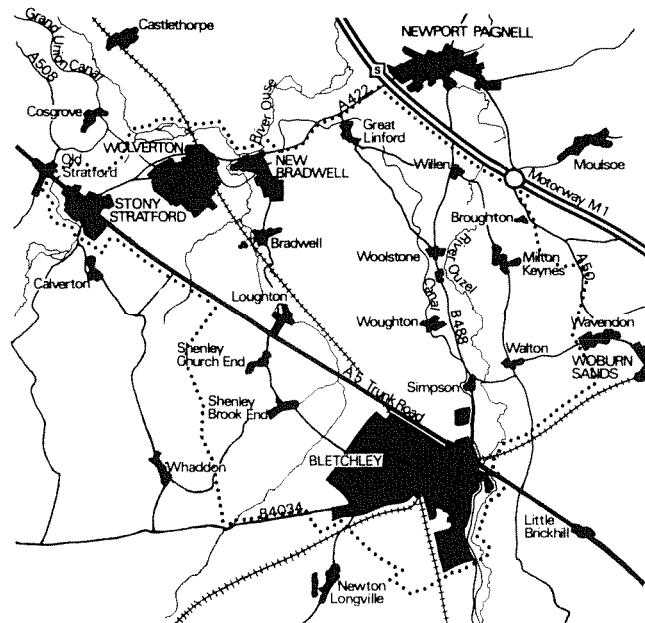
Because Bishop roots his critique of the Milton Keynes' planners and his policy conclusions in the historical context of the city's development, it is important to correct some of the assertions that he makes about that context.

Bishop correctly characterizes the Mark I (1940s) new towns and Mark II (1950s) new towns in terms of their recognizable physical properties and their approach to planning—particularly at a neighborhood scale. However, in his description of the so-called "Mark III" new towns of the 1960s he oversimplifies their purpose as well as their structure. Milton Keynes, for example, was conceived explicitly as a part of a regional strategy for south-east England and sought to account for part of the absolute growth in the population and region.⁵ It was not—as were the earlier new towns—"aimed specifically at those living

amongst urban decay.” While, as Bishop states, it is true that Milton Keynes and many of its expanded town contemporaries such as Northampton, Swindon, and others gave much less emphasis to self-containment and more encouragement to private housing, it is hard to find the evidence that fashions, especially “models rooted more in United States’ practice” were influencing these new towns of the early 1960s. A look at the plans for Runcorn with its rapid transit system and discrete “neighborhoods” and for its counterpart, the proposal for a North Buckinghamshire new city (predating Milton Keynes but on its site) by the County of Buckinghamshire planning officer,⁶ seemed to suggest quite an opposite direction to United States’ models. Nor, indeed, do the plans for Redditch, Skelmersdale, or Dawley appear to owe a lot to United States’ models. On the other hand, one of the foremost studies for a (unrealized) new town in South Hampshire prepared by Colin Buchanan and Partners in the mid-1960s does begin to reflect a more complex pattern of freedoms and flexibility that—at least in the proposed rectangular road mesh—might evoke American examples.⁷ Even there, however, the conceptual basis for Buchanan’s ideas appeared to be rooted in the universal imperatives of the geometry of road traffic, rather than in a fashionable reference to

planning in the United States.

The planning of Milton Keynes began in many places and many minds before the MKDC was brought together in the spring of 1967. The Corporation’s own guidelines for competing consulting firms in the summer of 1967 embodied much contemporary thinking on the role of the new towns that was later to appear in the plan. For example, the Corporation emphasized the need for flexibility and for close attention to the complexities of phasing and implementation of the plan, in such a way as to ensure that at each stage the new town provided a good environment for living, working, and recreation. The firm of Llewelyn-Davies Weeks Forestier-Walker & Bor (LDWFWB), in their successful response to the brief, set out a particular philosophy in terms of planning for change, elements of which appear and reappear in the later formulation of the plan. There were other direct sources of planning experience as well—the professional staff gathered by the Corporation individually had experience in a variety of new towns and local government settings. In the case of Bletchley, the residents of the area had already been part of a major planned expansion scheme undertaken by the London County Council and later the Greater London Council.



2

2 The new city was designated in 1967 to occupy 9,200 hectares and to be planned for a population of 250,000 by the turn of the century. At that time, 45,000 people lived in the designated area in the towns of Bletchley, Wolverton and Stony Stratford, and in a dozen small villages including the village of Milton Keynes.

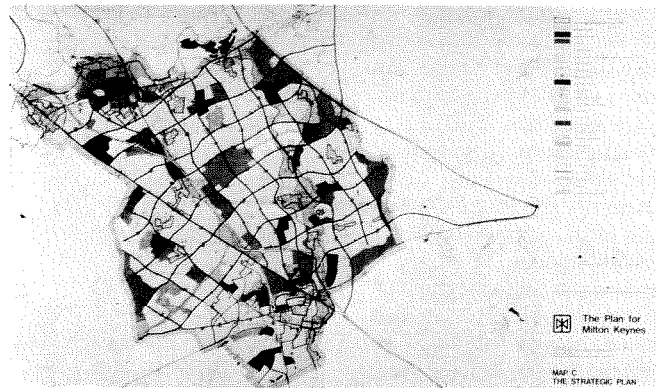


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3 The general character of the land dates from the 17th and 18th centuries: larger fields, hedgerows, and lanes with nearly all building in villages and towns. The ground form rises about 60 meters from two north/south streams to a central ridge.

4 The plan for Milton Keynes was prepared over the period 1967–1970 by the MKDC and a consultant team led by the firm of Llewelyn-Davies Weeks Forestier-Walker & Bor.

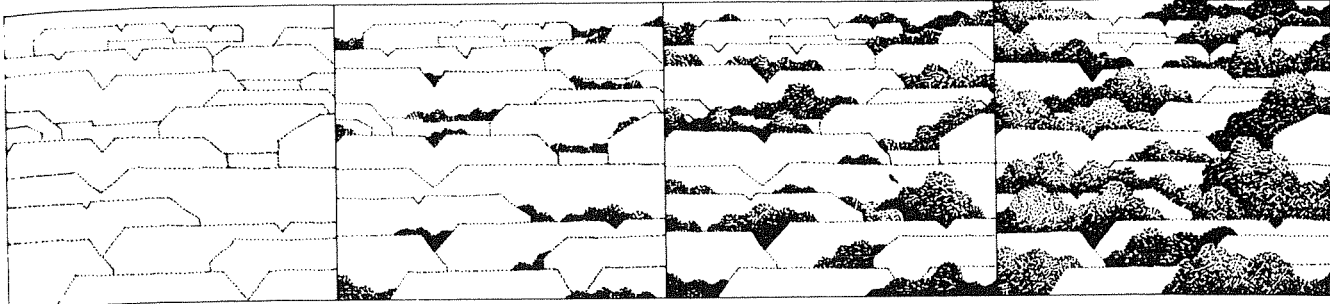
5 The plan proposed that the building of the new city begin in the north and south and proceed in a way that would join the major existing towns in a crescent of new development by about 1980. This has now been realized and in 1984 there are 114,000 people living in Milton Keynes.



4



5



6

At the time of an initial series of seminars debating goals and directions for Milton Keynes in December 1967 and January 1968, a wide range of views became apparent. At the same time, however, some evident and powerful support of the concept of planning the city in a way that would allow for change and a future less constrained by the past emerged and was reinforced by the early work by LDWFWB on the design of hospitals for growth and change.

In their studies of growth and change of hospitals John Weeks and Richard Llewelyn-Davies paid particular attention to unpredictability of health-service demand, policies and technologies beyond a very limited period of time, and, thus, the importance of arranging buildings in a geometry that would allow for unpredicted and new arrangements of activities.⁸ In the planning of Washington new town by LDWFWB during the period 1963–1964, the same ideas were expressed, especially in the interim plan. As the final report for Washington acknowledges, the ideas concerning the geometries for growth and change play a major influence in those proposals even though the uniform grid of the interim Washington plan proved impractical when confronted with the uneven regional traffic routes crossing the new town site.⁹

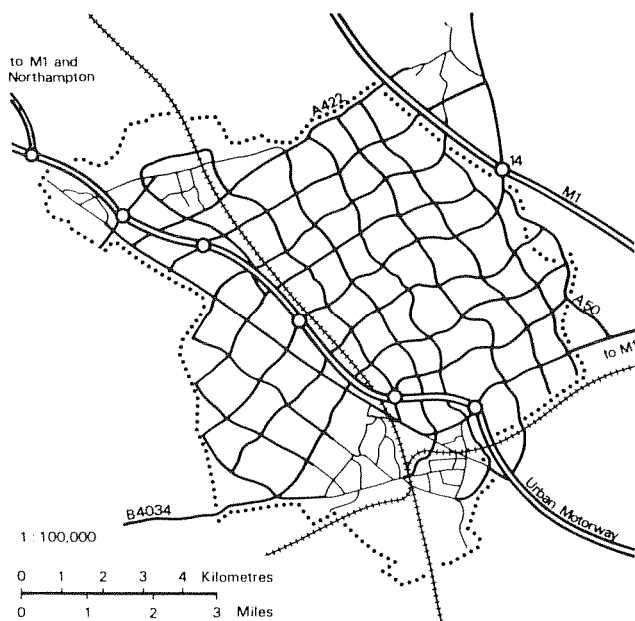
The spirit of these ideas appears again in the plan for Milton Keynes:

... the central aim of the plan is to arrange these necessary fixed elements [transport, drainage, water supply] in a new city so as to allow the greatest possible scope for freedom and change as it is built. They have also been planned as far as possible to allow wide variety in patterns of life and the greatest possible choice for the future. ... But at Milton Keynes it will be necessary for the thinking and planning process to be continued throughout the period of building. It is considered likely that policies and patterns of building which are appropriate in the early years of development will have to change long before the city is finished. The plan provides this freedom but it can only be exploited if systematic monitoring and evaluation are undertaken and plans and programs are correspondingly reviewed, developed, and changed to meet new circumstances and the wishes of the people of the new city.¹⁰

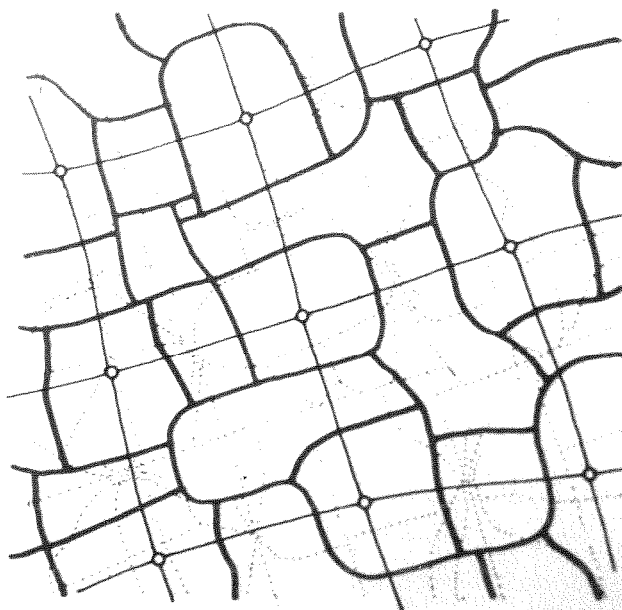
Historically, then, the plan for Milton Keynes as a whole expressly sought the accommodation of change and new thinking in the light of fresh thinking and evidence. In so far as this principle is exemplified by Bishop's discussion of neighborhoods it is necessary

again to refer to the history of the plan's development on this matter. In initial discussion about where people would live in the new city the term "neighborhood" was, in fact, avoided as long as possible to lessen the risk of connoting a particular social or community order, along the lines, perhaps, of what Bishop refers to as "the determining and inhibiting effects of the neighborhood concept." Together with the consultants and the corporation's team members, a number of wise and interested academics were involved in these discussions. Mel Webber was one, but it would be unfair to him and to other contributors such as Kevin Lynch, Peter Cowan, and David Donnison, to suggest that the residential areas of Milton Keynes were planned so simply and directly on his ideas of "community without propinquity," for example. In fact, the conclusions drawn about residential areas—or neighborhoods, if we have to use the term—were the result of many contributions and lengthy and earnest debates. They reflected thorough and systematic interrogations of earlier new town experience, the review of goals and objectives by the planning team, and the array and evaluation of a wide range of possible options, all enhanced by the insights and experience of many urban experts and commentators, and influenced significantly in design by the search for a geometry that would allow

6 Since 1968 approximately 28,000 new houses, 30,000 new jobs, and 1,800 hectares of parks and open space have been established at Milton Keynes. The Development Corporation has had continuing responsibilities for planning and landscape policy and has been responsible for most of the architectural design.



7



8

pervasive and accessible public transport. In this regard the plan stressed "... that the environmental area within the main road grid is not proposed as a 'community' or 'neighborhood'." There is little or no evidence available that would suggest that a particular size or unit or grouping of units is more or less appropriate socially or administratively. Therefore, the proposals are made in such a way as to permit the maximum freedom of social development, movement, and choice. In concept, the grid of main roads can be regarded as being superimposed on networks of pedestrian routes and local roads that continue across the grid. The areas within the grid of main roads are not self-sufficient and isolated areas or any number of areas can be regarded as a unit according to the function being considered."¹¹

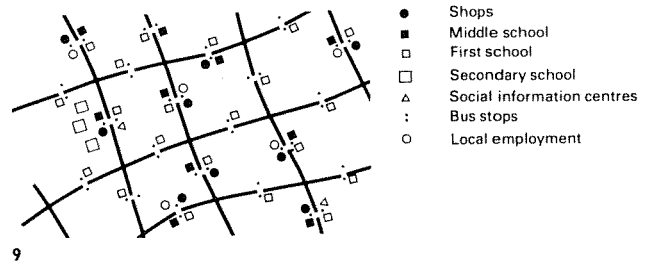
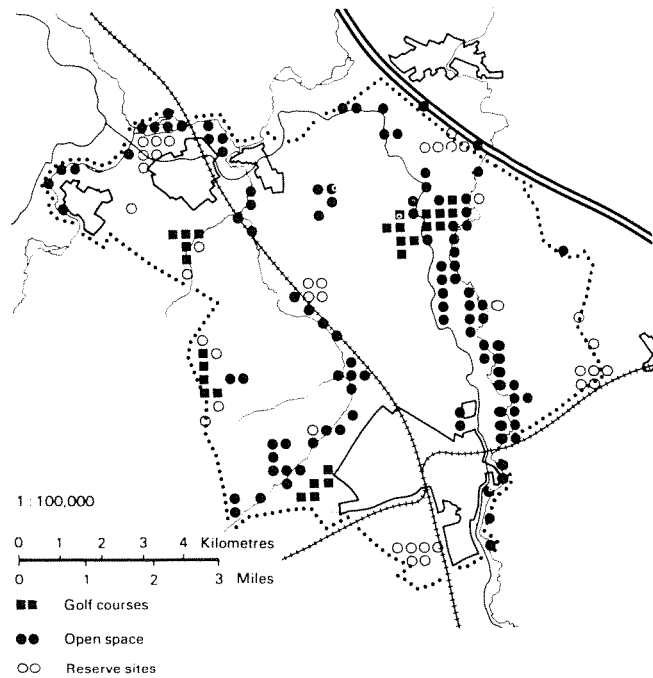
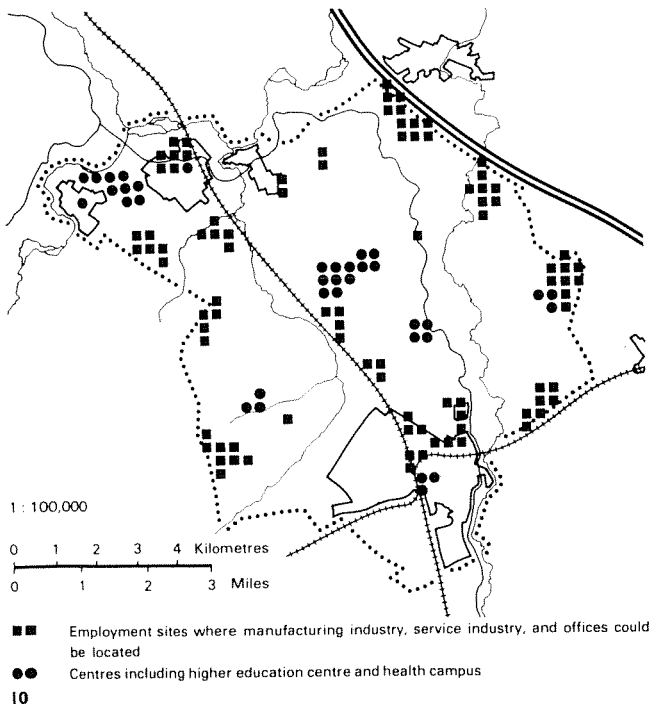
Taken as a whole, Bishop's message seems to make something of a virtue out of a research finding necessity: that despite certain intentions and purposes (that he misconstrues) of the plan, residents are behaving in ways that suggest that those (nonexistent) constraints do not create obstacles to the use of Milton Keynes in ways they enjoy (and which in fact were intended by the plan)!

The point could be left here, but in light of the material presented by Bishop on

places, paths, and roads it seems important to clarify the principles behind the original plan on these matters also. Authorship of the proposals and purposes that follow refers to their acceptance by the consultant, by client teams, and by their political masters of the time.

There are four areas in the proposals that deserve mention in this context: the distribution of preferred or special places, the road and public transport pattern, the way in which uses are located and categorized, and the proposals for local places and associations.

In a deliberate attempt to distribute opportunities for city residents in space and through time the plan proposed half a dozen or more locations throughout the city where unique major activities would be located. The new city center was one obvious such activity, but the locations also included a major city health facility, the Open University campus, the College of Further Education, and possible major subcenters on the east and west flank of the city likely to be developed toward the end of the century. The intention behind these proposals was to create for the residents in every part of the city an association with at least one of the city-wide functions. These locations also allowed space for expansion and provided



locations for major activities not yet then identified. In every case these special places were proposed to have an "address" on the main road system, that is, to be visible and obviously accessible from that system. At the same time it was hoped that the buildings and activities located in these, special places would be designed in such a way that the city's path and pedestrian system would penetrate the site and building form and that the activities would use that local movement system as a piece of their internal infrastructure. The same principle was proposed for activities of more local importance and of which there may be more than one in the new city, such as the major secondary school clusters, industrial estates, recreation buildings, health centers, and so on. These activities again were distributed throughout the city so that appropriate sites would be available when critical growth points were reached in the development of the city, giving, in turn, a particular set of opportunities

and associations to the residential areas nearby.

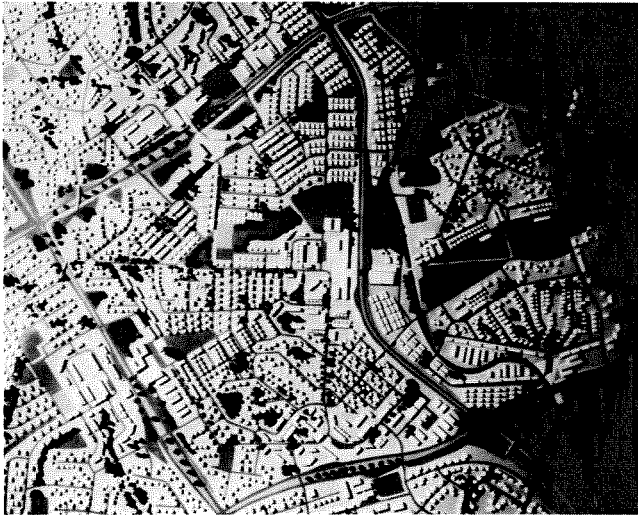
The road system for Milton Keynes is, perhaps, the most conspicuous feature of the plan—especially in terms of the departure from earlier British new town practice. It was proposed as a deliberate response to the probability seen at that time of far greater use of the motor vehicle in a future environment in Britain. It was also proposed to offer the most efficient and the highest potential standard of public transport service from the beginning of the new city's development. In the plan the main roads were seen as analogues of main roads in towns and villages, i.e., as a place from which one sees the principal activities of a town or a city and as roads that take on the character of the neighboring development. It was also felt to be very important that the experience of the city as a place when seen from shared or public transport be the same as that experienced by those using individual cars; from both modes that

7 Onto this land the plan proposed a grid of main roads carrying public transport and faster moving traffic. The grid is bent to fit existing major routes, villages, topography, and woods.

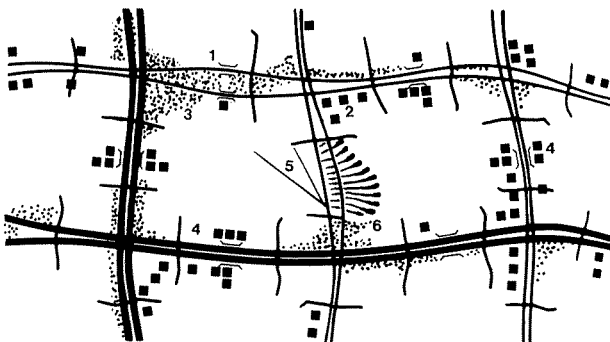
8 A looser mesh of minor roads lies over the grid of main roads and a counterpart grid of main pedestrian/bike paths was proposed generally crossing main roads at midblock points (bus stops).

9 The places near these crossing points are possible locations for activities serving any part of the city.

10 Activities that serve city and region are located at different places in the city and two major park systems follow the stream valleys.



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11 The plan proposed that the character of residential areas differ greatly as a product of local variations in policy and constraints and that a deliberate effort be made to achieve diversity in design at the finest possible grain.

12 The plan proposed that travel on the main roads will be an important way of experiencing the city and that each road would have a special

character. Design variables included: carriageways separated with landscaped median; "hard" edge of buildings; "soft" edge of landscaping integrated with adjoining use; carriageways close together, passing through an activity center; view of adjoining area provided from road; and carriageways separated and at different levels to suit topography.

experience should be as revealing, as enjoyable, and as instructive as possible. By having the main roads as the principal channel for shared transport and by spacing the bus stops giving access to this transport reasonably widely, it was hoped that an efficient and reasonably high-speed public transport system could be implemented. These considerations were very important in selecting the fairly closely spaced mesh of the main road network (1 kilometer) in each direction. That close spacing, in turn, was intended to keep intersections simple and the walking distances to shared transport of no more than 500 meters or so.

In proposing a distribution of activities throughout the city, a system was used that did not require unrealistic categorical precision. For example, it was recognized that employment opportunities would be available to greater or lesser extent in every category of land use and while there would obviously be concentrations at centers and at areas set aside specifically for industrial use it was also policy to allow employment at small local centers and even within residential areas.

Another departure from previous practice in new towns was the explicit avoidance of any policy concerning housing densities. The distribution of densities indicated in the plan re-

flected the predictions of the planning team and not any particular policies or concepts favored by the Corporation. These predictions, in turn, were based on the current patterns of demand and design elsewhere in Britain, from which it was not expected Milton Keynes would depart significantly except insofar as it was thought likely to experience a higher percentage of privately sponsored dwellings at perhaps lower densities than had been previously seen in new towns. Thus the plan specifically treated density as the residual of behavioral research and local policies—local in time and local to the particular development in question.

Early in the planning process it was advocated that every site, every agent, every sponsor, and—ideally—every user in the city should be able to influence the quality and nature of place created. Thus, the task of those prescribing an overall structure and set of policies for locating activities was to provide for a system of possible associations that can be developed or not as the need arises. This approach led to the notion that at any center could be activities serving a small or a large hinterland and that residents would be able and likely to develop links to any number of centers and places throughout the city. The essence of this approach was to let local events together

with terrain, ecology, and site influence the making of places. The approach put forward certain principles and illustrations for exploiting the opportunities inherent in the larger pattern of a continuous mesh of pedestrian routes, local roads, and main roads; and it advocated a careful and systematic evaluation of what was achieved as each new center and place was developed.

Such a framework, deliberately creating freedoms for future designers and planners to exploit, is one that, as Bishop's article makes clear, has, indeed, been used as intended. At times, the flexibility seems to have stretched to a point at which some of the fundamental ideas are no longer recognizable, but this is the price as well as the purpose of the plan. What has not yet been accomplished, which would make a major contribution to the theory and practice of urban design and planning, is a rigorous examination of the outcome of each of the different ways in which the plan has been interpreted. There are a number of very practical measures by which one might evaluate the quality of place and path in Milton Keynes. Has the system in fact resulted in a system of lower costs, higher quality, and accessibility at the pedestrian, shared transport, and private transport scale? Has the pattern provided for in the plan truly enabled a change through

time, reflecting contemporary pressures, e.g., for energy conservation, for reduction in housing size, or for large-scale and—occasionally—very high rates of construction? Is the form and content of the city as it emerges apparent from the main road system or is it, indeed, now veiled in a system of landscaping and all but invisible to users of the main roads? How has Milton Keynes fared given the potential for adapting and changing local places to meet local requirements in the contest for economic development and business growth? These are all questions that could be addressed in both absolute and comparative terms. The very existence of an implementing resource as versatile and substantial as the MKDC, and the scale and speed with which Milton Keynes has been developed, invites these questions to be addressed.

In the process of answering such other questions, it is, of course, vital that the residents be consulted. It is, after all, their experience of the city that marks its success. The appreciation of resident experience and response, however, cannot be encapsulated in answers to questions that do not satisfactorily interrogate what it is we need to know, from a practical or even theoretical point of view. It bears repeating often that the much needed collaboration of social researchers with urban planners and policy-

makers in the evaluation and development of their work hinges on a mutual appreciation of purpose and intent. In the case of Milton Keynes a good starting point would always be the plan itself.

- 1 Milton Keynes Development Corporation, *The Plan for Milton Keynes*, Volumes One and Two (Wavendon, 1970).
- 2 *Ibid.*, p. 98.
- 3 Among others these include a report prepared in 1975 by B. Barrett (MKDC), Lord Llewelyn-Davies (LDWFWB) and P. Chapman (Open University) entitled *Flexibility* and the report prepared in 1977 by the MKDC entitled *Seven Years or, a Summary of the 1976 Household and Employers Survey*.
- 4 Milton Keynes Development Corporation, *op. cit.*, p. xi.
- 5 Ministry of Housing and Local Government, *The South East Study* (London, England: HMSO 1964).
- 6 Fred Pooley, *North Bucks New City* (Aylesbury, England: Buckinghamshire County Council, 1966).
- 7 Colin Buchanan & Partners, *The South Hampshire Study* (London, England: HMSO, 1965).
- 8 Richard Llewelyn-Davies and John Weeks, "Notes on the Function and Design of Hospitals" (London, England: the Nuffield Foundation, 1961).
- 9 Llewelyn-Davies Weeks and Partners, *Washington New Town Master Plan and Report* (London, England: 1966) p. 55.
- 10 Milton Keynes Development Corporation, *op. cit.*, Volume One, p. 31.
- 11 Milton Keynes Development Corporation, *op. cit.*, Volume Two, p. 1,269.

Donald Reay

The usual arguments about Milton Keynes tend to revolve around the "grid pattern" versus the "neighborhood unit" issue, which has been made to sound more confrontational than it really is. The latter is always painted in too rigid colors, and the former, while being possibly more flexible and realistic, raises difficulties in the building relationship of facilities to major roads, and, at the same time, develops more opportunities for the making of special places.

In fact, the differences between the two approaches have become blurred, and recent surveys seem to indicate that Milton Keynes inhabitants regard themselves as living in a village system set in approximately square kilometer road grids, with the town center a special trip some way off and the workplace a bus ride away—which is what the neighborhood people were talking about in the first place. The only constant in these discussions is the distance children walk to elementary school, and the real planning issue is the density at which everything is put together and in what manner. Evidence suggests that for both economic and practical reasons Milton Keynes' density may be too low.

In discussing this new town one is conscious not so much of arguing about design ends but about design means and

the conditions under which design has to be done. Unless these conditions are thoroughly understood they have a habit of distorting or even canceling out design ends. A program for a project of this size defining all the practical and social ends and financial and even the psychological and aesthetic ones can be forced to employ means that make these ends difficult—if not impossible—to attain. There is a point at which a row of houses gets forced by economic emergencies to be too long, where repetition of the same unit for economic reasons becomes inhuman and monotonous, where the assembly of different arrangements of the same plan becomes cute and not interesting, where parallel rows become boring, where strong horizontal window patterns become an assertion of uniformity not individuality, where thinking (almost unconsciously) of housing as a public utility such as water supply breeds a fatal kind of sterility.

Reliance on massive planting (which will take nearly a lifetime to mature and maintain) to combat these difficulties, and visual screening and separation to achieve coherence, is risky and conceivably unnecessary, particularly when one considers that many of the urban or even suburban residential classics, from Italian hill towns, English country towns, and Mediterranean villages are visually

satisfying with few trees or occasionally none at all.

Making these design issues more difficult to achieve, of course, is the relentless pressure of costs, approval procedures, and time. When one has to build and design 2,000 to 3,000 dwellings a year together with schools, shops, factories, offices, etc., at minimum cost, the pressure to reduce design and approval time and encourage construction simplicity and repetition is horrendous, and produces bland solutions rather than interesting ones.

Milton Keynes has fought all these difficulties hard and with considerable success. But one cannot escape the feeling that it has also been handicapped by a plan concept, conceived in a period of prosperity and optimism (now nonexistent) but admirable in itself, that has a landscape and engineering infrastructure the continuing cost of which imperils the quality of the buildings—which imposes distances on the inhabitants that lagging car ownership and expensive public transport do not yet alleviate, and which tends to make the whole town a construction camp during its building. The rigidity of the central area particularly when compared with the original master plan seems out of place in the Bucks countryside (Crystal Palace notwithstanding) and the whole question of a Los Angeles

type form of development, both practically and aesthetically, seems open to question in the context of a small island country of 50 million people trying to live on 50,000 square miles of land.

Milton Keynes— Who Forgot the Urban Design?

Francis Tibbalds

At the age of 13, the new city of Milton Keynes has a lot going for it and, in many ways, the community is a privileged one. In my view, however, it is not the place that it might have been had the broadly based principles and objectives of the original plan been properly interpreted in its detailed implementation.

Central Milton Keynes is bland, rigid, sterile, and totally boring: it was originally conceived as a rich, intricate piece of city center design—its complex organic form integrated into the adjoining residential fabric. In terms of the physical and social environment, the surface of the city was intended to be a continuum stressing linkages, overlapping catchments, redundancy, and complexity. The end product is fragmented; the grid roads divide the city instead of welding it together.

There are many shortcomings. Neat traffic-signalized intersections have become land-consuming roundabouts. Local activity centers have generally been wrongly located in the center of grid squares—creating the very simplistic single-center “neighborhoods” the plan had sought so hard to avoid instead of forming “connectors” between adjoining squares visible to passing drivers on the primary roads. Development has become inward, looking within grid squares instead

of spanning them to form a continuous, rich, urban fabric. Buildings are too far from the primary roads—separated by a landscape desert. Driving along the grid roads is a largely sterile experience—they are too uniform, boring, and uninformative. The “sense of place” and choice of facilities at local activities falls far short of the quality and ease of connection proposed in the plan. Housing density is too uniform and the choice and variety envisaged in the plan has not been achieved. Local routes for pedestrians and vehicles have not been established in a continuous and integrated fashion.

Milton Keynes is not as awful environmentally as this may sound—just disappointing in that it is not as good as it could have been had the spirit of the original plan not been crushed, ignored, suppressed, or misunderstood by those charged with its implementation.

It may not be too late. Development is only partially complete. It is not yet a city or even a coherent town. In the continuing development of the city and filling in of the existing urban fabric over the coming years, the Development Corporation could, if it so chose, do a number of things to safeguard the production of a richer environment that better meets the unchallenged aspirations and acknowledged promise of the original plan:

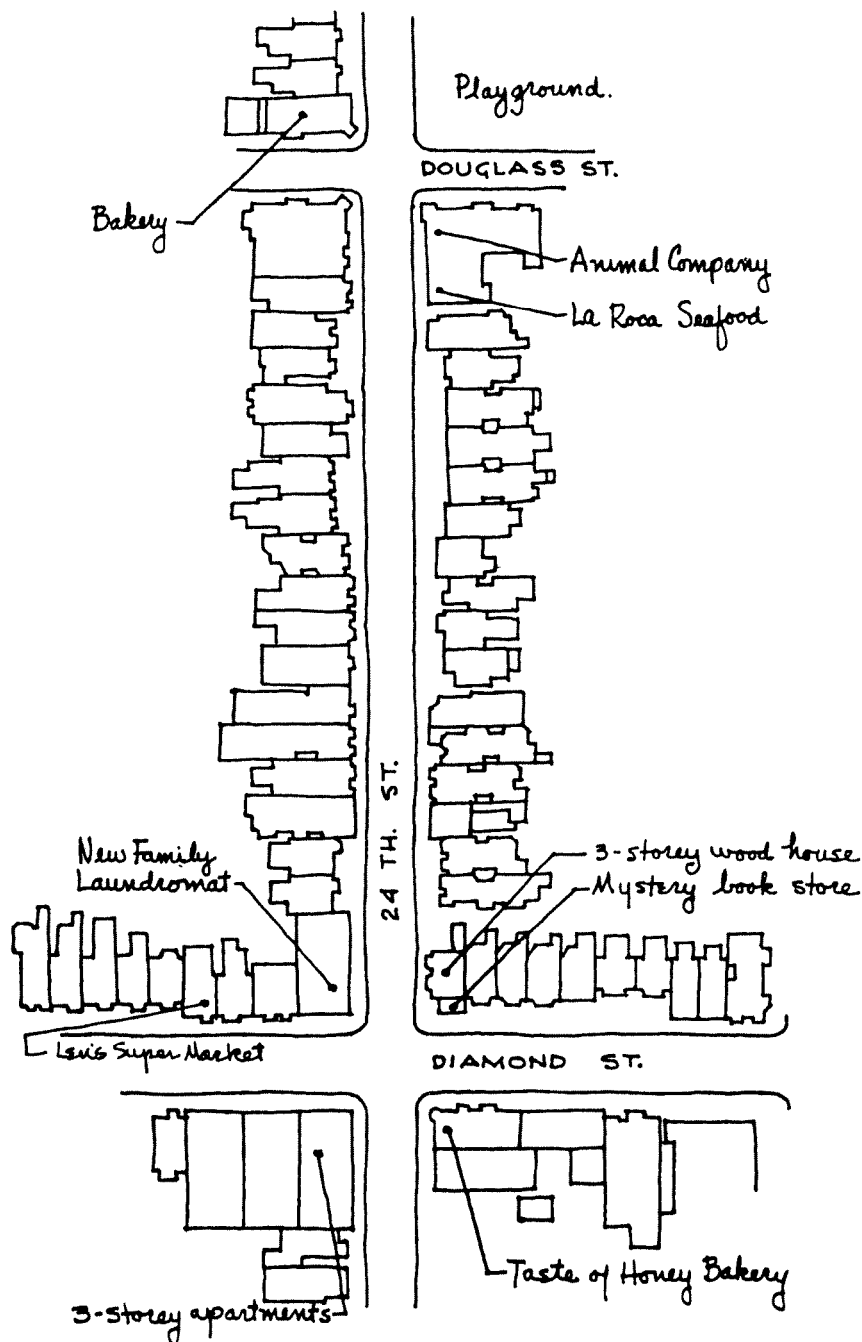
- . . . the grid road system should be completed and greater visual variety therein encouraged.
- . . . local activity centers should be located at the midpoints between grid squares to connect residential areas.
- . . . housing development areas should be concentrated on local routes and across grid roads.
- . . . local routes should be continuous across grid squares.
- . . . a complex, continuous, fine-grain urban structure must be developed within and overlapping the broad framework of the main road grid, reflecting the plan’s goals of variety, freedom of choice, opportunity, etc.

It is ironic that amid the wealth of professional expertise brought to bear on the planning and design of Milton Keynes a fundamental omission has gone unnoticed. The design process of Milton Keynes progressed from planning directly to architecture and engineering. It missed a vital stage—*that of urban design*. I believe this failing is largely responsible for the gap between the intention and the reality. Because of this, the city may irretrievably have sacrificed the opportunity to become one of the

world’s greatest examples of new place-making, and end up instead as just another collection of good, bad, and indifferent buildings.

Looking at Cities

Allan B. Jacobs



You can tell a lot about a city by looking. Consider, briefly, what you can see along a few neighborhood streets, and what it might tell you.

There is a three-story wood house, a not very fresh yellow ochre in color, at the northwest corner of Diamond Street and 24th Street in San Francisco.¹ Though clearly not one of San Francisco's Victorians, there is a Victorian sense to some of the details. Maybe it is a house of the turn of the century or of the teens. Stairs climb to a small second-level porch, off of which are two doors. There are also two house numbers, 748 and 750, so there are probably two dwelling units. The main body of the house is set back from one street. But at the street, in a small construction that looks as though it were added to the original building, is a store: the San Francisco Mystery Book Store. Over the store windows some of the paint is missing where earlier signs have been removed, leaving distinct shapes. The shapes are reminiscent of familiar signs: Did Meadow Gold dairy products have signs like this? Perhaps this was a corner mom and pop grocery store before the bookstore opened.

The windows on the top floor have doublehung woodframe sashes, the upper half of which are divided into three panes. They are probably original. The second floor windows are newer, aluminum casements. Pockmarks in the aluminum suggest that they have been there for a while.

Something about that yellow ochre paint attracts our attention. On a

closer look we can see that the paint is very thick and has some kind of grit in it: the kind of paint surface we have seen and heard advertised by large material companies. The ads promise that this new paint is 20 times thicker than ordinary paint; will last a long, long time, eliminating the need for costly, regular painting; that it will seal leaks; that it is self-cleaning; that it will not crack; that it is guaranteed; and that favorable credit terms are available. The ads are similar to those once associated with asbestos shingles, perma stone, and aluminum siding. But there *are* cracks and it *is* peeling. Why, we ask ourselves, do people choose those materials? They may think that the new paint or siding is better than the old. The new may be aesthetically more pleasing to the owner. Or perhaps the prospect of not having to shell out all that money for a new coat of paint every five-or-so years is what appeals. Then, too, small, local house painting companies require payment in cash; cash may be in short supply and payments on time may be both appealing and negotiable. But there are cracks now. Where are the people who made the guarantee? What happens to the water that gets into the cracks? We think about things like that and look north at the adjoining houses on Diamond Street.

The next four houses are similar and of no familiar style; then there are two small Victorians, another two in a style similar to the four, then a large Italianate Victorian at the corner. This array suggests that development occurred over time,

perhaps from before the turn of the century to the teens, and was carried out by many small developers.

Changes to the original structures are readily apparent. Asbestos siding on one required the removal of original details. Garages were added to two houses. Two have been painted recently. All the roofing looks good—the shingles lie flat. Single light meters, doorbells, mailboxes, and house numbers indicate that the first four houses are single-family dwellings.

House fronts measure 25 feet wide and sides pace off to about 33 feet. That is not very large: 825 square feet for two floors. Housing for “working class,” “blue collar,” middle- or lower-income families?

Back at the southwest corner of the intersection is the New Family Laundromat. An earlier sign reveals that the Diamond Bakery once used the store. Above, through a second floor window of this two-story, stucco, simple building, a white-haired man who looks to be in his sixties rises and turns off a television set. Next to the laundromat are two two-story buildings that once had stores in them. White curtains and blinds behind the large shop windows suggest people in residence. Len’s Super Market, in the first floor of the next house, looks like a classic mom and pop grocery.

There are people at the street intersection. Most of them are women and men in their late fifties or sixties. A lot of gray or white hair is in evidence. Some wait at a bus stop

with small packages. These people are more functionally than stylishly dressed: straight wool coats with simple collars, double-knit slacks in dark colors, and one or two hats. One woman wears a rust-colored coat and fairly bright red pants.

Four or five girls go in and out of the store at a third corner: Taste of Honey—A Natural Bakery (good smells, an arty letter style to the sign). Next to the bakery a new store, Auntie Pasta, promises to open soon.

When buses go by it is very noisy. There is a small boy on a low-rider plastic tricycle. With the one exception of an Asian girl, all of the people are white.

The fourth corner is taken up by a three-story multifamily residential building: mostly stucco, some shingles for decoration, dark aluminum casement windows, large garage doors facing the street, similar white drapes in all windows—a building of the 1970s.

Quickly now, walking west on 24th Street for one block, there are many, many houses—as many as 18 on one side of the street—on 25-foot lots. Very few are alike: one-, two-, and three-story; many different architectural styles; ages that could range from the turn of the century to the 1950s; wood, stucco, and even some brick. Most buildings have one or two units. One house with two entry doors has four recently added mailboxes. Only once are there as many as three houses alike in a row. The diversity continues: some windows clean and



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2 Diversity at 24th and Diamond Streets in San Francisco

3 Diversity at 24th and Diamond Streets in San Francisco

others dirty; neat white curtains in one house followed by a makeshift window covering, perhaps intended to be a tablecloth; some safety devices at doors and windows. One house has relatively new wall shingles. The joinery is ragged, especially at the window frames. The work looks as though it was done by the owner, to improve the house. There are other houses where earlier Victorian detail was replaced with stucco. Two or three houses were painted recently. One of them is for sale.

A look behind the houses indicates large yards. There is much more space here than was suggested by the street scene alone. People could and do grow fruit trees here. People must have spent time in the yards and may still.

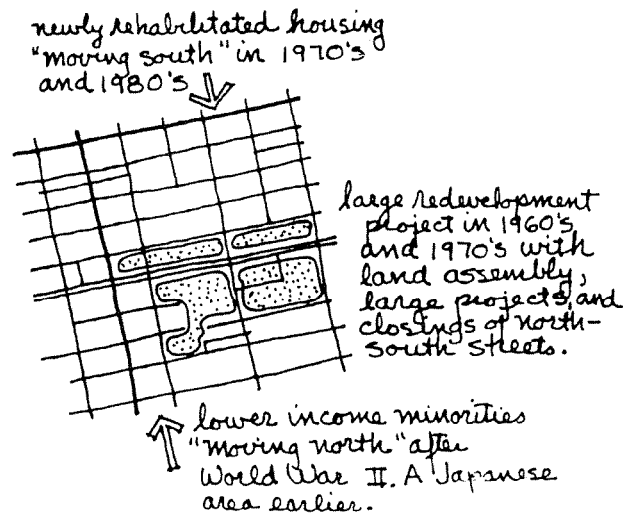
A good place to end this trip is at the Noe Valley Play Area at the next corner. The play equipment, planting, tiles, and concrete work are relatively new; but the one tree and a storage and toilet building are old. The net on the tennis court is metal screening and the surrounding fence does not go completely around the court. Some children are in one corner of the park with a teacher.

We *saw* a great deal in that short walk, more than we could put down in these few pages. And we were able to learn something new about the area. For example, it seems reasonable to conclude that it started to be developed somewhat before the turn of the century and that development occurred over a long period and was done by many

small-scale builders who built only a few houses at a time. The houses are not large, suggesting middle- or lower-middle income families. Single-family units suggest that owners lived in them, and one suspects that the owners of the two-unit and the few multifamily buildings also lived in and maintained them. They were probably families with children. If they were blue-collar workers they could have worked in the industrial areas to the east, at the end of 24th Street, or south of the downtown area—areas that are known to us. Public transit to those areas is good now and would have been then. Office workers would have worked downtown. The older people we saw on the street may not be the original owners and tenants but have been there for a long time.

A quiet neighborhood is suggested, one where people have tried to “keep up,” maintaining their properties, and making modest improvements to them. No major physical condition problems are evident.

There are signs of change, past and present. There are a few signs of young people with modest incomes, the sort of flower children associated with the late 1960s and with environmental movements. Younger people continue to move in. Some are “upgrading” the properties. There are new, trendy stores. Young, professional, downtown-oriented people may be replacing lower-income people. It is the kind of area where “gentrification” might be an issue. Some of the young people now have children. It seems a mixed area and change, so



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far, may have been slow. In a city with an office-oriented economy we will expect more young business professionals to seek this area. People from the large homosexual community nearby would also gravitate here and may have already. The old will die or leave, but slowly.

So, you can tell a lot about a city or neighborhood just by looking: something of its history, when it was built, for whom, what physical, social and economic changes have taken place, who lives there now, major issues and problems that may exist, and whether the area is vulnerable to rapid changes. You cannot tell all that you might like to, but you can tell a lot. Field observation—looking—should be an important systematic, diagnostic tool for professionals and others who design and plan urban environments, as important as other accepted research methods. That is what this article is about: careful looking.

Most people do not look at cities or neighborhoods or even a city block the way we have just looked at 24th Street—but they do look. Indeed, people who live in urban environments, including urban planners, architects, landscape architects, developers, bankers, and other professionals, take cues from the physical environment every day, aware or unaware as the case may be. The messages they receive are often the basis for actions. In some cases, they may become involved in massive physical change to a neighborhood, with all manner of resulting social consequences, based

on their responses to what they see. This is one reason why many urban planners, though they may honor the practice of a field trip or reconnaissance survey, may not consciously use what they see. They prefer what are presumably statistically rigorous and documentable methods of research and analysis about urban issues and change. They are understandably fearful of mis-seeing and misinterpreting because of the values they bring with them.

We have been cautioned rightly at every turn on this matter of trusting what we see, notably by environmental psychologists. Not only are we advised that the environment frequently operates below our level of awareness, at the same time, environments provide more information than can be processed. What do we miss? And, much as we might like, we cannot stand apart from the environment; we can only participate.² Many, many studies advise us that we cannot observe with objectivity.

What to do? We cannot say to people, “Don’t take messages from what you see because you may be influenced too much by the biases you bring with you to the situation and will act inappropriately.” That would be like asking people to go around blind. People *will* look, they *will* see, and they *will* respond; most important perhaps professionals will also. That being the case, they ought to do it well.

Looking at and taking messages from urban environments should be as important a research and

analytic method as any other that we choose to use, one used in concert with others both as a discrete research act and as a constant part of our professional and personal lives. Certainly, too, looking and interpreting is fun for those who are enthralled with cities as wonderful, exciting places in which to grow and do what we do.

In our striving to “do it well,” young colleagues and I have, over the past six years or so, tried to come to grips with what you can and cannot tell about the history, evolution, and present status of urban areas by looking. Our studies have included a review of what others have done in this field, investigations of individual clues to see what they might mean in different situations, and interviews with urban planners, educators, doctors, developers, and architects.

Most important, we devised a series of case study experiments in neighborhoods of large urban areas to see how much we really could tell about an area, just by looking. Walking field trips were carried out by one to three observers in urban areas that were completely unfamiliar to them. A staff person in a local planning agency had selected an area that could be walked in about three hours, was well known to people in the agency or community, and for which data were available. The field observers were given only a street map on which the area they were to observe was delineated. Three hours were spent in the area observing and interpreting what was seen.

At the end of the walk the observers spent an hour mulling over what had been seen and thinking about what it might mean. They then presented a general analysis of the area's history, evolution, and present status, including issues and problems, to people supposedly knowledgeable about the area.

Comparing their conclusions to both the staff member's knowledge of the area and to other available data, the field observers could assess the extent to which they were correct in their diagnoses. They could also determine which physical clues were most revealing and reliable, how clues were combined to draw conclusions, the function of personal knowledge and of knowing urban histories, and some of the limitations and pitfalls of the method. They could, as well, review the process that was used and observe how the eye-mind relationship works in the field.

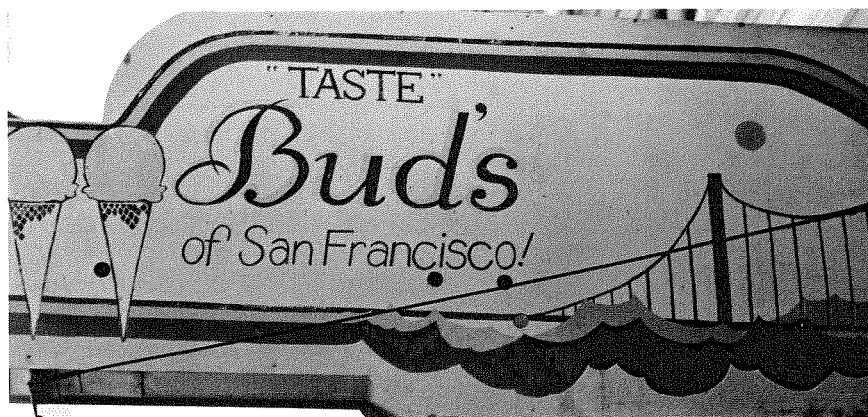
That is the method used with nine cases in the United States and Canada and four in Italy,¹ which may be likened to larger and more complete versions of the Diamond and 24th Street description that opened this article. In every case we have been able to gain a reasonable understanding of an area's past and present states, usually to the surprise of local planners and residents. Moreover, it has been possible to teach relatively inexperienced people how to take messages from what they see, particularly about physical and socioeconomic changes that are taking place, messages that do not turn up through other research methods.



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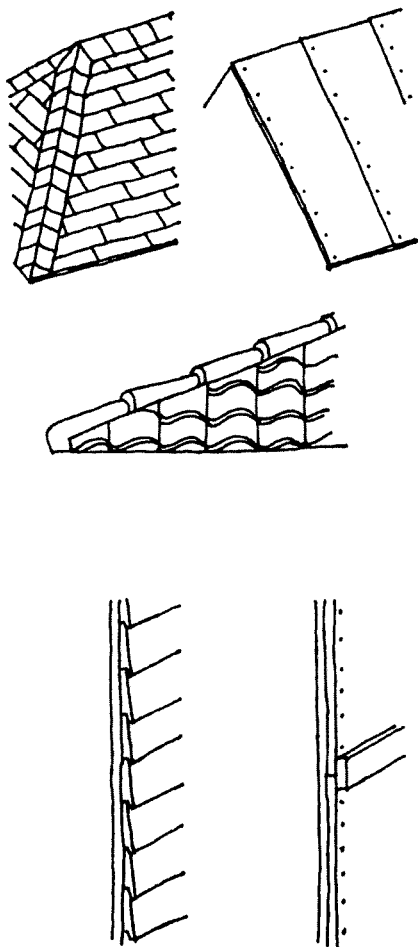


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5, 6, 7 Details that are clues to understanding an urban area



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8 The qualities of building materials are different and visible

If you spend enough time looking at urban environments, questioning what you can tell about the physical and socioeconomic dynamics of an area of city, a number of physical indicators—clues—emerge as most helpful. For the most part, they are what one might expect: buildings (and units within them), particularly their architectural styles, age, size, quality of materials, maintenance, and condition; land uses; landscape material, design, and maintenance; special purpose buildings; peoples; an almost endless number of public and private details—mailboxes, doorbells, grilles, signs, furniture, meters, wires—that we call artifacts; commercial areas; street patterns and block and lot sizes; streets, walks, trees, and curbs; topography and other natural factors. Taken alone, any one clue might mean very little. A single family house is, by itself, not much more than a single family house. An older white man is an older white man. It is the combination of clues, the patterns, and the breaks in patterns that are most useful in gaining an understanding of the dynamics of an area. But individual clues offer a beginning.

Central to the method of inquiry and diagnosis is the combination of observing those “things” that make up the physical environment and a constant questioning of “why” and “what.” Why does a particular thing such as a sign limiting parking to certain hours during certain months of the year exist? Why is a law office located in an old Victorian house on the fringe of downtown? What might a new

residential building in an older area mean? What might have been the reason for a concentration of board and care homes? What might a large number of older people with fewer younger people in newly rehabilitated housing suggest for the future? All the diagnosis, including the continuous formulation and reformulation of hypotheses about an area, is dependent upon this constant questioning related to what was observed.

Presumably, urban planners are concerned with change: to guide it, to encourage it, to stop it, or to document it in order to anticipate and possibly to act on its consequences. Observation can help do this as much as other research methods can and often much faster. A set of relatively straightforward questions carried in the back of the observer’s consciousness seems to do the trick: Are there patterns and, if so, what are they? Do the patterns fit with expected patterns and processes of urban development for the type of area being observed? Are there new elements that break the older patterns? What is different? Does the rate of change seem fast or slow? What might the new elements suggest about why change is taking place? Are the changes deviations from what one might expect given the location? Are there changes from original quality or from existing conditions that suggest vulnerability to future changes? Is there a discernible direction of change? Do the observed changes in the area in question suggest anything for the larger urban area? What kinds of additional information would help

answer the questions raised by what is seen?

The suggested location of these kinds of questions toward the back of an observer's consciousness is purposeful. A significant potential problem with the kind of visual diagnosis that is being discussed is that of looking too hard for problems and for change. "If you look hard enough you will find." Maybe the observer will find something that is not there.

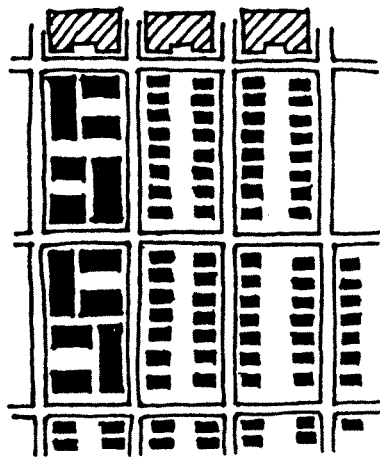
Ultimately, we return to a continuous interactive process of looking and questioning. For those concerned with urban change and with planned responses to it, as well as with what urban areas could be, looking at the place and asking the questions that help identify change are the starting points.

Conclusion

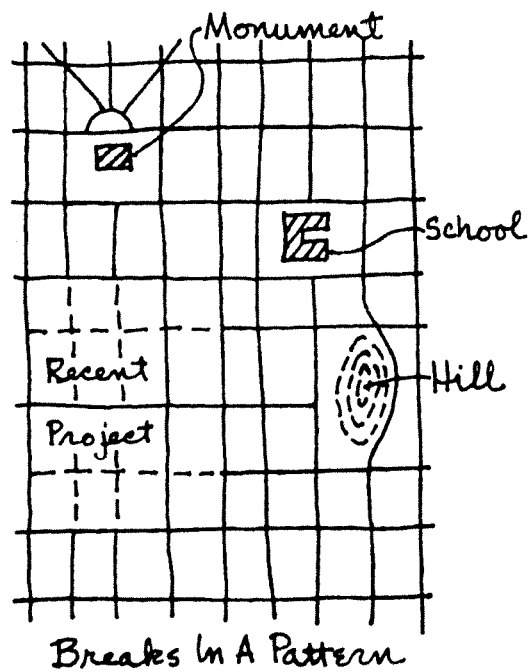
We take messages from urban environments by looking and we act upon those messages to maintain or to change or to create places that seem appropriate responses to urban problems and opportunities. I do not think we have been aware of the extent to which we make use of what we see in our work. Many professionals and lay people associated with urban matters shy away from deliberately using personal, visually gained experience as one basis for reasonable conclusions and actions. The knowledge gained from looking seems to them somehow too personal, too open to question, too "soft," or nonquantifiable and, thus, too chancy to be used in serious company.



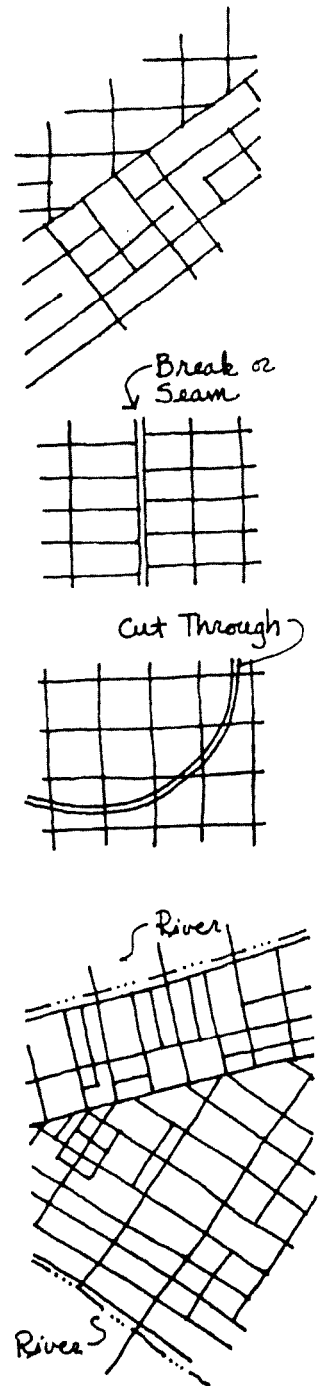
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10, 11 Patterns and breaks in patterns

12 Breaks and seams

In avoiding or underusing what can be seen, we simply fail to take advantage of an important, available, inexpensive tool. It is important to get involved with what we see, to learn from the observed urban environment and to use what we learn to help answer questions of concern and to achieve better places for people to live in concert with one another and with the land. Urban planners should employ observation as an analytic and decision-making tool more consciously and regularly than we have done. If conscious, systematic observation, as opposed to unconscious and haphazard visual experiencing, does nothing more than to help avoid unfortunate decisions and actions that affect peoples' lives, it will have served well. We think it can do much more than that.

Seeing people and their environment is a different matter than gaining knowledge secondhand. It underlines the difference between reality and abstraction. Policies and actions, we suggest, are more cautiously arrived at when images of real places and actual people's faces are associated with the decisions.

Notes

- 1 William H. Ittelson et al., *An Introduction to Environmental Psychology* (New York: Holt, Rinehart and Winston, 1974), p. 13.
- 2 William H. Ittelson, *Environment and Cognition* (New York: Seminar Press, 1973), pp. 13–15.
- 3 The case studies are: East Palo Alto and Naglee Park in San Jose, CA; East Walnut Hills in Cincinnati, OH; Prescott and South Prescott in Oakland, Modesto, and North Sacramento, CA; the Fan District of Richmond, VA; an area in Charlottesville, VA; a Calgary neighborhood; two areas in Rome; a section in Milan; and one in Bologna. The first four case studies have been published as working papers by the Institute of Regional and Urban Development, University of California, Berkeley.

Introduction

This year the College of Environmental Design (CED) at the University of California, Berkeley, celebrates its twenty-fifth year as an administrative unit, and the twentieth year of its building, Wurster Hall. Sally Woodbridge has interviewed many of the people who were centrally involved in the creation of the college and its building, and has constructed an account of the intentions, circumstances, and personalities that brought them both into being.

MIT was founded approximately a century before the CED and set about constructing a building for itself, a building that eventually came to be the home of the Department of Architecture and was later destroyed to make way for an Insurance Building. Lawrence Anderson, who studied in that first building, brings it back to life for us and has extracted from the MIT archives an account of its construction. A comparison of the size of the two buildings, the nature of their respective planning processes, and the issues that received design attention says much about a century of change in both education and professional practice.

The Rogers Building: 1866–1938

Lawrence B. Anderson

There cannot be many of us still remaining whose early professional work was done under its roof. To write about the building now requires embarkation on a nostalgic journey that brings to mind countless moments spent there during its final years. The nostalgia, which might otherwise seem merely sentimental to younger readers, can be offset by an account of the building's inception and construction that will show a seamier side of the picture. That account will be derived primarily from minutes of the Building Committee, preserved in the MIT Archives. They are charmingly inscribed in longhand by the faithful secretary, Thomas H. Webb, who was also secretary to the MIT Government.

The building was named to honor William Barton Rogers, whose initiative had led to MIT's founding in 1861. In the confusion and stress of the Civil War it was difficult to get the Institute underway. Classes were finally begun in rented space in downtown Boston in 1865, but MIT soon acquired land in a new district, the Back Bay, that was being developed by filling tidal marshes near the mouth of the Charles River. The site was only a block from what later became Copley Plaza, flanked by Richardson's Trinity Church and Charles McKim's Boston Public Library.

Rogers was MIT's first building project, and for a

time it accommodated in its 55,000 square feet of usable space all the early instruction. Architecture classes began in the building in October 1868 under the direction of William R. Ware, a Boston architect and partner of Henry van Brunt. In 1865 Ware had been charged with developing an architectural program. In 1866 he published the pamphlet, *Outline of a Course of Architectural Instruction*, but in 1867 he was still in Europe, observing schools and accumulating the books, photos, and casts he thought necessary. Thus, he was not involved in the construction of the new building.

In addition to Rogers, MIT constructed other buildings in the Copley Square area, but in 1913 the decision was made to settle across the Charles in Cambridge. In 1916 every department except that of architecture moved across the river to a campus designed by Welles Bosworth, an alumnus. That left the School of Architecture in sole possession of the Rogers building, probably through its choice. The School had throughout its early history far more affinity with architects practicing in Boston than with its parent academic institution. A very large number of its students attended classes part-time and were not eager to commute to Cambridge for general courses. They could walk to and from the offices where they worked, as could

the part-time lecturers and jury members. These conditions led to the development of a degree curriculum in which the School furnished its own instruction in science, mathematics, history, and structures.

In 1938, when the Rogers building was sold to make way for an insurance company's office building, the School of Architecture joined the rest of the Institute in Cambridge. That move was the beginning of deep changes in the School toward finding its place in MIT's spectrum, away from its parochial and vocationally oriented past. Because I enrolled as a graduate student in 1929 and, after studies in Paris, joined the faculty in 1933, I had the good fortune to live through that period of transition.

As a student I was introduced to a building that was rectangular and roughly 95 by 150 feet. Its narrow end fronted on Boylston Street and was flanked by buildings of similar size and character on either side. It was made of granite, sandstone, and brick, with floor framing largely of timber. Stylistically the exterior stuck closely to neo-Renaissance models that had impressed the designer during his French studies, although the same architect worked in a much freer style during the remaining decades of the 19th century, doubtless influenced by his close contemporary H. H. Richardson.



I MIT—aerial view

Photograph courtesy of MIT Museum.



2

2 Rogers Building from southwest

Photograph courtesy of MIT Museum.

The entrance on Boylston Street featured the obligatory broad flight of steps which led, not to the columniated main floor, but as in Perrault's east façade of the Louvre, to a superelevated basement. All of the façades displayed a correct but rather conventional array of windows, arches, and classic orders, with ornamentation appearing in the expected locations. (During construction various artists had been invited to submit models for sculpture, and while the authors of the chosen designs were paid a fee, the designs for a figure above the pediment and the pediment sculpture itself were not executed. A central decorative tablet broke in transit, and a window had to be substituted.)

It did not take long to discover that the architect had a far greater concern for his envelope than for the elements he had to dispose within it. They included, besides the usual academic assortment of laboratories, classrooms, and offices, a lecture room capable of seating 900, a large exhibition hall, and a library of substantial dimensions.

It can be seen from the section drawing that access to all these elements is provided by a great skylit atrium occupied by monumental stairs. Such a central open space is a frequent part of important buildings of the period. It provides unity and minimizes the need for

corridors. But in Rogers it was not handled with great felicity. There were awkward bridges, and the various flights did not maintain a constant tread/riser relationship. Its approach to Huntington Hall is constrained and insufficient for crowds; it dumps people where they will have difficulty circulating to their seats.

The design studios were grouped on the top floors around this atrium. In the graduate studio individual work places were curtained off to protect the privacy of *en loge*; however, they also discouraged fraternization. In my day a strictly enforced rule forbade smoking because of the paper hazard. We were, however, allowed to sit on the broad cast-iron stairs in the atrium with their mahogany balustrades, and to smoke in the presence of large metal ashtrays. Since I smoked in those days most of my conversations with undergraduates and others who observed this discipline took place at these times. Naturally in one academic year I hardly came to know the nonsmokers.

The open atrium/stairway, lacking any fire or smoke cutoff from surrounding spaces, was a hazard of high order, combining as it did the characteristics of a flue with its function as the only circulation element available for egress. Scarcely any other stairs were provided, certainly none that could have served as an alternate safe

exit. Rogers was lucky indeed to survive 70 years of useful life without a fire. Over the years awareness of hazards to life found expression in building codes. By my day Rogers had acquired proper exterior fire escapes that thumbed their noses at Renaissance façade canons.

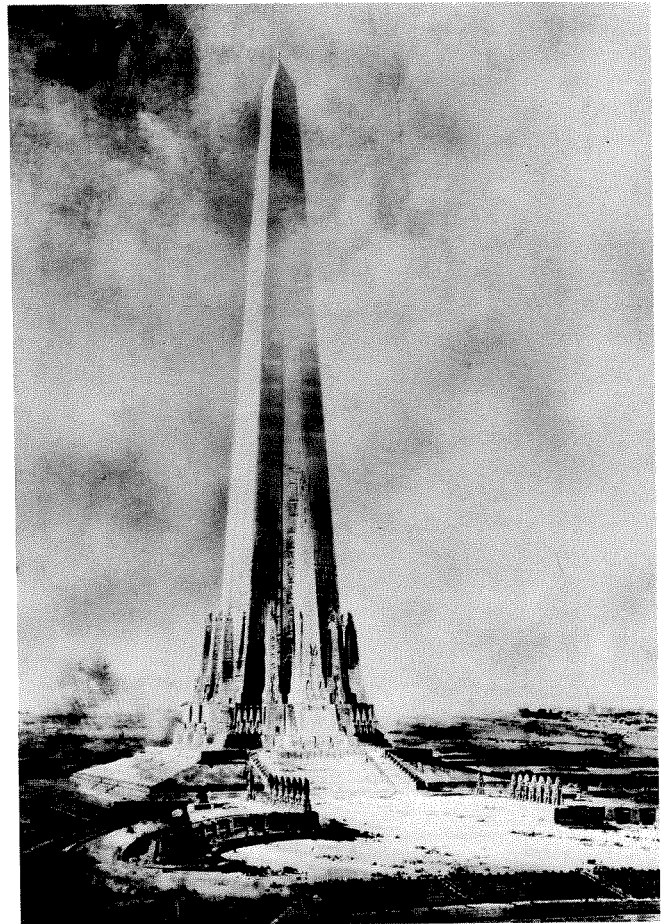
The commanding feature of the atrium was, however, the great perspective rendering of Despradelle's *Beacon of Progress*. It was mounted on a rigid chassis *à la française* and suspended in the void in front of the balustrade by Huntington Hall, so that a person entering the building and climbing upward could not fail to be overwhelmed by what must have been one of the largest beaux-arts drawings ever made in the United States. It is one of several drawings Despradelle made for his self-generated project, and could have been as large as 12 by 16 feet.

Désiré Despradelle had been recruited in 1893 to be MIT's second French senior design critic, following the death of the first, Eugène Létang. Immediately following his arrival in the United States he visited the Chicago Exposition just before its closing. He was so impressed that he conceived the idea of a permanent structure in stone, the "Beacon of Progress," that would commemorate the Exposition on its own site. He worked without authorization or compensation on this project

for six years, winning for it in the Paris Salon of 1900 the First Medal in Architecture. Although Despradelle also participated in some executed projects in Boston, the Beacon was his magnum opus. He belonged to a generation of architects who felt impelled to make colossal gestures of this sort, equivalent to writing a major novel or composing a great orchestral tone poem.

Other spaces in Rogers left strong recollections, but the most significant was the basement space that became known as the Emerson Room. Because the room had evidently been meant to accommodate heating boilers, it was endowed with high space owing to a floor level several feet below that of the general basement. Steam bought from Boston Edison made the boilers unnecessary. The room was only about 30 feet square, but its proportions gave it manorial scale. It was entered by means of a kind of arched loggia along one side that terminated in the steps leading down to its level. Thus, one was able to survey the room at a glance and to become aware of its social mood.

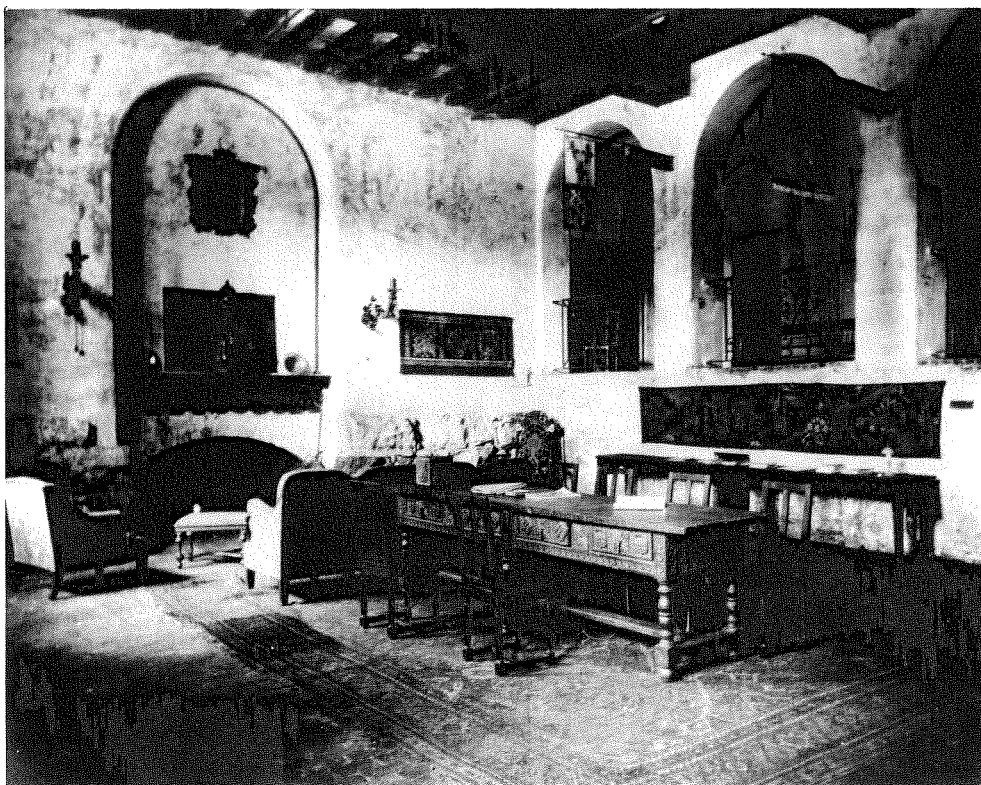
While it was, of course, used for parties and celebrations, its major purpose was repose. Immersed as we were in ingrained charrette habits, it became necessary from time to time to work for several days with only short periods of sleep. It did not



3

3 Désiré Despradelle, The *Beacon of Progress* perspective rendering, circa 1900.

Photograph courtesy of MIT Museum.



4

matter whether one slept by day or night. The room was always dark and quiet, isolated from street noises and from the building's other occupants. One or more large sofas invited positions of comfort.

William Emerson, dean of the School from 1919 to 1939, was always solicitous of student well-being. He had a large fireplace built to make use of the chimney and equipped the room with items picked up in his frequent European travels: French wrought-iron railings, a great carved oaken table from Florence, and a very respectable tapestry. An attempt was made later to create a room of the same name and purpose in Cambridge on the fourth floor of Building Seven, but it never provided the ambience of the original. Building Seven was the addition to Welles Bosworth's 1916 campus built to house the School in 1938. It was essentially composed of standard 15-foot bays which, while adapting themselves to changes in use, failed to provide even as by-products, spaces of a singularity and isolation that would allow them to become, through use, memorable. The new Emerson Room, constructed of standard modules and mingled with classrooms and offices, was easily taken over for classroom use by the always hard-pressed Schedules Office.

With our student body smaller after 1916, we had

very little use for Huntington Hall, the lecture room. (It was on the platform of that room that Rogers himself, who had previously relinquished the presidency because of ill health, collapsed and died while delivering a commencement address in 1882.) But we did frequent the large exhibition hall at the rear of the building underneath Huntington Hall. This was the place for the hanging of projects, for the long drawn out jury sessions, and for the gallery talks by some member of the jury commenting on the designs and justifying the choice of the awards. These actions seemed at the time to be an immutable ritual without which architectural education could not have been imagined. Students were excluded from the process, in order, it was thought, to evaluate their works without any personal pleading. Some of the subsequent gallery tours were brilliant improvisations, but inevitably they reflected only the personal opinions of the reviewer. In the late 1940s W. W. Wurster ordained that students should have the experience of defending their work orally, as they would need to do in practice. This democratized the process, but diminished its efficiency and even seemed to encourage grandstanding on the part of jury members who had had nothing to do with the previous student input to the projects. At MIT other alternatives to jury evaluation are constantly evolving.



5

5 Emerson Room with tapestry

In this room Herbert Beckwith and I selected and hung a retrospective exhibition of student work covering the entire history of the school until 1938. Even at that relatively early date, the review of student work furnished striking witness to the shifting priorities in social attitudes and stylistic preferences over the school's first 70 years. I wish that all of those projects could have been preserved. Many are reproduced in Caroline Shillaber's *1861–1961: A Hundred Year Chronicle* and, fortunately, the most significant ones can still be found at the MIT Museum. Today student drawings are not made for posterity; we have lost the custom of preserving them, except for theses.

Let us now see what can be learned from the record of how the Rogers building came into existence. The Building Committee was composed of seven persons, members of MIT's Trustees, then called *The Government* (now called The Corporation). Rogers was the permanent chairman and seems to have attended most of the meetings. Their first meeting was in May 1863. Four days later at a second meeting they considered a letter from architects Jonathan Preston and William G. Preston, which proposed a fee of "5% of the nett cost" for complete design and supervisory services; on that same day they voted to accept this

proposal, to authorize the Prestons to contract for foundation piles, and to proceed with plans for the superstructure. These architects had, in fact, already executed the neighboring building for the Natural History Museum and had also been providing ideas for the MIT building to another provisional committee of the Government.

Who were these Prestons? Jonathan, the father, was 62 at the time of the start of the commission and would live to be 87. He must have come into architecture as a self-made man, no doubt through earlier experiences in masonry and contracting; by 1863 he had attained some stature in public life, having held elective positions in municipal and state government. (He was also from its beginning a member of the MIT Government.) He attended most of the Building Committee meetings and took care of the business matters relating to the project. In the minutes he is often referred to as "the Superintendent." His son, William, was looked to for design. William Gibbons Preston was studying or had studied in France: one of his renderings of the Rogers façade was inscribed "Paris 1863." He was on the threshold of a career as architect that was not to end until 1906.

Ten days after their appointment the Prestons presented plan drawings and shortly

thereafter a budget estimate of \$144,000, which could be reduced to \$140,000 with the adoption of certain alternates. Fifteen weeks after their appointment sealed proposals for granite, freestone, and masonry labor were entertained, and others for plastering, digging, and heating were at hand. The project was off to a fast start.

Yet not until the 31st week was the contract for the granite basement approved at \$7,634.50; the freestone proposal of \$41,750 was accepted in the 43rd week. In the 50th week Jonathan Preston was authorized to contract for earth moving (the City of Boston was providing the necessary fill by the carload, but MIT had to pay for the grading).

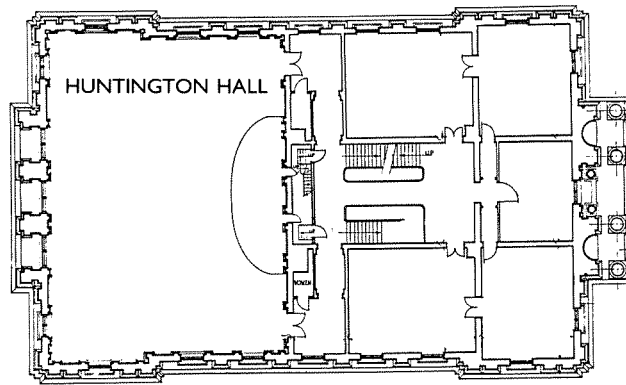
Just one year after the inception of the project, William Preston was asked to write his views on the ventilation requirements. In the files is a long letter describing his observations on the most up-to-date ventilating installations for scientific buildings, chiefly in England.

Rather belatedly, it would seem, in the 95th week of the project, committee members raised the question whether it would not be wise to put an additional floor on the building to meet a perceived increase in needs for space. At that time \$107,071 was already under contract, and the amount estimated for completion was \$27,417.

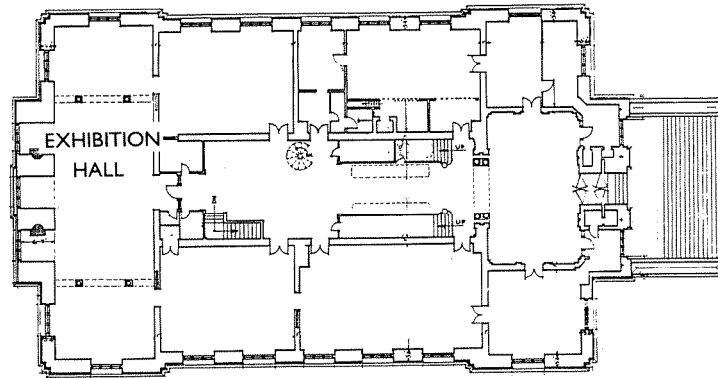
6 Plans, section of Rogers Building

Drawings courtesy of MIT Museum from Historic American Buildings Survey. WPA Project No. 665.143.254

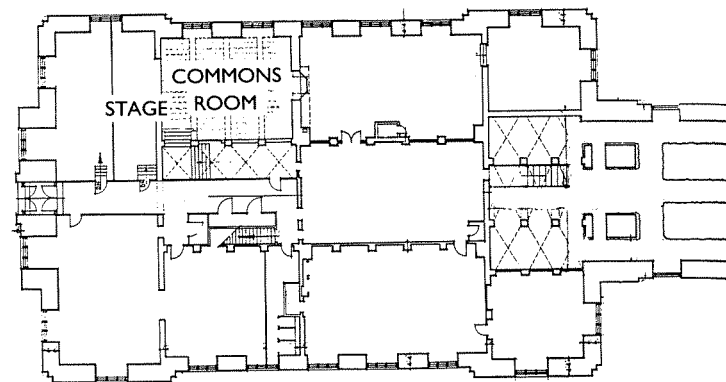
SECOND FLOOR PLAN



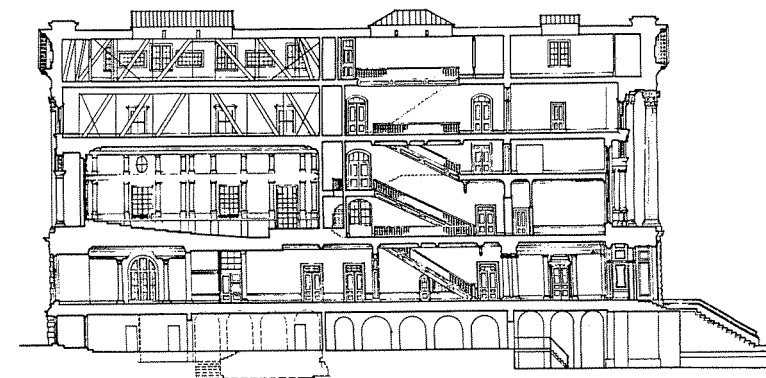
FIRST FLOOR PLAN



BASEMENT PLAN



LONGITUDINAL SECTION ON CENTER LINE



6

William Preston prepared very promptly a sketch showing, it would seem, how the building would look if a partial attic floor were added, and a month later provided an estimate of additional cost of \$15,181. But the committee was not satisfied, and actually employed another architect, a Mr. Fehmer, to sketch a mansard roof which would cover an area equal to that of the other floors. In the 104th week the Government approved his design on the condition that the cost not exceed \$25,000, and he was asked to prepare working drawings. Within two weeks Mr. Davies, a Committee member, noted that the top floor exterior walls were composed of two four inch widths of brick separated by a hollow space of twenty-two inches, a construction patently inadequate to support Fehmer's scheme. Because it turned out that the total additional cost would be \$28,000, Fehmer's plan was dropped in favor of the more conservative one by Preston.

In the 114th week the Government appointed a special committee on heating and ventilation. It submitted a report within a month. Eight months later, the members asked why their recommendations had not been carried out. The communication among the interested parties had not been good.

In November 1865, after two years of construction, the

MIT Treasurer warned that the authorized expenditure limit of \$156,624 was rapidly being approached, while much interior work remained to be done. New estimates were made as to the probable costs remaining. This resulted in the appalling disclosure that the budget would be exceeded by at least 30 percent. It became necessary to leave part of the interior unfinished, but even so the amount spent came to \$271,000 in 1867, of which only about \$16,000 was for "ventilation, warming, and lighting."

By early May 1866, three years since the start of the project, the need to occupy the building was urgent; the leases on rented space were expiring. Yet studies were still being made to determine the location of water closets and urinals, and in July the windows had not yet been inserted. The minutes terminate inconclusively early in 1867, with William G. Preston asking to be reimbursed for his passage to Europe to study ventilating methods. In retrospect, the project petered out with tantalizing slowness, the initial optimism about both costs and time of completion completely unrealizable. Doubtless there were re-cremations on all sides that the stylistic formality of the 19th century phraseology could not reflect in the records.

So this handsome building, so beguiling to occupy and

to use, was born in the harrowing ineptitude of its creators. Why? Because the elder Preston was an experienced professional and an outstanding citizen, we have to assume that his methods prevailed at the time, although they were amateurish as compared to those in European cities. The Committee authorized the Superintendent to purchase materials and to let contracts for labor, sometimes even to hire journeymen by the day, as the needs of the work dictated. Thus, expenditures were difficult to control. No one seemed to be exercising the functions expected today of the general contractor. And, clearly, Preston grossly underestimated the time and cost needed for interior fittings, resulting in ghastly overruns at the very end.

At that moment the American Institute of Architects was only about a decade old. All the elaborate apparatus, tradition, and documentation of appropriate procedures and contractual relations that we abide by now were yet to be developed through costly trial and error. Industrialized building technology was in its infancy. Cast iron was on the market; structural steel and reinforced concrete were not. Blowers for ventilation had to be driven by steam. Lighting was provided by gas. The notion that environmental control systems could be integral with building design did not exist.

We may derive several useful lessons from this case study.

As a profession, architects quite predictably believe that a building gives delight because of the talent and insight of the designer, operating within the cultural setting of his time and place. Aesthetically, the design of the Rogers building had been borrowed from a culture far more sophisticated than ours, at least in its external arrangements. Its internal arrangements failed to reflect the clarity and purity of the best French hôtel plans whose façades may have influenced the Rogers exterior; nevertheless, memorable internal spaces did emerge, largely due to accidents and interventions on the part of users, unforeseen by the designer. The inability to transplant the Emerson Room into its new Cambridge context indicates how capricious these considerations can be.

Regarding the processes of detailed design and construction, clearly the technological organization of the building industry was, in the Boston of 1863, not adequate to the challenge. We can, in retrospect, congratulate ourselves that 120 years of experience have enormously amplified the industry's capacity to control costs and to bring about the timely completion of major projects.

A Machine in the Garden

Richard Oliver

Wurster Hall was successor to the Ark, a gentle, wood-shingled building designed by John Galen Howard that had first housed the College of Architecture. Richard Oliver began his studies there and completed them in Wurster. We have asked him to reflect upon the influence of the two settings.

When the students of the College of Environmental Design (CED) returned to the campus in the fall of 1964, we attended classes in a new building. We had left the familiar qualities of the Ark and the T buildings for the new setting of Wurster Hall. For those of us who were planning to graduate the following spring, the move was particularly full of anticipation and trepidation. Almost 20 years later, this is one person's account of what we think we found and what we imagine we left behind.

Until the summer of 1964, the center of the CED was the Ark, a modest, wood-framed, shingle-sided building placed on a knoll along the north edge of campus at the Euclid Avenue entrance. The building, which wrapped around a brick-paved courtyard, held a lecture hall, jury room, library, administrative offices, shop, and only enough studio space for graduate students and seniors. These rooms were placed along a broad, light-filled, L-shaped hallway that followed the lay of the land—flat around the courtyard, a cascade of steps rising along the knoll—an abstract topography that fused the building to its site. The jury room occupied the preeminent position, placed at the end of the hallway, at the summit of the stairs. It is astonishing to consider that all those facilities were fitted into a building that seemed like a large house—or perhaps a modest temple.



I Stair of the "Old Ark,"
University of California,
Berkeley. College of Environ-
mental Design Document
Collection, University of
California, Berkeley.

Among the building's many charming idiosyncracies was the fact that the chairman's office had a side door that allowed us to have clandestine meetings with Charles Moore, the chairman, without having to encounter his awesome secretary. Among the many disappointments of Wurster Hall was the fact that the chairman's office had but one door, which was closely monitored. We all had lectures and juries in the Ark, but because of the move to Wurster Hall, never a studio. The Ark was a building we came *to*, but were never *in* for long stretches of time. Nevertheless, there was no doubt that it was the heart of the college.

Most design studios were held in wooden, so-called "temporary" buildings—an enduring legacy of the post-World War II shortage of classroom space. For our first three years, studio was held in T-10, initially on the first floor, later on the second; in our fourth year, we moved to T-4. These two-story, loftlike buildings were linear in organization, with doors and stairs at each end. They served, therefore, as both destination and route. It was not uncommon to pass quite naturally through the entire length of T-10, and in doing so to stay in touch with other students and their projects. The T buildings encouraged interaction. Nevertheless, they were far from ideal: years of intensive use had left the work

surfaces and walls in a rude and battered condition.

An unofficial though important part of the physical setting of the school was the Café Espresso, an elegant coffee house located just across the street from the Ark. The interior had been designed by Donald Olsen, a member of the faculty, and its crisp, light-filled, flag-festooned atmosphere seemed wonderful. The Café served sophisticated fare as well as coffee and donuts, and its cosmopolitan air added to its charm. At any time of the day or night, one could stop by and expect to find faculty and fellow students. It was possible to mingle here, overhear gossip, be regaled by humorous faculty members, and discuss important matters.

The Ark, the T buildings, and Café Espresso were part of a composition that aligned itself with a powerful ally—the hilly topography of the campus and of Berkeley. The Ark and its dependencies formed a coherent though dispersed entity, a kind of "landscape" with a "temple-studio" at its heart and a social hall and workspaces at its periphery. Movement within the Ark and outward to its dependencies was almost completely horizontal, a choreography enriched by the rise and fall of the earth, and punctuated by light and shade, by the quiet of the campus, and by the noise of the street. The physical arrangement of the

college bridged town and gown in a most direct and simple manner.

In contrast, Wurster Hall severed its ties to topography, fused the official parts of the CED into one structure on campus, and replaced casual, horizontal movement with structured, mechanized, vertical movement. The studios were removed from the T buildings and placed in a vertical stack linked by two elevators, forming the distinctive tower of the U-shaped structure. The studios, being high in the building, were reached most conveniently by elevators and entered from one end. The stairs at the other end were not used very much. Thus, the studios were destinations—indeed defensible territories—but not routes; it became less easy to "drop by" another studio. Awareness of and within the school as a whole began to decrease.

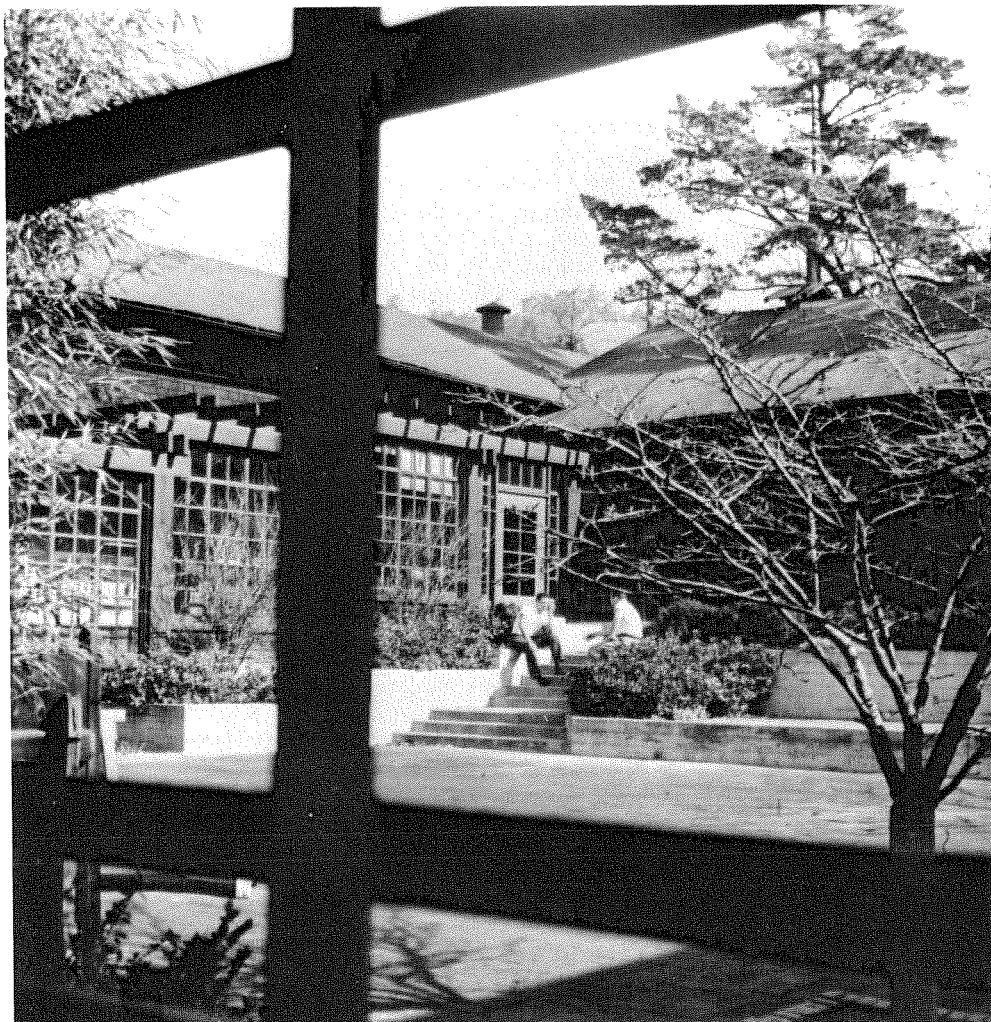
The studios were airy and spacious, and those at the top offered spectacular views across San Francisco Bay. The furniture was new, and everyone had a stool. The newness and clean precision of the drafting furniture engendered contradictory feelings: people seemed to appreciate the crisp, unbeaten, professional-looking furniture, and yet that very quality seemed to inhibit the kind of rough-and-ready model making that seemed so essential to creativity. How could one cut chip-

board on those pristine drafting surfaces?

The building was made of reinforced concrete, baldly expressed. The contrast between the machinelike precast work and the rougher cast-in-place work underscored the basic "honesty" of the structure. The mechanical systems were frankly exposed, and there was austere but evocative detailing everywhere, in doors, windows, hardware, joints of all kinds, and especially in the sunlight shading devices that remain one of the most distinctive elements of the building.

To many, however, the new building seemed harsh and even brutal in its appearance. This impression was furthered during the first year when cardboard shark's teeth were installed at the outer edge of the protruding, penthouse, seminar room balcony, giving the building an unmistakable image of a monster. Nevertheless, to some of my classmates and to me, Wurster Hall embodied an approach to design we pursued in our own student projects, and it seemed to many of us that the building transformed into concrete the spirited and iconoclastic character of the wooden architecture of the professors we most admired.

Being in Wurster Hall for our last school year meant we had been directly deprived of spending that year in the Ark. Thus, the



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2 Courtyard of the "Old Ark,"
University of California,
Berkeley. College of Environ-
mental Design Document
Collection, University of
California, Berkeley.

“Victorian lounge” that appeared on the top floor of Wurster Hall that fall of 1964 reflected a sad longing for the Ark as well as a witty and wicked commentary on the new structure. The Victorian lounge was the inspired creation of Peter Behn and Larry Gavin, though others contributed heavily to its design and production. The ceiling was a suspended, cardboard rendition of one of the aedicular tempiettos in Moore’s Orinda House—minus the columns. There was a cardboard fireplace with gross trophies on its mantel, flowery wall paper on an adjacent concrete column, a tattered rug, and a pair of comfy overstuffed couches. Its frumpiness and coziness were all that Wurster Hall was not, and the lounge served as the only congenial gathering spot in the entire building.

Once installed in Wurster Hall, we all realized immediately that there was no replacement for the Café Espresso, either within or near the building. A really central social component of the college had been left out of the planning. Social interaction seemed to atrophy, further contributing to a sense of estrangement many people seemed to feel in the new building.

If an important social dimension remained unaccounted for in the new building, a hierarchy of parts so clearly expressed in the

Ark had similarly been diluted. The jury rooms, for instance, were placed unceremoniously off the main lobby and its emanating hallways, where they failed to have the central position that the old one in the Ark had possessed. With that loss of position and hierarchy, the drama of juries subsided.

At the heart of Wurster Hall’s problems, however, was the elevator core. Movement into and through the building lost grace and continuity; it became chopped into segments controlled by the elevator. Social contact lost its easy casualness, and became disjointed—people passed each other in separate elevator cars or were forced to confront one another in a single car. The elevators could not handle the surges of movement at various times of day, creating the specter of hordes of agitated people waiting. Rather than providing convenience and coherence, the elevators of Wurster Hall engendered a disconnected anonymity.

Wurster Hall never came to be loved by those of us who graduated in 1965. The lack of affection for it (and the affection for the Ark) was not merely a resentment at the passing of old ways or a sense of poignancy about the loss of our senior year in the Ark. Indeed, countering these nostalgic feelings was a genuine excitement with the new and a great pleasure in the straightforward, unsenti-

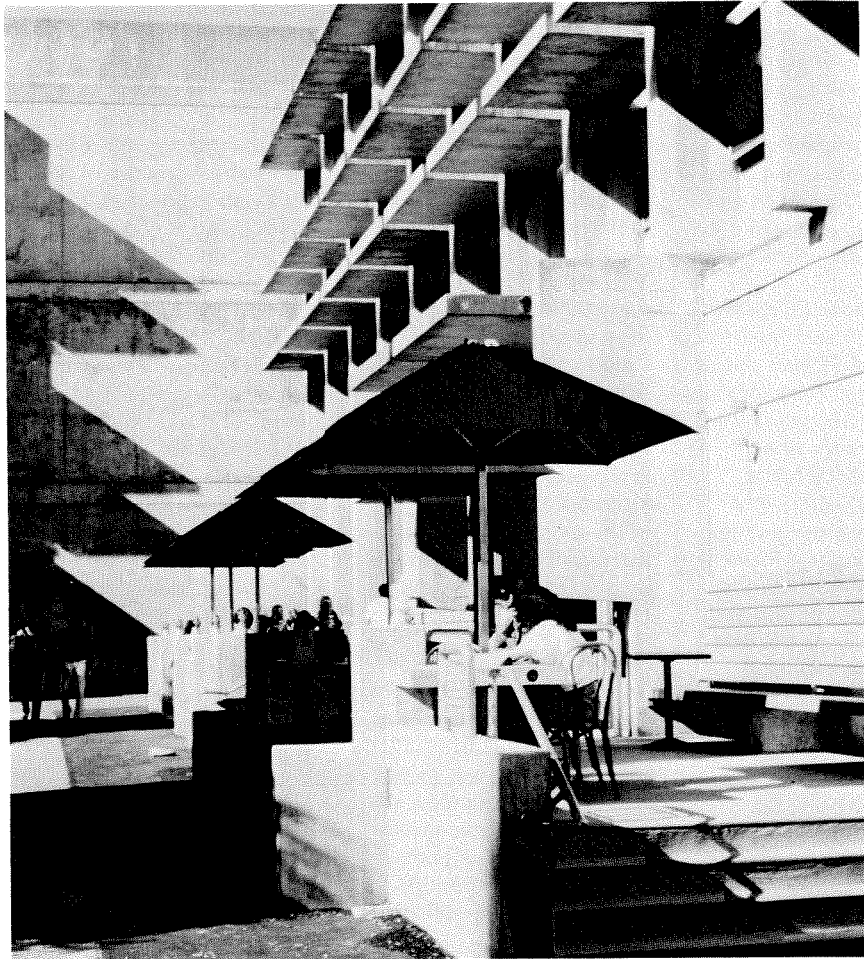
mental manner of Wurster Hall. The essential problem with Wurster Hall was an irony: as the building gathered the disparate pieces of the CED under one roof, it acted as a social centrifuge. Wurster Hall proved to be centrifugal because it relied upon the elevator—a symbol of technology—as an organizer of space; the Ark and its far-flung dependencies had been centripetal because their spaces had been organized horizontally, draped across a memorable landscape.

Epilogue

There must be something telling about the fact that in 1984 both the School of Architecture and Planning at MIT and the College of Environmental Design at the University of California, Berkeley, have installed espresso machines. Whether this signals the full-blown endorsement of a society that has given itself over to small snacks and quick fixes, or whether it indicates the imminent demise of the coffeehouse, or whether it represents the slow triumph of the persistent sense that tables to lean over in discussion are essential elements in college life, the phenomenon exists. So we end our story of institutional beginnings with an update on the coffee places in each school.

In the novel, Ramona, feudal Californians drift about in the sun-drenched landscape being sentimental and vaguely Hispanic. That image, cast across the continent in the nineteenth century, rattles around still in the collective understanding of California and comes to rest occasionally in place names, usually those of restaurants.

It is not surprising, then, that the effort to infuse a little romance into Wurster Hall—by providing space for food and drink—carries the banner: “Ramona’s.” Surprising is the way in which Fernau and Hartman have teased the hard, tough materials and blunt forms of Wurster into shapes that are



Ramona's Terrace

remarkably accommodating and pleasant. The space inside Wurster that is now used for Ramona's was initially designated for exhibition and jury space, then given over some years ago to a dim sandwich and coffee place that served largely as a last resort.

The new Ramona's, spiffed up inside with stainless steel, graphics, and Thonet chairs, breaks through the wall to a splendid terrace on the west. Here the suitably sunny disposition of the place comes into its own—not with lavish materials or the rhetoric of classical forms—but with materials akin to those of the larger building. Concrete terrace walls and bench bases are indistinguishable from the wall to which they have been added. They are lined with sturdy, blonde wood surfaces and sheltered by pyramidal canopies of black and green canvas—unlikely, but mysteriously satisfying colors. The porchlike terrace sits alongside the main stream of traffic into the building, its highbacked benches gathering Ramona's sun. Everything affirms—for those who break off sunning to notice—that attention to things that frame and touch people, not opulence, contrived imagery, or even espresso, makes dwelling possible.

Donlyn Lyndon

Wurster Hall is a difficult building—difficult because of the weight of its presence and difficult because of the weight of two decades of public opinion. Perhaps in a somewhat ironic way, the building's strongest allies are often those sympathetic to the Bay Region's tradition. There is a difference between oppressiveness and toughness; in working on Ramona's Café I came to appreciate Wurster's toughness. This toughness escapes the oppressive and succeeds best in transmitting certain attitudes of the Bay Region in the industrial materials, in the simple detailing, and in its peculiar manipulations of scale.

Our solution had to be as straightforward as the tight budget and schedule of the program would allow. The existing servery was to be torn out and expanded, the dining area redone, and the possibility of boring through to the outside to provide seating was to be explored.

On both the inside and the outside we accepted the major materials and hardware as given, and, in a somewhat modified spirit, the building's notorious pedagogic device of revealing its parts. We did not acquiesce out of a sense of the preciousness of the existing condition but rather to draw attention to what we admired about Wurster by manipulating the scale and context of its familiar parts. In this situation, we chose

to err on the side of the “invisible remodel” rather than the inadvertent anachronism of a datable design.

On the interior our aim was to establish a sense of place or location, clear in its spatial and functional definitions. Our solution took the form—not of “areas” or “spaces”—but of “rooms” in the premodern sense: their use, size, and proportion are defined in terms of the cardinal surfaces of floor, walls, and ceiling. The subdivisions of these surfaces—the picture mold, wainscot, floor pattern, and fixture location—are scaling elements that further define the rooms and their parts.

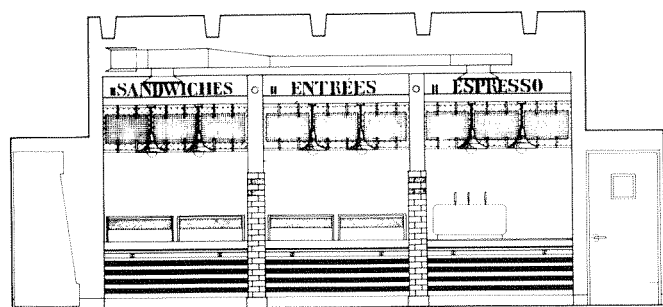
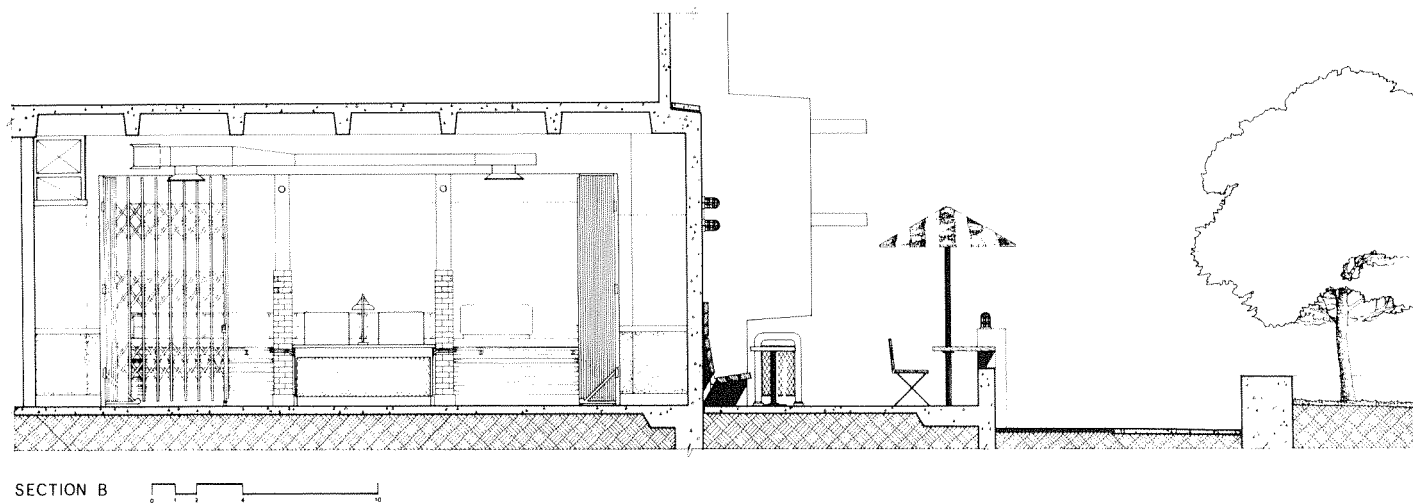
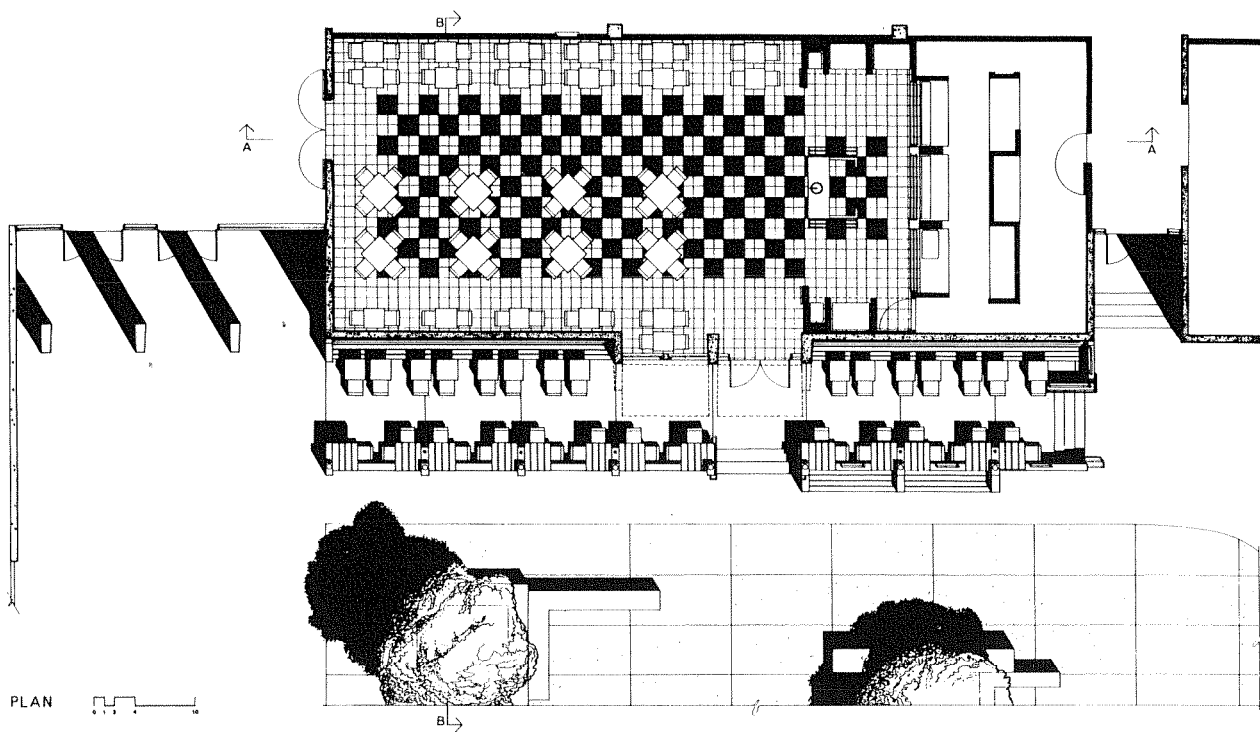
The situation on the exterior was more acute. Although the impulse to “soften” the building to accommodate its new use was doubtless legitimate, in doing so we wanted to avoid what might amount to putting a bowtie on a bulldog. A café is too small to tangle with ten stories of concrete. Again, by adapting the vocabulary of the building we were able to blur the distinction between old and new and introduce a secondary scale to mediate between the coffee drinker and the wall above.

Specifically, our solution was to break through the wall, create an entry under the *brise-soleil*, and string out a narrow terrace across the face of the building. A low wall punctuated with short columns around which tables

are wrapped defines the terrace. A long, highbacked bench inspired by two others on campus—one taken from John Galen Howard's old architecture building and the other from Maybeck and Morgan's Hearst Pool—rests against the foot of the building, running the full length of the terrace. Large stainless steel and canvas umbrellas provide shading.

More peacefully than in the late 1960s—when heavy timbers were boldly thrust through the firewalls on the diagonal to challenge the authoritarian barrenness of the stripped MIT industrial building type and to create a new environment for learning—the café has made its place at the edges of the dome, where little was planned, less expected, and people were somehow forgotten. The café's language of form is plain and unmistakable.

The day of the café's opening was like no other. Conversations were animated, people talked who had not talked before, at least not *that* much. The school's Visiting Committee saw a social center for the architecture department. But the opening day was also the closing day; there was no money to operate the new café. Nevertheless, students continue to use it informally and it seems to have begun its own, fragile life.



SERVERY ELEVATION

2 Ramona's Terrace, plan, section and elevation

Some Notes on a School Place/Center

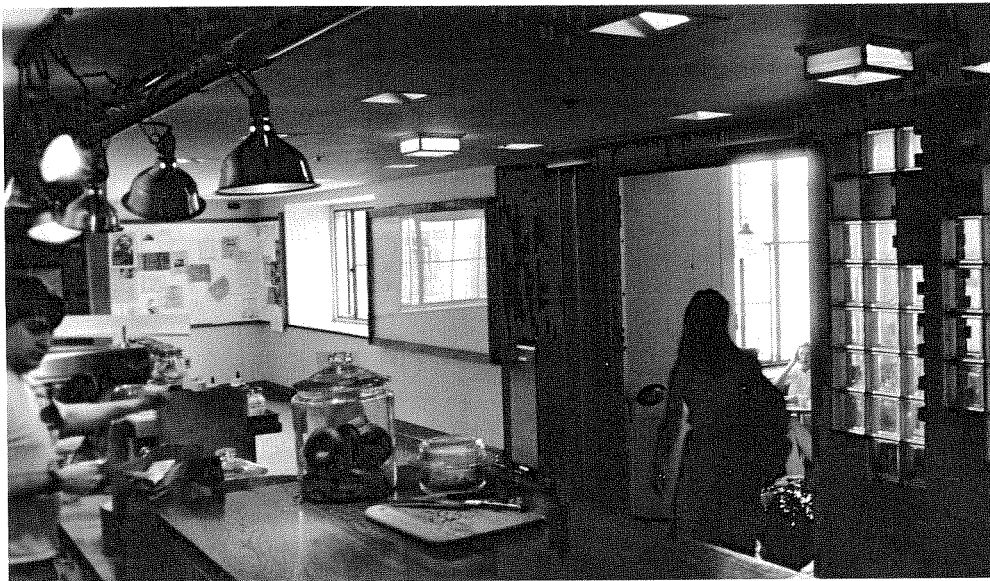
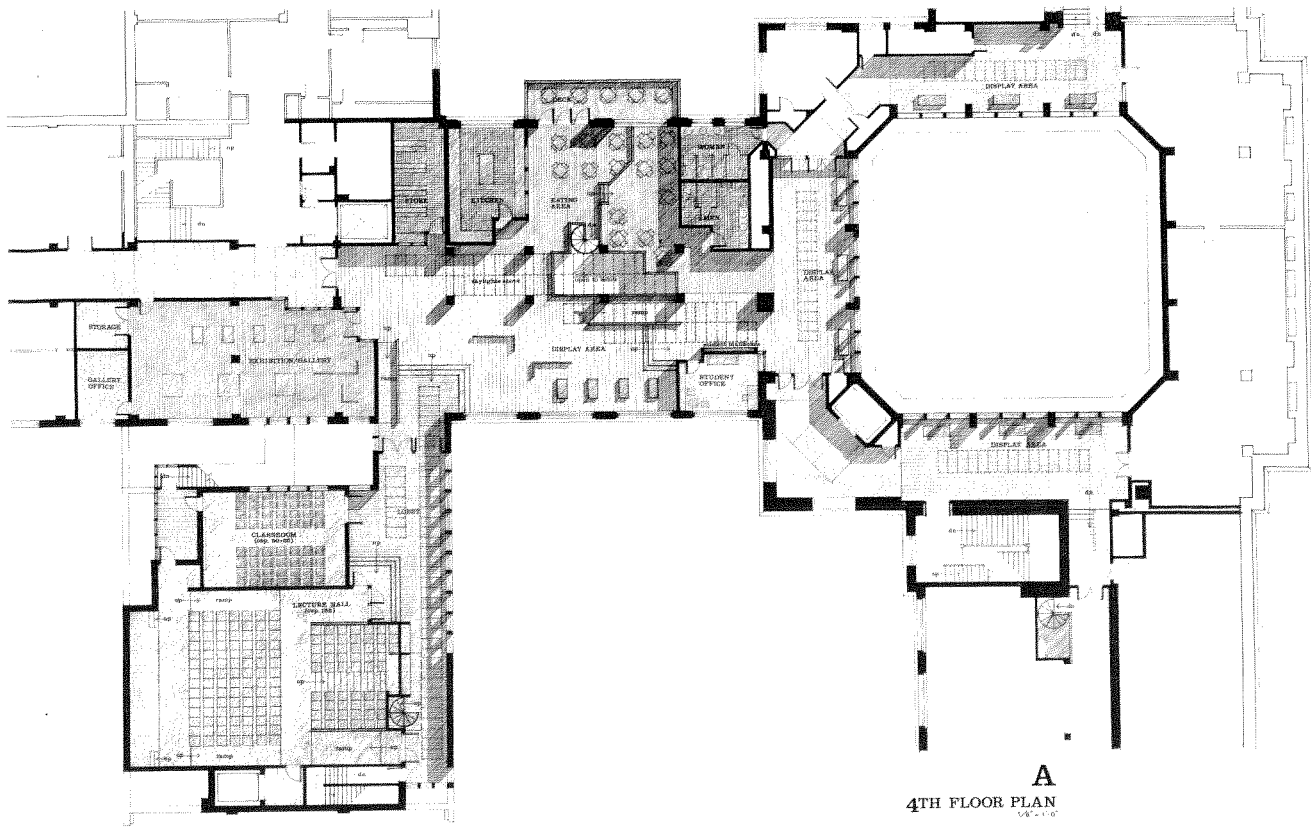
Jan Wampler

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William L. Porter

MIT's School of Architecture & Planning, which is buried within corridors of the larger structure of this Institution, has never had a sense of identity, place, or center. This design provides this place/center both by use and form. The program includes a new large lecture hall (160 seats), a small lecture hall (60 seats), an exhibition gallery, an open exhibition area, a café, a school store, student offices, and a lounge. To design a place/center the typical relationship at MIT—of a corridor in the center and rooms on the side—had to be changed. It is replaced with an area definition with movement across the space in a diagonal. At the same time vertical space connections are made with the Architecture & Planning headquarters on the third floor. The uses are clustered around this new place/center, which connects the rest of the School both horizontally and vertically. The dome, a symbol of MIT which is never seen from the inside, is used as a form reference for the School. Skylights in the roof make it visible both from the third floor and from parts of the fourth floor. Glazing around the dome makes the inside of the dome visible from the fourth floor. Corridors around the dome are used for exhibition display space, are associated with the adjacent area, and, yet, are just circulation space. The principle has been to replace the corridors with area definitions and to make a place/center.



2

1 Sketch plan for New School Center
(Courtesy of Jan Wampler Architects)

2 MIT cafe
Photograph by Alka G. Badshah

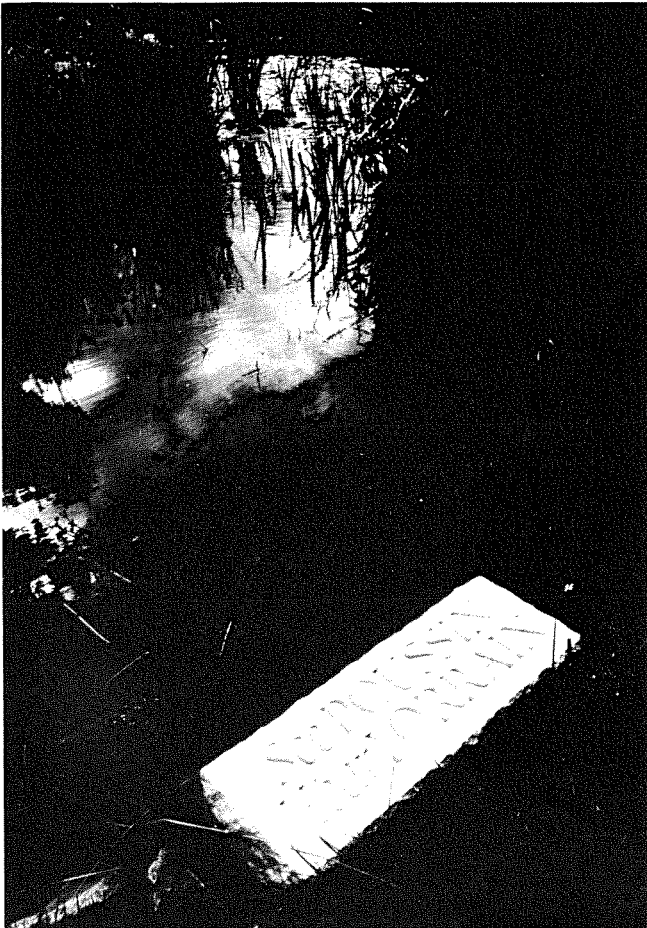
Two Poetry Gardens: Giving a Voice to the Genius Loci

Frances Butler,
with photography by
Dave Paterson, Andrew
Griffith, and Richard Rose



I **Stony Path. Corot, a column.**
(Photograph by Andrew Griffith.)

Almost 400 years ago, in his play *Othello*, Shakespeare used Iago to demonstrate the difference between language attempting to represent the observed world and language deliberately used to distort the visible into a mute sign of invisible, and often treacherous, intention. The subsequent adventures of language use in our consumer economy (which is based on advertising) have not reassured anyone that what is said is what is real. In fact, the twentieth century has seen much scholarship dedicated to a demonstration that language can never accurately define reality, but can only surround it (metonymy) or supplant it (metaphor). The recent response of many visual artists has been to turn to that which does seem to be real, the body and the ground on which it stands; consequently the last 20 years have seen a veritable rolling thunder of the movement of rocks, earth, and water for the making of Earth-works. Some of these works have alluded to the formalist preoccupations of minimalism (Michael Heizer's *Double Negative*); many more have made reference in some way to the cthonic myths of the empty center—the hearth, the cave, the spiral, or the labyrinth—into, and out of which, life goes and comes (Robert Smithson's *Spiral Jetty*, Robert Fleishner's *Chain Link Maze*); and others have explored the earliest systems of division and measurement of space by line, of sunlight by shadow into time markers, and of sound into rhythm. For the most part the imagery and symbolism evoked has been prehistoric, or at least preliterate, as



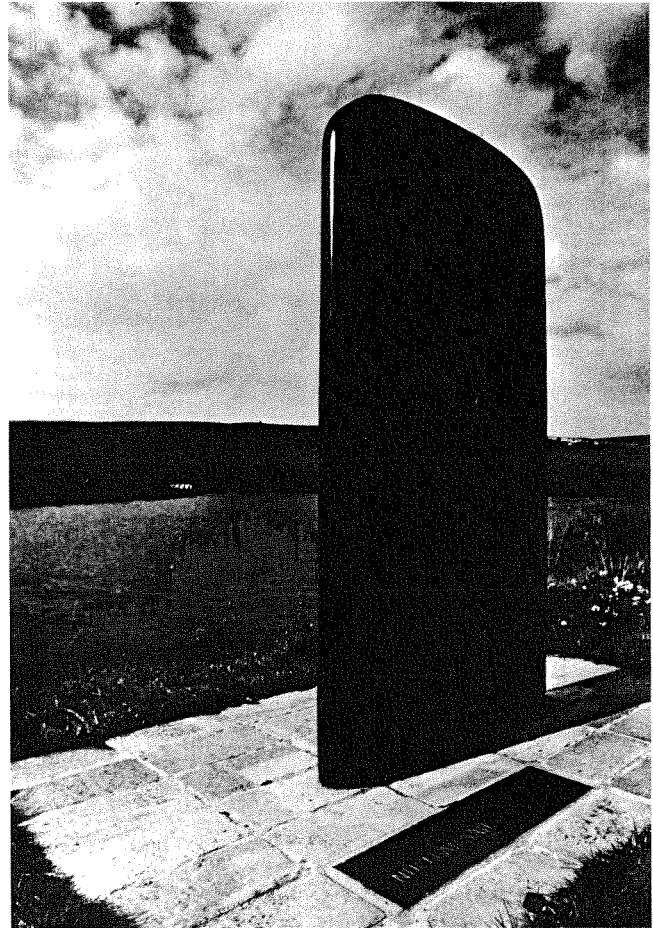
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chronicled in Lucy Lippard's recent catalogue of these efforts, *Overlay*.¹

Of all of these Earthworks, only one makes reference to the fact that all of this has happened before—even to the moving of great quantities of earth and water—at the end of another period of high social regimentation and the contraction of the range of public symbolism into the imagery of power, in 18th-century England and France. This is the garden of Ian Hamilton Finlay in Scotland, which is named *Stony-path* after that of Heraclitus, the 5th-century Greek philosopher who posited the process of continual becoming as the only reality, and who said of his garden pathway: “The way up and the way down are one and the same.” Ian Hamilton Finlay’s garden is, in fact, a virtual

history of the varied practices used by 18th-century gardeners for what Capability Brown first named “place-making.” Finlay’s garden follows the practices of those who, like Alexander Pope or William Shenstone, developed the Garden of Ideas, rather than those of Brown himself, who preferred eliciting unspecified or unstereotyped responses to the landscape, although he did describe his “improvements” in terms of language: “Now there, he said, pointing a finger, I make a comma, and there, pointing to another part (where an interruption is desirable to break the view) a parenthesis—now a full stop, and then I begin another subject.”²

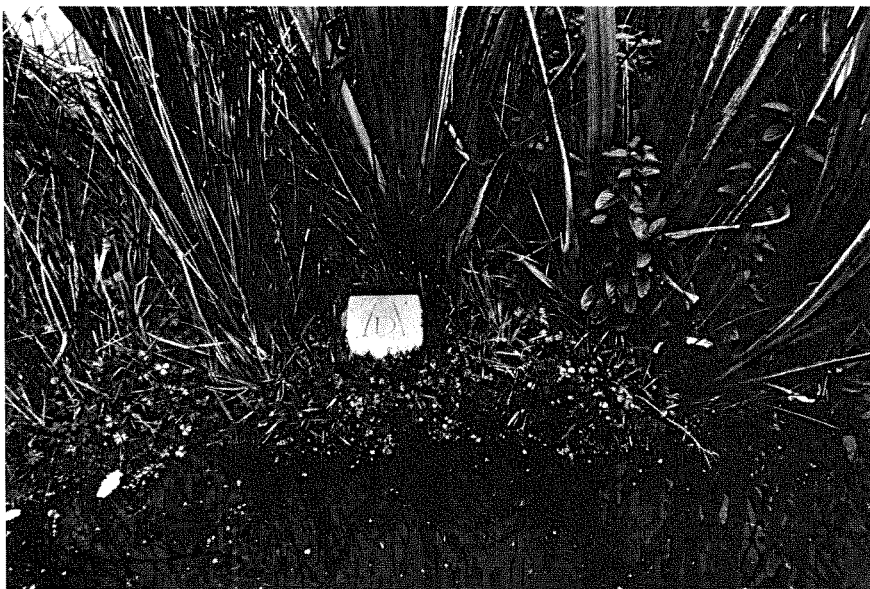
Pope and Shenstone continued the tradition of the garden inscription, first inspired by the paintings of



3

2 Stony Path. See Poussin, Hear Lorrain. Inscription by John Andrew. (Photograph by Dave Paterson, in Finlay, Ian Hamilton, and Dave Paterson. *Selected Ponds*, The West Coast Poetry Center, Reno, Nevada, 1975.)

3 Stony Path. Nuclear Sail, inscription by John Andrew. (Photograph by Dave Paterson in *Selected Ponds*.)



4



5

4 Stony Path, The Great Piece of Turf.
(Photograph by Dave Paterson in *Selected Ponds*.)

5 Stony Path. The Japanese an Ambassador to Scotland-Dragonfly. (Photograph by Dave Paterson in *Selected Ponds*.)

Nicolas Poussin, especially his two versions of the theme *Et in Arcadia Ego*, in which the inscription on the tomb recalls the presence of death in the midst of life, and further continued in a more elegiac vein after the paintings of Claude Lorrain and Gaspar Dughet (also called Poussin) and more melodramatically after the paintings of Salvator Rosa. Finlay, too, makes use of the garden inscription to focus both mind and body to a quality of attention that can be called the filled moment, and which, in Shenstone's phrase, gives voice to the genius loci.

Here we ascend some airy seat,
Or little temple's close retreat,
Beneath a shady bow'r:
And oft some moral sentence find
To please, or to instruct the mind,
And pass each tedious hour.³

Shenstone recorded his 20 years of inscriptional gardening in a book, *Unconnected Thoughts on Gardening*, and Ian Hamilton Finlay credits Shenstone's influence by naming one of his own writings, *Unconnected Sentences on Gardening*. These titles, as well as the program of both gardens, the circuit walk on which one encounters a variety of scenarios or a variety of views of the same garden event, attest to a similar interest in the spatial expression of a political ideology—the assertion of the validity of multiplicity of human symbolic action and response.⁴ In the 18th century the paintings of Joseph Wright of Derby or the prints of William Hogarth countered the belief of the previous generation that human symbolic

action was so uniform that infallibly human intention could be read through the contractions of the eyebrows, as Charles Lebrun tried to demonstrate in his iconographic treatise, *A Method to Learn to Design the Passions* (1734), with its pictorial circuit tours of varied responses to one central action. Ian Hamilton Finlay today stresses the necessity for multiplicity of statement to elicit the range of debate that is a necessary component of effective public symbolism, as opposed to the stripped-down corporate graphics or the abstract formalism that he feels are supported by contemporary government art programs in an effort to dilute public understanding of the pleasures and powers of citizen debate on political issues.

Ian Hamilton Finlay and his wife, Susan, began the garden in 1966, in true 18th-century style, by moving a lot of earth and water—digging a pond, damming a creek, and creating on their several acres of Scottish moorland three bodies of water, giving rise to one of the alternate names of the garden, the Inland Sea. Finlay regards the ship as one of the principal expressions of freedom of movement. There are both full size dinghies and many miniature ships on his waters. Bernard Lassus, author of the book, *Les Jardins Imaginaires: Les Habitants Paysagistes*,⁵ which concerns garden fantasies in France, notes that miniaturization serves to expand the boundaries of one's own space, in what he calls the measurable expanding to the immeasurable. Finlay uses miniaturization with great sophistication.

He first sets an infinite stage for his ships by labeling the water: HIC JACET PARVULUM QUODDAM EX AQUA LONGIORE EXCERPTA. This translates roughly as: Here lies a little extract of water from a larger stretch of water. He then uses real size to provide the right scale for the surroundings for his ships. One stone Aircraft Carrier on a plinth is a bird feeding tray; the birds are the airplanes. Another stone submarine, the U.S.S. Nautilus, glides out of a green and rustling sea; the wind stirred boughs of surrounding evergreens. In another ship reference, to the galleons used as fountains by the Romans, and to one of the water jokes of the gardens at Tivoli, a bronze ship named the *Villa d'Este* jets water from its bilge into a pond.

Carrying the Roman motif farther, one garden is filled with busts on plinths, they are all models of ships. Another Roman conceit makes columns from inscribed stone bases set before living trees. This project has also been carried out in the gardens of the Kröller Müller Museum in the Netherlands.

The Northern Renaissance has been celebrated through the use of Dürer's signature to frame a scene reminiscent of his print of Adam and Eve, and another to sign a beautifully planted collection of wild flowers and marsh grass recalling Dürer's *Great Piece of Turf*.

This stone, "See Poussin, Hear Lorrain," engraved by Michael Harvey, lies on the shore of the lake and summarizes another range of

allusions specific to 18th-century landscape painting. One can position oneself by the inscribed stone and allow the vista to roll out in the orderly and clarified visual array typical of the paintings of Nicolas Poussin, or one can make use of the other senses too, hearing the wind, feeling the warmth of the sun, noting the atmospherics of light and shade as suggested by a Claude Lorrain painting. To emphasize the movement of the sun Finlay has made many sundials for his garden, including one that is less than specific about the time, an incised stone image of the shadow cast by a nearby potted iris. To emphasize the reflective qualities of the water he has carved one inscription backward on its board, so that it can only be read in the water. Birch trees flicker in the light and mock the stone carved with the motto of the corporal punishment enthusiasts: Bring Back the Birch. Light and water are the most important parts of a garden, or as Finlay states in *Unconnected Sentences*: "Weather is the chief content in a Garden; Superior Gardens are composed of glooms or solitudes, not of plants and trees; and finally, Flowers in a garden are an acceptable eccentricity."

All these components are concrete perceptual pleasures, the textual devices serving to focus and heighten a range of sensations that might otherwise be (literally) overlooked by a culture which tends to emphasize the visual. The inscriptions urge the response of Rousseau's Natural Man, and appropriately, Finlay has built a little island in a lake, and on it a model of the tomb

built for Rousseau at Eremonville by the Marquis de Girardin.

See Poussin, see the tomb, for as in Poussin's famous painting, *Et in Arcadia Ego*, Death is to be found even in Arcadia. The 18th century relished the pastorate, indeed, as Panofsky has shown, the Latin inscription in Poussin's painting was generally mistranslated in the 18th-century pastoral painting into a melancholy possibility rather than a horrifying reality.⁶ However, the Romantics also relished the frisson of terror (Edmund Burke felt it was a necessary component of the sublime), and another favorite painter was Salvator Rosa, the painter of stormy nights, swirling clouds, and highway robbery. In "Poussin and Salvatore: Cops and Robbers" (*Unconnected Sentences*) Finlay carries out this note of play-act death in his garden with a bronze tortoise crawling up the bank, its shell, reminiscent of a German military helmet, inscribed *Panzer Leader*. But the reality of death and the fact of terror are also present, in a large piece at the edges of the garden, in a black-marble submarine conning tower, named, as sailors name it, *Nuclear Sail*. This, too, reflects in the water, a lengthening shadow of political reality.

This garden is a political statement, clearly described by Finlay in his *Unconnected Sentences*: "Ethical battles are 18th-century gardens continued by other means"; and "Certain gardens are described as retreats when they are really attacks." The various classical fragments in the garden refer to

Finlay's heroes of the French Revolution, Saint-Just and Rousseau, and to their admiration for the austere classicism of Poussin, or *his* admirer, Jacques Louis David. Finlay has increasingly made his garden into a statement of the need for public symbolism, which could be used for Public discourse, a function that the paintings of David fulfilled in the time of the French Revolution, but which current official art, he feels, cannot fulfill.

Thus Finlay's garden is based specifically on the necessity for language, a *vox populi*, which he feels is the only tool that we have for social solidarity, and, which cannot be abandoned for nonverbal symbolism, but must be used to reinforce the values of the Greek polis, with its body of responsible, active, and, above all, debating citizens, or risk being used by those like Iago, who use language to create distrust of language itself, to isolate, to terrorize, and, finally, to destroy individuals and culture.

Ian Hamilton Finlay's garden includes a temple in which are displayed editions of some of the garden pieces and the publications of his press, the Wild Hawthorn Press, which has published poetry books and broadsides for many years. Thus, the texts of the garden, which is open for the public to visit, are expressed in the publications of the press and are dispersed to poetry readers around the world, extending the boundaries of the garden in another sense of the measurable extending to the immeasurable.

Finlay's garden is a small version of William Shenstone's garden, which was a smaller version of Stowe. Richard Graves, a friend of Shenstone, in his early poem, "Love of Order," warned of the folly of ever increasing miniaturization, urging another kind of usefulness:

Yet let not us inferior folks
Expose ourselves to great men's
jokes
But usefully our ground dispose
By planting cabbages in rows.⁷

Nevertheless, as documented by Bernard Lassus in France, or Jan Wampler and others in the United States,⁸ many of those who have any space at all, and even some who have none (e.g., James Wines and Patricia Phillips, in an article in *Art Forum*, show garden-making strategies in New York City)⁹ tend to make miniature worlds for themselves. Since the garden is an archetype, it is continuously reinterpreted.¹⁰

The mutability of the garden, the changes of weather, of plants, and of time, are given material form in my small private garden in Berkeley, California, a garden called "Light and Heavy Light," or the "Shadow Garden." This garden is a palimpsest, an overlay of additions and subtractions on a design begun by a Berkeley architect, William Coburn. The original design was based partly on aspects of my graphic design (e.g., checkerboards, the "Slash and Spritz" flying sticks popular with graphic designers in the late 1970s) and partly on his own interest in the derelict trellises still found in ethnic vegetable

gardens in a few communities in California. Inspired by ruins, the tiled borders and the trellis, in fact, proceeded to disintegrate, and in time-honored tradition, provided the materials for another garden. This one was based not on divisions on the ground, but on divisions made by changeable markers in the air, which projected both texts and images back onto the ground. As one trellis was dismantled, others were erected that were linked to the ground by long movable tiled wands, leading the eye from the fragments of tiled beds up into a maze of mobile sleds made from poles and wire mesh, which held the letters and figures. On sunny days these cast moving images onto the garden floor, alternately paved and planted in its own checker-board of changing color and texture. The changing texts often refer to time or to the interaction of letter shape and language meaning, as expressed in timely poems by Alastair Johnston, another Scots poet: "L8R" and the typographic "Yes giving way to No." The garden includes many references to the mutable and the irregular, including the dregs of the formal parterre, the crazy paving of suburban gardens. It also acknowledges the role shadow plays in symmetry and duplication, ranging from myths about the powers and dangers of twins to William Blake's poem about the tiger. The garden has a tiger, modeled on a Chinese paper cutout, which projects into symmetry. It also has a symmetrical axis along which the checkered planting is aligned, started and finished with windows inlaid with maps of the



6



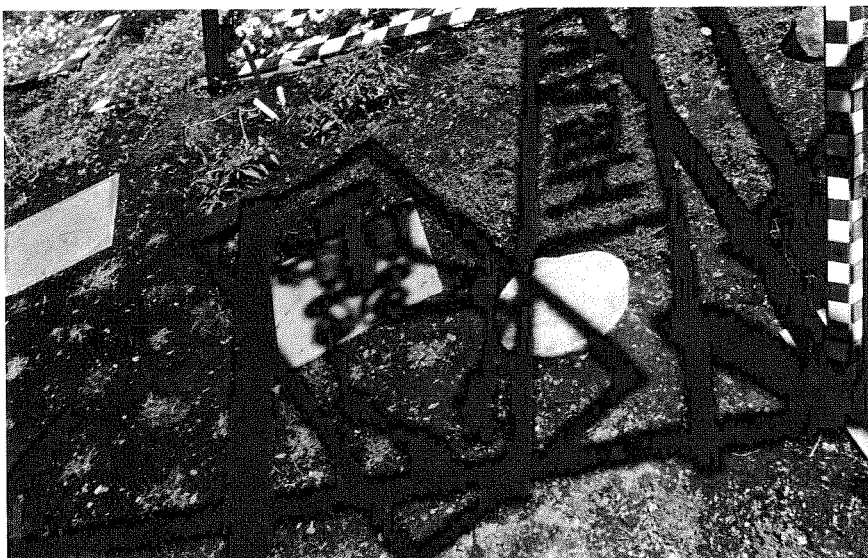
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6 Shadow Garden. Overview of the garden. (Photograph by Richard Rose.)

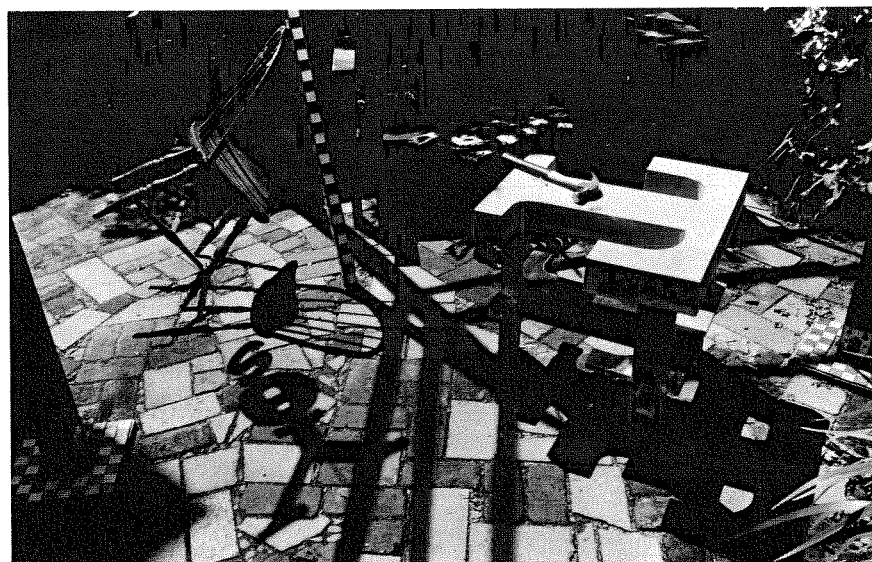
7 Shadow Garden's Symmetry: Blake's tiger, duplicated and aligned with cat.

Tiger, tiger, burning bright,
In the forrests of the night,
What immortal hand, or eye,
Could frame thy fearful symmetry?

(Photograph by Richard Rose.)



8



9

8 Shadow Garden. Skeleton, out of the closet. (Photograph by Richard Rose.)

9 Shadow Garden. Tea Pavilion, with tiled wand; (Condensed): Yes giving way to No; and T—Table with built-in shadow. (Photograph by Richard Rose.)

garden, which repeat (or reflect) each other.

A stolen shadow is equivalent to death, as folk tales and folk customs suggest. In keeping with the garden's program of presenting the social history of shadow, a skeleton is kept in an open closet along with extra words and cutouts.

Shadows, too, are transitory, and depend on the time of the year for existence. Therefore, another shadow garden was necessary, a night theater, lit by electricity, in which the traditions of the shadow puppet theater, which extends from China to Greece, could be explored. The puppets for this theater are made from clear plastic, which casts shadow only of their drilled or cut edges and creates linear shadows that shine both white and dark, light and heavy. The puppets are articulated hands and dancing figures and are used in a play, *The Gesture of Outward*, which I will publish as a book, in collaboration with the photographer Richard Rose. Thus, this private garden shares some of the same intentions of Ian Hamilton Finlay's larger public garden, because I have a press, publish poetry books, and use the garden as a source from which to generate texts and illustrations addressing the question of the existence of both historic and contemporary public symbolism, and its usefulness to public (non-commercial) discourse.

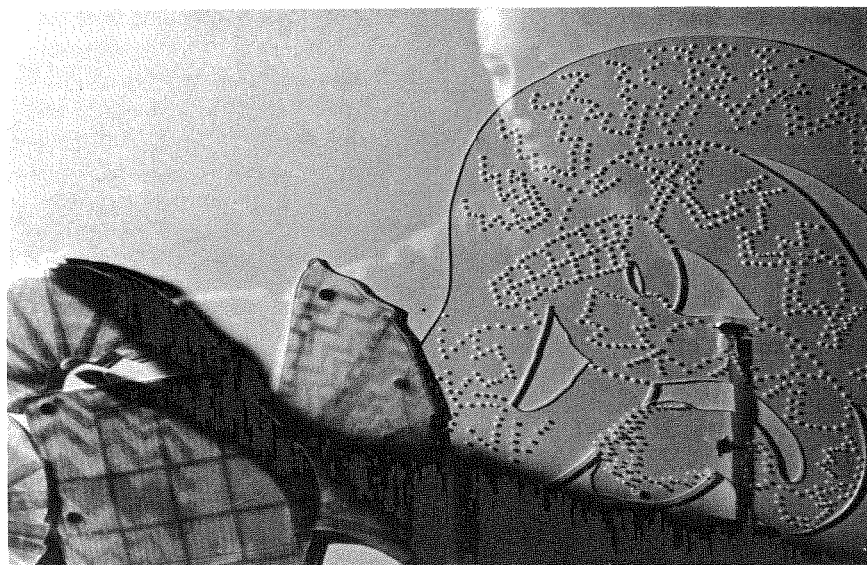
Perhaps the classical column, which has by now supported the busts of Hitler and Mussolini as well as those of Socrates and Virgil, can no

longer be used to marshal belief either in responsible politicians or in responsible citizenry; however, language and the evoked civic image do not have to be abandoned completely for imagery of the cave, with or without Platonic shadows. Probably primitive men and women were even more preoccupied with power and death than we are, but the need for contemporary, public, symbolic discourse on the realities of economic, political, and military power, and of the racial, sexual, and ethnic overlays by which it is configured, is poorly served by the continued exploration of an elegant prehistoricism psychologized into Jungian archetypes.

The critical necessity for symbolism and discussion of individual responsibility in an increasingly corporate state requires the use of all of the available instruments of human expression. We may hope that the few examples of public symbolism in the visual arts (e.g., the portraits of mercenary soldiers by Leon Golub) will be joined by presentations of multiple 20th-century options for public power. This is not the stone age nor is it the 18th century when death could be sentimentalized in the gardens of a few gentlemen.

Notes

- 1 Lucy Lippard, *Overlay* (New York: Pantheon Books, 1983).
- 2 Capability Brown, quoted in Elizabeth Manwaring, *Italian Landscape in 18th Century England* (Oxford, England: Oxford University Press, 1925) p. 141.
- 3 William Shenstone, quoted in John Dixon Hunt, *The Figure in the Landscape, Poetry, Painting and Gardening during the*



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Eighteenth Century (Baltimore, MD: Johns Hopkins Press, 1976), p. 220.

- 4 Ronald Paulson, "The Pictorial Circuit and Related Structures in 18th Century England," *The Varied Pattern: Studies in the 18th Century*. Edited by Peter Hughes and David Williams (Toronto: A. M. Hakkert, Ltd., 1971), pp. 165–187, and Max F. Schulz, "The Circuit Walk of the 18th Century Landscape Garden and the Pilgrim's Circuitous Progress," *Eighteenth Century Studies*, Volume 15, Number 1, 1981–1982, pp. 1–25.

- 5 Bernard Lassus, *Les Jardins Imaginaires: Les Habitants Paysagistes* (Paris: Les Presses de la Connaissance, 1977). See also his introduction to Ian Hamilton Finlay and Dave Paterson, *Selected Ponds* (Reno, Nevada: The West Coast Poetry Center, 1975).

- 6 Erwin Panofsky, "Et in Arcadia Ego: Poussin and the Elegiac Tradition," *Meaning in the Visual Arts* (Chicago, IL: University of Chicago Press, 1955), pp. 295–320.

- 7 Richard Graves, quoted in Manwaring, *op. cit.*, p. 139.

- 8 Jan Wampler, *All their Own: People and the Places They Build* (Oxford, England: Oxford University Press, 1977).

- 9 James Wines and Patricia C. Phillips, "Growing Up," *Art Forum* (October 1982), pp. 46–51.

- 10 J. B. Jackson, *The Necessity for Ruins* (Amherst, MA: University of Massachusetts Press, 1980), p. 20.

- 10 **Shadow Garden.** The Gesture of Outward, shadow play, 1984. (Photograph by Richard Rose.)

Christopher Alexander

Introduction

Seven years ago, a group of people under my direction built a few houses in Mexicali. The story of the construction is told in full in the book, *The Production of Houses*, which is being published by Oxford University Press in the summer of 1984.

Two of the people—at that time students—who played a very important role in the project were Dorit Fromm and Peter Bosselmann. A few months ago, Dorit had the idea that it would be helpful and interesting to visit the families and get their reactions seven years after construction to evaluate the extent to which we had been successful, and to what extent we had made mistakes.

A summary of their results is presented in the following article. I am very delighted that it is being published and that it appears at the time that the book about the project is published.

Since the authors' analysis is quite extensive, I will not try to add to their detailed observations about the families' feelings. However, I want to take this opportunity to make one important overall point about the project, to comment on it, and to underline it.

The dead and lifeless quality of modern housing projects is well-known. Whether we are talking about government housing of the type built by Infonavid in Mexico, or the typical condominium apartments built all over the United

States, we are all familiar with the abstract housing of modern times. This abstract housing is usually unrelated to people and somehow fixes the dead hand of its impress so strongly on them that the houses never have the chance to become human, even in time. With housing projects of this type, there is a grave danger that the world will gradually be filled with plastic and with untransformable environments that bear the mark and feeling of the machine process, of rigid money, rigid technology, and a rigid social process. It does not matter whether this terrible result is produced by socialistic good will, as in the case of public housing, or by the capitalistic desire for profit, as in the example of American condominium development.

In both cases the outcome is the same. The world is robbed of the fundamental humanness of the environment and people, within the process of development that they are given, no longer have the power to create anything different.

The main hypothesis put forward in *The Production of Houses* is that housing becomes better at a fundamental level only when the pattern of control is deeply changed.

Now, seven years after the families in Mexicali built their houses, we can begin to judge whether this hypothesis is really true or not.

What I find exhilarating about the project and about the observations recorded here by Peter and Dorit, is the way in which the passage of time has genuinely involved the

families, and the fact that these families have deeply and radically continued the process of design and construction.

By conventional standards, this may seem a small point. Indeed, by present architectural standards, one might even wonder if the families have not "spoiled" the design. The original form of the houses is already changed, almost unrecognizably, in many cases. The original design of the houses is, therefore, lost. In some ways, the present condition of the houses is so different and so "ordinary" that an architect using the standards of the 1980s might wonder whether the original architecture has perhaps not been superseded, or made irrelevant, because its contribution, as physical form, is gradually becoming more and more invisible as the houses are slowly buried and transformed by the many, many changes made by the families every year.

But, in my mind, this is the triumph of the project and the real proof of its success.

In the book we speculate a great deal about the way that the families were changed in their feelings of power, in their attitudes, and in the ways in which they were liberated, able to feel responsible and completely in charge of their own future, of their own lives.

This speculation was based on limited examination of the statements made by the families and on guesses about their enthusiasm seven years ago.

Now, seven years later, we see that this was not merely hopeful speculation, but solid fact. The lives of these families did change in a fundamental way. They did become liberated in the process of their work with us. The process of laying out their houses and making their dreams come true in physical reality did fundamentally transform their lives.

Clearly, the active, creative quality in their lives, which began to show itself in their work with us, has established itself as a permanent part of their everyday attitude towards the world. It is quite clear also from what we see in their houses, that these people feel completely free to do what they want, that they do what is necessary and comfortable for them, and they do it easily and promptly.

They are no longer prisoners in any sense of the feeling shared by so many millions that they must accept blindly whatever abstract housing is given them. Instead, the human environment, the physical world in which they live, has become something lively, molded at will and made to conform to their lives, needs, wishes, talents, and fantasies.

The world they live in is now their *own* world. They have been permanently changed by their experience.

The hope we had when we first built these houses with them, that we might be able to effect a fundamental transformation in the quality of life, has been realized, because what is now there is

absolutely and triumphantly theirs, not ours.

A handful of people on the earth has been liberated permanently by their experience with an unusual housing process.

The true meaning of a possible architecture of the future, in which people are deeply related to the earth and to their buildings, has, in this small example, been shown.

Now we need to do it on a larger scale.

Mexicali Revisited: Seven Years Later

Dorit Fromm and
Peter Bosselmann



In the fall of 1975, Christopher Alexander was asked by the government of the state of Baja California to conduct a self-help housing project near the border town of Mexicali.

We were two of thirteen students and architects from Berkeley who joined the project in January 1976. We found a city growing rapidly in all directions. A continuous flow of settlers was coming from all parts of Mexico in search of work.

The project site was on the outskirts of town. Sagebrush blew across the empty fields. The climate was hot and dry. There were a few small squatter homes, near our site, built in a temporary way to provide quick shelter. In the evening, when the air cleared and visibility increased, we would look up towards the mountains and see the neighborhood being transformed. New families arrived, children played in the streets, gardens and trees began to grow: a neighborhood was developing in front of our eyes.

We came to Mexicali to demonstrate a method of design and construction appropriate to self-help housing in this region. The "Pattern Language," developed by Christopher Alexander and others, was to be used as the basis for self-help design.

Alexander envisioned building a community, autonomous and alive, instead of isolated acts of building. He saw the connection between room and house, house and street,

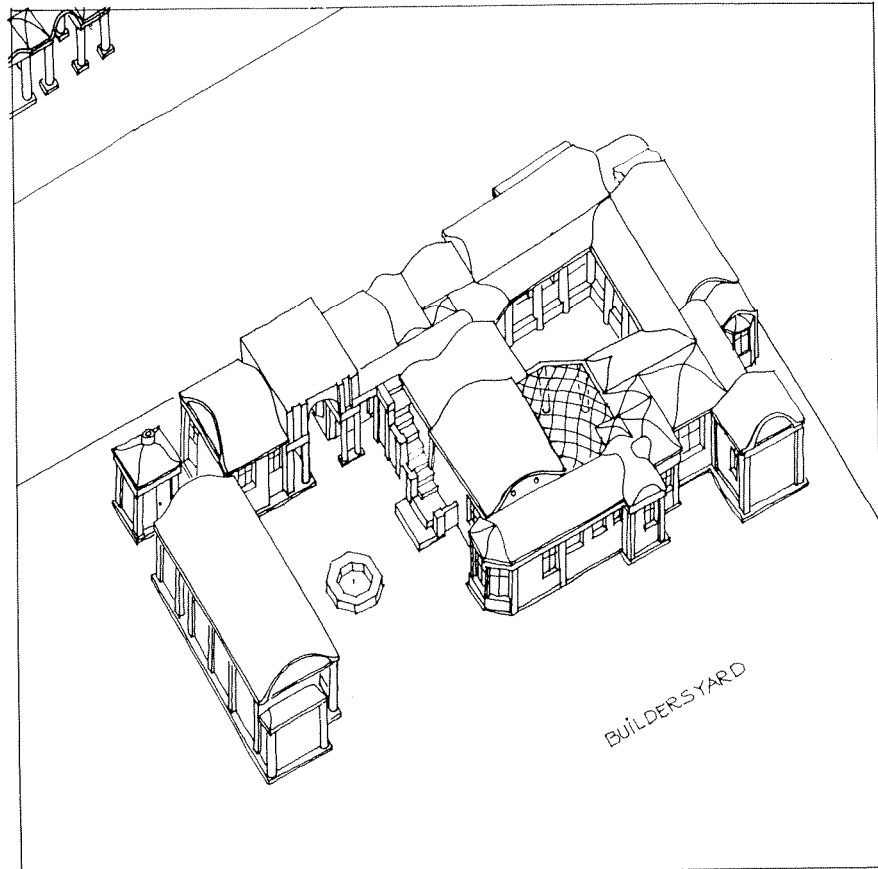
**I Drawing showing the Housing Project
and Builders' Yard, 1984.**

All drawings courtesy of Peter Bosselmann

street and town, all helping to complete and support each other. These many separate acts and decisions of buildings come together as one whole in these patterns of use, so that people might share a common conception of construction and planning. Use of the Pattern Language was seen to increase those aspects of the built environment that foster individual and group autonomy and encourage community pride and identification. In this project the government had provided land, in one block, for 30 families to design their own homes using the Pattern Language.

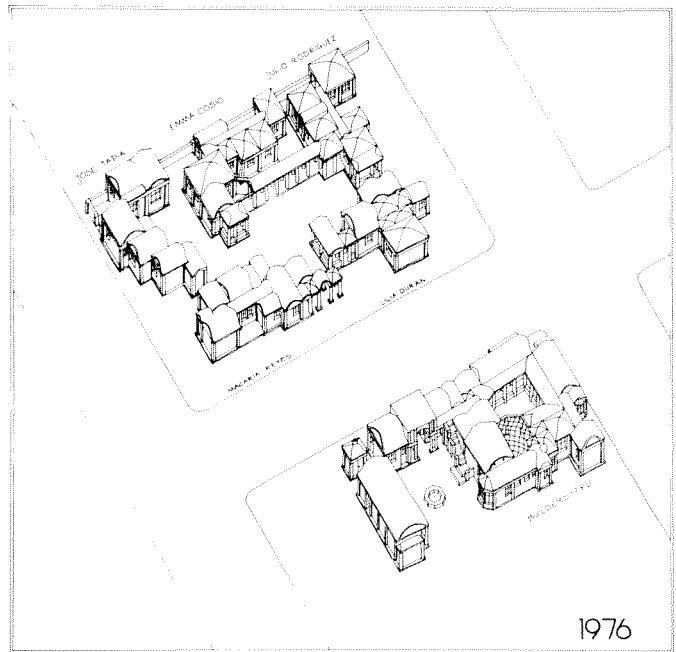
The 30 lots were in “colonias populares,” a district subdivided into small lots of approximately 2,500 square feet and provided with basic services of unpaved roads, water, and electricity. In these districts, no standards were imposed on what individual settlers built. However, the government had started several pilot projects to demonstrate how to build earthquake-proof structures and how to insulate against Mexicali’s desert climate. The government viewed our project similarly, that it would demonstrate easy construction techniques for this locale.

The key concept of our self-help housing project centered around a builder’s yard. The ideal was that the builder’s yard would become an institution in the life of the colonia, it would be a place where anyone could go and learn about construction and building materials. It was hoped that if the project proved



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2 Builders' Yard, 1984.



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successful, other builder's yards would originate and, in this way, a decentralized housing program could spread.

Our builder's yard was a place where materials and tools were stored, where an Italian-made block machine rattled away and produced, on a good day, 400 wall blocks. Families would come together in the shade of a loggia, around a fountain, to meet, to discuss, and to get advice. The building system was tested on the construction of our builder's yard. We used a building system of soil-cement blocks with concrete roofs. Each room had an individually vaulted or domed roof that gave the group of buildings a distinctive appearance.

When completed, the builder's yard was among the first group of buildings at the edge of town. At that time it made sense to construct buildings around a courtyard, which we visualized would one day be lush and green. The façades only had a few small openings to the streets. In those early days, the builder's yard was seen as the seed of an oasis against the surrounding dust and glare.

The establishment of a community guided us in the decision to use courtyards as an organizational principle for family-house layouts. Five or six homes inverted around a center of common land formed a "cluster." We hoped building in units of clusters would create a close social bond among families who had little in common at the outset. Each of these clusters was to be linked through the shared land to the builder's yard, forming a network of groups.

In February 1976, five interested families answered a government advertisement to build the first cluster. The site for the cluster was located across the street from the builder's yard. Patterns that defined the layout of the cluster were selected, and each family laid out the design of its own house right on the site; each was different. The families began to build in March 1976, but many delays, difficulties in block production, and organizational problems plagued the project. With student help, the first five homes were finished in December 1976.

A second cluster was laid out, but it was never started. The remaining

3 Housing Project and Builders' Yard, 1976
4, 5 The Tapia House, 1976 and 1984



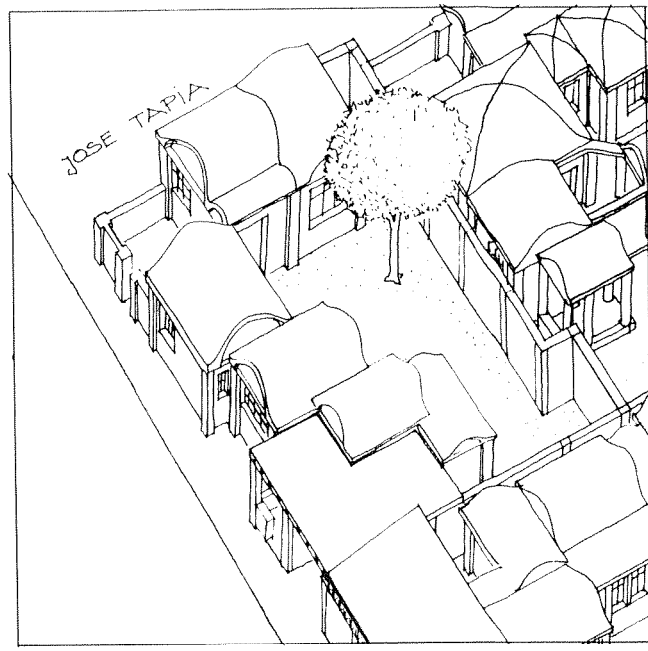
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25 homes were not built. After the first cluster, the government did not renew the contract.

The success or failure of this project can be viewed on many levels. On one level, it can be evaluated from the perspective of the first five families. On another level, it can be assessed from the viewpoint of the Mexican government: Could our process be applied to provide housing for their rapidly growing population, in this and other cities? In this regard, the project had many problems.

As a whole, the construction process was very labor intensive. It required a great deal of time, skill, and ingenuity, which students had the patience to employ; however, student help could not be relied upon forever.

This region's primary housing need was the provision of immediate shelter. Many operations in our construction process took so long that they would never have been used by those who needed shelter. Our priorities—improving the environment, creating a community, good design—were not the settlers' priorities. This should have been



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clear to us. Standing on top of the building making formwork for the roofs, we had a splendid perspective—quick and simple housing had been rapidly built all around us. Our project was no longer on the edge of town.

Another problem of the project was making a building material available that was thermally more efficient than concrete block. We could not find the ideal mixture of cement and earth, and ended up pressing cement blocks with little or no earth, reducing their thermal value.

All in all, we wondered, how meaningful had our work been? We wondered how successful this process was in the eyes of the five families who had built their own homes with our help.

Seven years later we went back. We looked for the familiar vaulted roofs. Everything had grown so much that we wondered whether we would recognize it, but we did.

The Five Families

Solid and eight feet tall, the wall stands before us. Made of bricks reinforced by concrete columns, it

wraps its way around the house. The opening for the driveway is iron-gated. Behind the gate a dog growls and barks.

We follow the wall that runs parallel to the dirt road. To our right, a building stands vandalized. Windows are broken and graffiti appear on the walls. Finally, on our left, an arched opening leads in, flanked on one side by the brick wall and on the other by a wire fence.

Inside, the brick walls form the edges to what was once the communal area. Five houses once opened out to this area; only one does now. The others turn their backs to the space.

The five families still live in the cluster.

The Tapias

I like the house. The thing I was disappointed in was that we couldn't live as a community. Since we couldn't live as a community, I built the fence and changed the porch. But the house, the house is good.

Jose Tapia is sitting in the living

room with his wife, Rosaria, trying to make us understand the changes they have made. And much has changed about this house that sits in the northwest corner of the cluster.

The Tapia house was built in an elongated shape—the bedrooms tucked off at one end, the living and dining rooms at the other. Like the other four homes of the cluster, the shared courtyard provided the main entrance. Today the main entrance to the house is from the street, complete with covered porch and carport. Windows have been added, and a six-foot brick wall has been built to close off the shared courtyard.

In view of all these changes, it came as a surprise to hear Mrs. Tapia say: “This was a good project. I liked it because we had good materials. This house is better than the others, because it is well-made. Nothing happened during the earthquake, the roofs don’t need to be repaired, and it’s more economical.”

“But,” she adds, “the patterns we used for designing the house didn’t work. The patio was facing to the inside of the compound and the rooms stretched out in one long corridor, making the house cold. We’ve changed some of this.”

The patio, which used to face out to the shared space and served as the main entry to their house, has been enclosed and is now a kitchen. Mrs. Tapia told us it did not get enough sun in the winter. Warmth,

we gathered, was not the only reason for its conversion.

“It didn’t work because the families were not well chosen. There was a problem when company came over because of the other families. One particular family took over the communal space and there was no privacy. So we didn’t usually use the porch.”

She told us that she would have liked the communal area to have worked, but it did not. Yet there was a time when the five families got together to do things in the communal space, when they greeted each other from porch to porch. What had happened?

“It worked well for a while,” concedes Mrs. Tapia, “until we got fed up with them to here [she indicates with her palm a line just below her chin], but this one family didn’t do anything to help the situation.” For her, the next step seemed obvious: “All the families around them ended up closing themselves off.”

Mrs. Tapia gave us a short tour of her house. A solid brick wall separated the Tapias’ yard from the communal area. “It’s divided; everyone took a piece,” she explains, following my eyes across her backyard wall.

Once the brick wall was built, the entrance to their home was changed. A bricklayer has made the alterations and the Tapias have taken care of small repairs: “I could have done them all myself,” Mr. Tapia

mentions, “because I’ve gained the experience through building the house.”

Mr. Tapia appears content about his home. He believes that the original patterns from the “Pattern Language” work in the house, but not for the common area. He explains to us where there is room for expansion. They are thinking of building a room at the end of the hall to put in a bookstore, because the school is close by and it would be a good business venture.

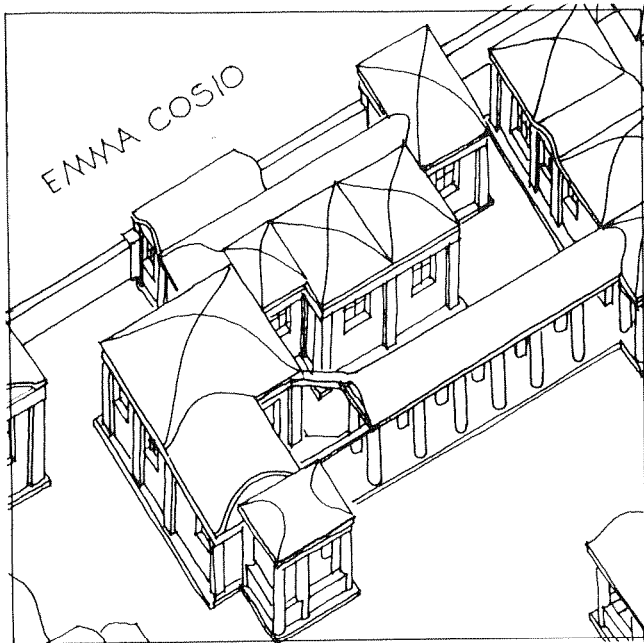
He tells us he is also thinking of building a larger dome over the existing one to insulate the house better and to give it a larger appearance from the street.

The Tapias’ freedom in conceptualizing spaces and moving walls as though they were pieces of furniture is impressive. The qualities they wanted from each room were clear to them. They are involved in attaining the kinds of spaces and rooms that fit their intended use. The house has not been altered, but is in a process of growth and change.

Emma Cosio

I haven’t changed any of the spaces. The property was very small and the house fits well into the lot. It has enough spaces for the children, but the lot is too small for them all.

Emma and her ten children have the largest house in the cluster, with a very large family room, from



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which the many rooms and alcoves are reached. Her house is the least changed, looking very much as it did seven years ago. She has alterations in mind.

Mrs. Cosio's house is the only one that can be approached from the original entrance off the communal area. Its front completes the walls of brick that now form the edges of the communal space.

We talked to her in the living room, which overlooked the large domed dining area. Eight kids were sitting around the table talking, two younger ones were playing on the floor.

She told us about a fire that had occurred in the house two years ago.

"The fire started here. The TV had a short circuit. There was smoke everywhere in the house. Two rooms were burned [living and dining]. What didn't burn, blackened."

She points to the ceiling where the burlap and wood strips have been burned away, exposing the concrete. It is the only indication that

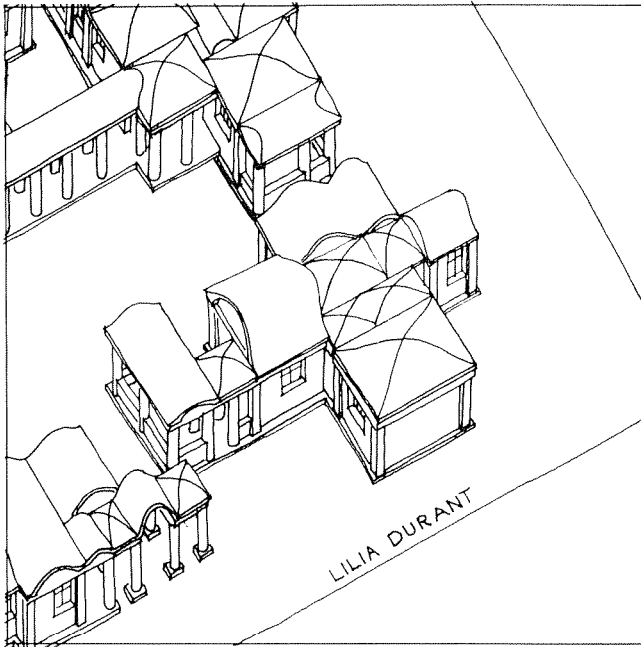
there has been a fire; everything else has been repaired or repainted.

Emma felt that at the beginning the communal space worked out. But as the area developed, more people walked through the communal areas and created problems. The space was then divided. She feels no one person tried to take it over, but that there were some problems with parking spaces. When asked if she minded the fact that hers was the only house without easy street access for parking, she responded philosophically: "No, I take the bus."

She would like to expand the living room by combining it with her porch. She also would like to expand from the back of the house. "But I am worried about the roof. How am I going to build another roof like that?"

She took us around her house. Mr. Tapia's six-foot backyard wall had cut off the sun from her living and dining room windows. The walls built by the other families define her front yard. Walls surround her yard in the back as effectively as in the front.

6, 7 The Cosio House, 1976 and 1984



The Durans

When we had three entrances, we had a problem with transients. The police would chase them and they would hide in the common area. It was a real problem and also dangerous to the families.

All openings to the cluster, except the main entrance, have been blocked. The entrance arcade is now neatly divided lengthwise by a wire fence. The wire fence runs straight alongside half of the Duran house. A brick wall protects the other half. Red, white, and blue candystripes wind their way around two of the columns on the arcade. By the entrance, a wooden sign reads "Barberia" [barber shop].

We walk through a gate, past the front door, into what was once the living room. In the center, a mother sits in the barber chair distracting her baby while Jesus shaves its head.

Jesus, a barber, can no longer find work downtown, so he moved his barber shop into the house.

The Durans are outgrowing the original layout of their house. Another child has added to the

space crunch. Although walls have not been altered greatly, spaces in the house now serve multiple uses.

Lilia Duran talks about the house to us; her husband adds comments as he works.

"We're really happy with the house because we designed and built it ourselves. It's a good house, warm in winter and cold in summer because of the walls and roofs. Oh, it has changed from what we built originally."

"We originally thought it was functional for five families to live together as a community. There were some problems. We put the fence up because of the problems we've had with the families."

Lilia Duran is a quick-spirited lady. She talks quickly and gestures as she explains. She wants it understood that she was the last to put up a fence—only a year ago. When Julio Rodriguez died (NE house), his wife put up the first wire fence. In fact, Lilia tells us that she had problems with her because she didn't like the fence.

"At least I don't have the problems I used to have. When it wasn't

fenced in, the other families' kids used my porch, which I felt was my private space. I asked them why they came over, because I didn't use theirs. I told them to go away. [Sighs] It never worked."

Another point of friction occurred when the family without street access wanted to change the entry so that they could bring in a car.

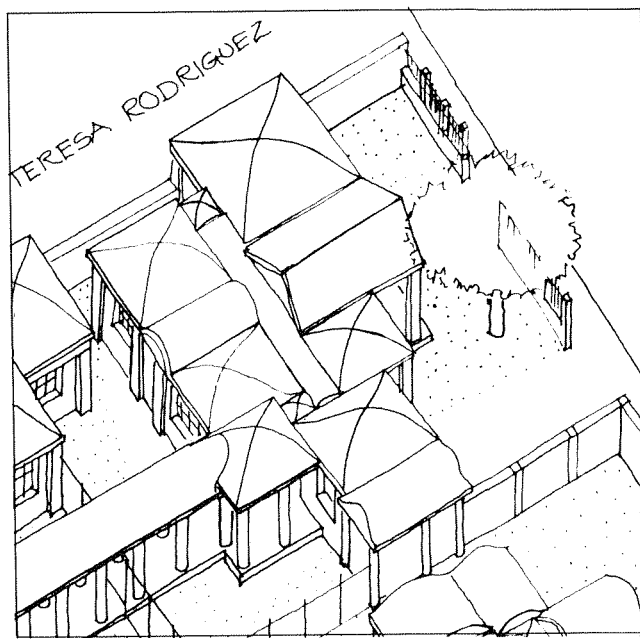
"I fought against it" Mrs. Duran says. "I convinced them. I didn't want the entrance arch taken down, because I built it and it was hard work. I said to them, 'you don't even have a car.'"

"I would have liked the original design to have worked because that's the way to live in a community with other people. I could talk to other families from patio to patio. But it only takes one family to bring their problems over to my house. . . ."

The Durans have extensive plans for the future, including extending the kitchen and building a two-story addition—one room for the new child and the other, above, for the barber shop. "The rents downtown are so high, we decided to



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open a shop here. Instead of making it as large as was needed, we make do with this size for now until we'll build the new room." She insists that the roofs for these structures will be domed, just like her existing rooms.

Mrs. Duran would like to see more houses built in the same way. She mentions that a house on a side street caught on fire and burned down, but when Emma's house caught on fire, nothing burned extensively.

She does not want to change any of the original patterns or materials. In parting, she says, "I really appreciate everything Chris [Alexander] did. I am very fond of him. Give him a hug."

Mrs. Rodriguez

Will you be coming back to build more houses? I just wanted to know—because some people have asked me about the houses, they like the way they look but don't know how to build them. We would like people from the university to come and help us.

Mr. Rodriguez was one of the strongest proponents for the

communal nature of the project. He was a strong cohesive force in the cluster. During the construction he played the guitar when everybody sat together in the evening.

When Julio died, a large positive force disappeared. His wife has had to adjust to living on her own while raising five children.

Walking up to the front door, we pass through an iron gate and red brick entrance porch with gabled roof. The house is well cared for and has the appearance of great permanence.

Mrs. Rodriguez sits us down and brings out a bowl of tangerines. Her living/dining area is large, partly because Julio loved to entertain. The children all share a bedroom. Now her needs have changed. A high priority is having a well-tended, safe home. Her house was the first to be enclosed with a wire fence running through the communal area.

"I live very comfortably here. There are a few changes I am thinking of. This sala [living room] is too big. I'm going to make it into the dining room and the kitchen will be over

8, 9 The Duran House, 1976 and 1984

10, 11 The Rodriguez House, 1976 and 1984

there. I'll turn the kitchen into the bedroom for the little boy."

Her eyes appear to grasp each room as she talks and pull it to another location. She tells us the patterns work well and make sense. Yet there are always adjustments to make.

"Over here was a wall which we knocked down to make the room larger. I got someone to put in a slab and a roof for the porch. I also put up a brick wall and a wire fence because some of the other people who lived here did not know how to behave themselves. They used to come into this house through the windows and also this door, but I changed the door, and I put iron bars on the windows. At night people used to wander through the communal area."

"We used to enter over there [she points toward the communal area] and we changed it to there [street side]. We used to take food and eat outside, but not now."

There is a sadness in her voice as she says this and so I ask her why she closed off the porch.

"My husband died five years ago. My friend and I used to sit outside [in the communal area]. We were both without husbands. People would hang out around here. They used to walk through, and sometimes even throw stones at us. So we closed the opening."

"Who did the change?"

"I did myself. I didn't have the

blocks we used so I went out and bought materials. For the new changes I'm going to bring in a handyman, because I work and can't do it."

"Well, suppose there was a change and things became quieter in the cluster, people stopped wandering through; would you want the dividing wall removed from the back?"

"No, I'd rather live by myself alone."

Mrs. Rodriguez would like to see the bond renewed between the families and the university. Right now her roof has a small leak and she is not sure how to fix it. The original concept of a builder's yard, an ongoing repair and building center, still remains a hope to some of the families. Mrs. Rodriguez wanted to know if something like this project will start again, so that other families may benefit.

"Friends have come to my house and looked around and said: 'This is like Cinderella's house.'"

Macaria Reyes

When I tried to build my own house, and could do it, I saw that I was capable. I saw that my ideas could be realized.

Compared to the other cluster homes, the Reyes' is the most enclosed. Tall walls surround the entire house. Dogs guard the gate. Eight-foot-high metal gates cover the only opening.

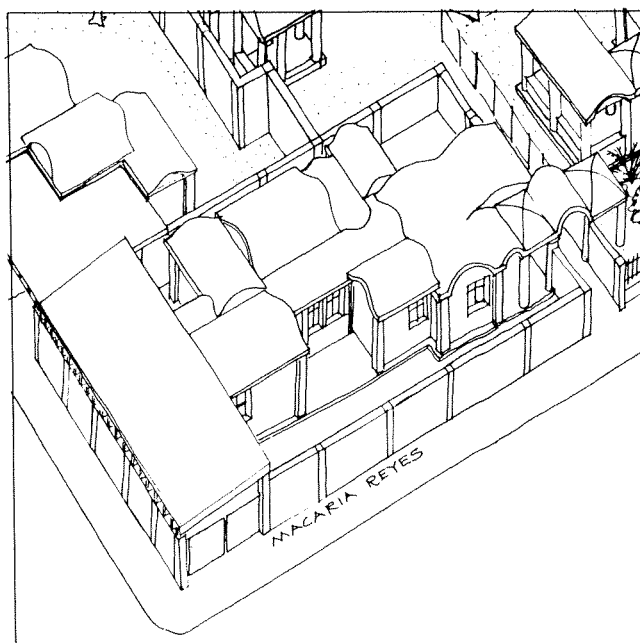
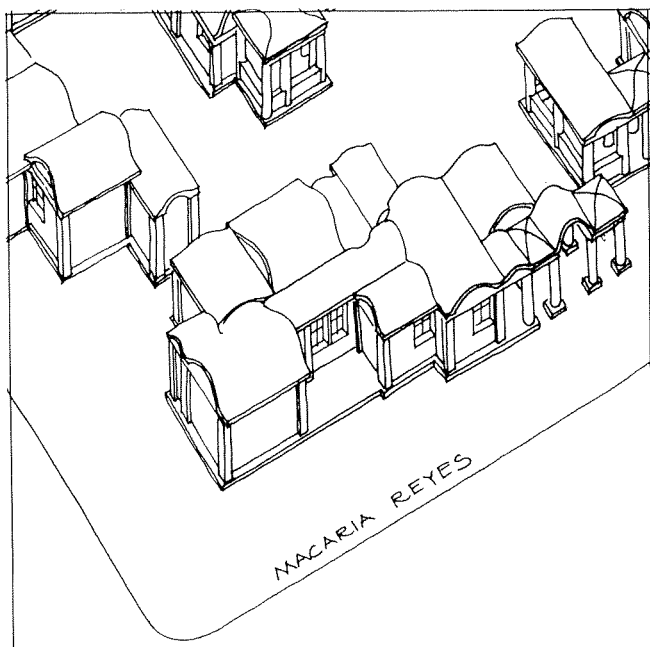
Luckily Mrs. Reyes met us at the gate to show us in. The entrance had worked well when the common area provided access; now it was in the least obvious place.

Walking past the cold forbidding façade, we are led through a cloister of walls to the side entrance and into the living/dining area. The interior is quite a contrast to the exterior. Macaria and her daughter are busy in the kitchen. The room is carefully decorated with tiles and cabinets.

The lack of sunlight in the room is not surprising, with walls enclosing the entire house. And the roof of the new carport reduces the light penetration even further into the house.

The interior spaces all have a finished professional appearance missing in the other four homes. The walls have been stuccoed, and closet openings are framed in wood and all have doors. Mrs. Reyes built the house herself with some help from her uncle. "I didn't have, at first, the correct idea of what I wanted, but using the patterns made me aware of my house." She worked extra hours on her job as a nurse so that she could afford to fix up the interior.

"I was very happy with the house and felt comfortable here. It's well built, cool in summer, warm in the winter. To begin with I didn't dislike anything. But we began to have community disputes. Some families did not behave. All the children would come to my porch to make noise and trouble because



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there was no fence. So that made me decide to build a wall.”

Maintenance of the common area was also a problem. Some families did not contribute enough time to its upkeep, causing more friction among themselves.

Mrs. Reyes would have liked the communal space to have worked out. She is still friendly with some of the families, but feels that people from different backgrounds should not be thrown together. She thinks greater care in choosing compatible families—perhaps through testing—would help.

We wondered how she felt about the house interior. When Mrs. Reyes designed her house she put a great deal of her space into three bedrooms and combined her living and dining rooms. Did she regret this design decision?

“No—I need three bedrooms. One for us and one for each child. All these spaces are used the way I planned, but I had to exchange the living room with the dining room when we built the walls.” But she says that the layout of rooms does not optimize her available space.

She is now thinking of expanding her living room by breaking the wall between that room and the porch. She is also thinking of enlarging her kitchen. This will happen next year, this year they are busy painting the house.

Perhaps they will fix the exterior also. “When my friends see the house from the outside, they say it looks small. When they see it from the inside, they think it looks fine.”

Mrs. Reyes told us that given a choice between different kinds of houses, she would choose to build her own house in this way. “There are so many beautiful houses . . . but this is my home.”

Yet the outside makes us wonder. Why did the Reyes wall themselves in? She explains: “We’ve had two robberies in here and with the walls I now feel safe in this house.” Her husband, a policeman, also felt the lack of security. Because the house is located closest to the builder’s yard, the Reyes felt the need for barriers against both the common land and the street.

After seven years we can see that many of our concepts have not been realized.

12, 13 The Reyes House, 1976 and 1984.

We wanted to create a process that enables settlers to build and design their own homes, a process that created environments that were beautiful and whole. We tried to create a community through the builder's yard and the cluster—and both did not work.

Interviews reveal that seven years later family priorities are different than they were at the outset of the project. Based on frequency of statements and order of appearance in these and subsequent interviews, security and privacy seem uppermost in the families' minds.

The common land we pictured with group gatherings created security problems because ownership was ambiguous. The three entrances to what became a common "street" made it difficult to supervise or question people who wandered through. Installation of heavier doors and bars on windows began.

The abandonment of the builder's yard added to security problems. Our concept for running a builder's yard required an idealism on the part of the Mexican students that was unfair to expect without government or university support. So the builder's yard stood empty, open to vandalism and destruction. Mrs. Reyes, whose house is closest to the builder's yard, said: "We've had two robberies here, and now that we've put up the brick walls all around, no one bothers us."

Obviously, security is not the only reason for the many walls and fences that have been erected over the last four years. The interviews

persuade us that cluster housing is not everyone's ideal. Four families felt acutely the lack of privacy, specifically the intrusions by other families' children. The problem, though, is not simply one of numbers. One family, the Reyes, believes: "It's not so much the noise and the numbers, as the kind of people." They wanted the right to choose the people with whom they would socialize.

One reason for this lack of privacy may be that in the early stage of the cluster design not enough attention was given to the way the entrances and the private areas around each house were buffered from the communal space. Or perhaps the cluster concept is altogether too novel for Mexicali. Mrs. Reyes said, "The idea comes from a place where people live comfortably without fences, but it is not the same here."

As a consequence social relationships suffered. They are not as strong as they were seven years ago. While some families remain in contact, others have started to quarrel. We can only hypothesize that better territorial definition between private outdoor space and common land would have helped relationships between families.

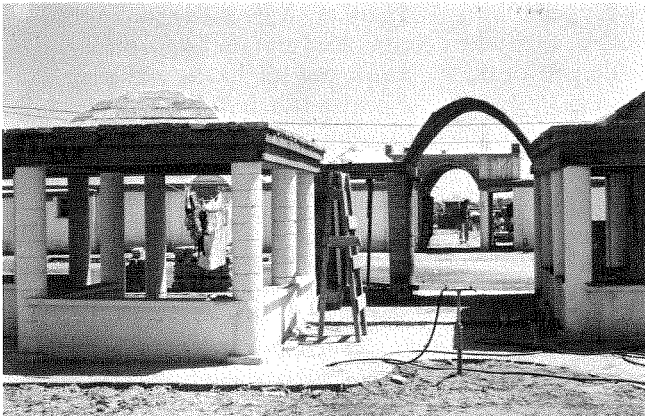
Today the entrances of four homes face the street. The walls, fences, and new entrances give each family privacy at the expense of the social interaction initially valued in the design of the communal area.

With the cluster no longer functioning, all those patterns designed

to support the cluster idea, such as elongated floor plans as well as the connecting arcade, have, of course, lost their meaning. Families see these, today, as a shortcoming of their house design.

Families were more pleased with the physical qualities of their individual homes. Family responses to the comfort of their homes were positive. Although minor complaints surfaced about the homes, most families felt them to be comfortable, fire resistant, and earthquake proof. The only substantial complaint came from Mrs. Tapia, who liked the way the house was constructed but felt the elongated room arrangement made it cold inside. All liked the vaulted ceilings, saying that they gave an expansive and large appearance to the interior spaces.

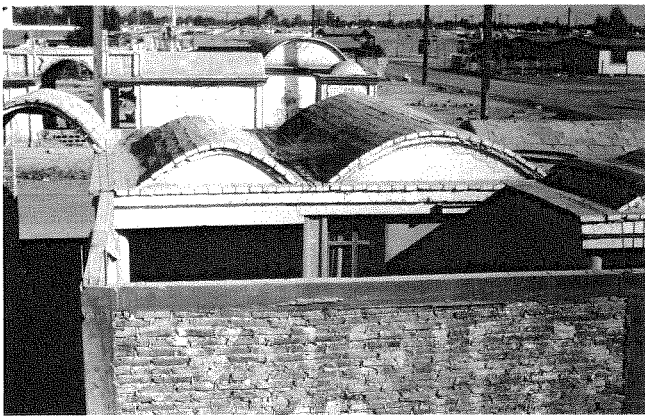
But families mentioned the street appearance of the houses as looking "so little, so small and uncomfortable." Indeed, the neighbors make fun of their appearance, saying they look like bread ovens. Instead of the project reading as a "whole" they expressed a need for a more impressive street appearance for their houses. Mrs. Rodriguez had made her roof appear larger and more conventional by the addition of a gabled roof above her new entrance. Mr. Tapia mentioned he was considering building a larger vault over his existing one: "All my friends say, 'Ooh, your house is so little' when they see it from the outside. But when they are inside, they say, 'Oh, your house is so big, so comfortable, so beautiful.'"



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14 The main entrance into the common land from the street. The builder's yard entrance is located across the street, 1976.

15 Entrance porches in 1976 were oriented towards the common land.

16 Porch and backyard are walled off from the common land, 1984.

17 Teresa's new main entrance, 1984.

Families regret that the original building materials are no longer available. They had changes made with readily available materials using local builders, although they know how to do it themselves. Many changes were made, from simple low walls to altering whole sequences of rooms.

In this aspect, we can feel we accomplished something. While community making floundered, individual autonomy grew. The changes the families made to their homes are remarkable. Jose Tapia's new porch towards the street has the same qualities as the original entrance pattern: "I tried to build it the same way, with a bench, and porch and columns in the corners. To do the same thing, to continue the pattern of the house." Lilia Duran's entrance to the barber shop is a colorful and delightful sequence of spaces. The same is true for the entrance Mrs. Rodriguez designed; her approach is more formal.

The families know how to help themselves. Through designing and building their homes they have developed an awareness of how they like to live. It shows when Lilia Duran takes us to her kitchen. "I am sorry it's messy. This kitchen is too small and I want to expand it out." Palm out, she sweeps her hand across the dishes and cupboards. "I am just going to remove this wall and push it out."

"How will you build the roof?"

"The same way; I want it the same way it was built. I don't know who's going to build it. If the

contractors don't build it [she shakes her fist and smiles], I'll build the dome myself." Judging from the other changes Lilia has made, she will do it.

Postscript

Returning to Mexicali has helped to satisfy our curiosity about the turn life has taken for the families. At the same time, revisiting has opened up one new question about architecture and creation of places that we cannot fully answer, and this question is so important and pressing it deserves more work and thought which goes beyond this article.

Christopher Alexander, in the introduction to this article, says that "the families are changed through the process, both in their feelings of power and in their attitudes. In the way they were liberated and able to feel responsible and completely in charge of *their* own future, their own lives." We discovered this to be true. But why?

Our study alone does not give conclusive evidence that the use of the pattern language is responsible for the new power the families felt in their lives. A visit to an Ifonavid public housing project that was started at the same time shows that families there have also made changes to their homes and street. The same is true for a conventional site and service project, where people have built their own homes and continuously changed their environment.

There are differences too in this comparison. Our five families had a sureness about the way they improved their homes. More so than others, their houses have become an integral part of their lives.

It is time to do an assessment of other pattern language projects to find more evidence whether the power felt by our five families is indeed present in all the users that have created with this method of design.

The first set of interviews with four of the five families occurred in January of 1983. Corina Rodriguez assisted in interpreting the answers. On our second visit, in December 1983, we interviewed the Reyes family, who had been away during our previous visit. We also reinterviewed Jose Tapia and Lilia Duran. Gloria Hernandez, architect, assisted. A third set of interviews with each family occurred in March 1984, conducted by Rebecca Leon. At that time the authors added follow-up questions.