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FINLAND—RUSSIA: Two Sides of a Gulf

Based on experience gained from a recent editorial junket through Russia and Finland, two P/A editors survey the contemporary architectural scene in those two countries.

Finland: Export Design
The architectural impressions of Finland that have gained a worldwide reputation for excellence in design are described.

Russia: Form Follows Tradition
Those tangibles that create the mood of the Russian architectural setting are explored.

Finland: Where Architecture Outlasts Us
Having studied architecture in Finland for a year, Architect Edward Marc Treib explores the factors that make "a good building a source of pride and accomplishment for all Finns."

Practicing Finnish Architecture
Article briefly describes common practices in the profession, and describes Finnish architectural education.

Practicing Russian Architecture
Facts and figures about the practicing Russian architect and his formal education are given.

What Shapes Soviet Architecture
Architects Peter Brill and Stefan Deer discuss the political–ideological and economic forces that have molded Soviet architecture.

Russian Building Systems: The Architect Returns
Architect William Caudill, recently returned from a State Department tour of Russia, probes the prefabricated building phenomenon and finds that the architect may soon return to a position of influence in Russia.

Giant Economy-Size Housing
Following a recent tour of Russia, Robert Mutrux, an architect with Fletcher–Thompson, Inc., describes a labyrinth of surprises and contradiction on the subject of Russian housing. While the American architect's impression of Soviet housing is less than complimentary, the Soviet experience provides us with examples of what can be done, as well as what should not be done on our own terms.

Inside Russian Architecture
Though interiors in the Soviet Union are generally drab and poorly kept, many public buildings, palaces, and cathedrals provide the exception. Illinois Architect Brock Arms, who traveled in Russia last year, discusses Soviet restorations, furnishings, and interior design education.
Sea Ranch Expands

Two resident architects have expanded the now famous Northern California second-home complex to include a gracious lodge for transient visitors. In addition, they have doubled the size of the restaurant, added a bar and solarium, lounge, library, and considerably enlarged sales and office space. Designed in the Sea Ranch wood-sided, slant-roofed idiom, the new complex is planned in a cluster arrangement that further echoes the theme of the surrounding condominiums. Alfred Boeke And Louis McLane, Architects, with Agora Associates.

Selected Details


Beating The Systems Game

A relatively simple architectural office game, developed by Houston Architects Caudill Rowlett Scott, translates rigorous systems analysis requirements into a program meeting the complex needs of a new hospital.
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YOUR POINT OF VIEW

Author Please

Dear Editor: Would you please identify the author of the article on the Richard Feigen Gallery, titled Architectural Fabergé (February 1970 P/A).

Robert West
Troy, New York
(The author of the article is Associate Editor Stephen A. Kurtz, whose by-line was inadvertently omitted.—Ed.)

Schools

Dear Editor: I am writing to you in hopes of receiving a reading from at least a few members of the architectural profession. During the seven years that I have been an elementary school teacher, I have been fortunate to teach in new, modern facilities. Our system, being the largest in the country, has a continual building program and my observations are not based on experience in antiquated structures.

Students, be they kindergarteners or seniors in high school, require definite motivation to produce even the initial attention required in the learning process. Due to the bombardment by mass media of all aspects of our daily existence, a teacher can no longer hope to achieve this by pounding on the desk and pointing at the chalkboard. Many of our children arrive in the classroom with such complex and compounded emotional and/or environmental difficulties that we can only hope to help them. It is therefore most desirable that the atmosphere in which the student spends six hours each day be pleasing and conducive to the educational process.

Light is an extremely important factor anywhere and is most certainly a prime consideration in a classroom. I have no complaint at all so far as artificial light is concerned. It has always been excellent. However, natural lighting is also important, not so much for physical reasons as for emotional and psychological ones. How effectively do you work in a room that is completely blocked off from the outdoors?

Many modern school buildings are designed to be air-conditioned but when the actual building takes place, budgets eliminate this. What is left is a building with fewer windows for ventilation, and a school population that spends some very warm days in the early fall and late spring. I do understand that a complete wall of windows can have much the same effect as a furnace when joined with the beating sun. However, when there are only four windows in a room, I do not think that one of them should be a fire window to be opened only in the case of a conflagration.

Since team teaching and movable walls are much in vogue, much of the teaching day is spent with the wall folded open. Therefore chalkboard space should not be placed so that it folds out of sight along with the wall.

Windows which open outward onto a play area are most definitely a hazard. Brick walls erected for decoration's sake adjacent to elementary playgrounds serve mainly as a climbing device and therefore are an inherent danger. Multipurpose rooms should be large enough to accommodate the entire student body at once. (By some structural freak, our stage has a decided draft that swoops down upon the assembled body with seemingly hurricane force.) Rooms designed so that movable coat closets must be used are unsatisfactory, because the closets live up to their name and move constantly.

On the plus side, I am grateful for wide, high halls, drinking fountains at child level (which for an upper level elementary child is more than fifteen inches from the floor), sinks in every classroom, walls and floors done in cheerful yet soft colors, and schools built on one level.

Anne Doherty
Olney, Maryland

Resolutions

Dear Editor: Inasmuch as January — established by a capricious calendar — is regarded by most, (that is to say, the Silent Majority), as an opportune time to express hopes for the future, I might just as well, as a good "conservationist," follow the habit.

Thus I wish to Progressive Architecture, progress in spreading the knowledge that the greatest hindrances and dangers for the human race lie in PSEUDO-PROGRESS, MISDIRECTED GROWTH, and FALSE GLORY. Wishes, I understand, may still be uttered freely in the U.S. without being "agnewed" with suspicion and one can still "as­piro" towards them. So I wish for less "progress" in many ways. Less progress in new weaponry, in the production of superfluous materials, goods, and the discovery of "Outer Space."

I wish for more emphasis on "In­ner Space;" less preoccupation with "horse power" and more with "hu­man power;" less enthusiasm for outer growth and more attention to inner growth; less concern for the "glory" of nations, and more concern for the needs of the people; less ad­miration for the "mechanical brains" and more for human hearts and minds.

Let us set our hopes on a majority which is NOT silent — but roused to speak out after acquiring the gift and ability to think!

VICTOR GRUEN, F.A.I.A.
Los Angeles, Calif.

Design Award Articulators

Dear Editor: Congratulations on your uproarious lampoon of the Design Awards. Vreeland's remarks on commendable banality and "imme­diate historic retrospection" broke me up. Venturi's comments on the first award scheme are inspired — no "interesting articulations" or "false complexity" for MLTW, all right. If such witty men ever talked seriously about architecture — but then that's what makes P/A so much fun to read. Keep up the good work.

Ralph Bennett, Architect
Boston, Mass.

Sealants

Dear Editor: In answer to Mr. Har­old J. Rosen's question in your Jan­uary issue, "Does Anyone Really Know What A Sealant Is?" I would like to propose that a sealant basically is neither a gasket-like thing nor a calk-like thing but is, rather, a small insect well-known throughout the breeding grounds of the walrus and other animals in the Pribilov Islands. I can understand Mr. Rosen's confu­sion though; in those very same is­lands there are some Esquimaux who insist that a sealant is the mate of a seal's uncle.

John Wells Murphy, A.I.A.
Cherry Hill, N. J.
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MARCH 1970 P/A
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Architects, educators, and P/A staff gathered in stately Sayles Hall for the Seventeenth Annual Design Awards luncheon. Above, view showing organ loft and slide presentations; below, view of main hall and speaker's podium.

P/A's Seventeenth

Above Photo: John Nicholas Brown, secretary of the corporation of Brown University, James F. Mottershead, president, Reinhold Publishing Co. seated; Donlyn Lyndon, Moore, Lyndon, Turnbull standing.

Above: Alberta Brown, dean of admissions, Pembroke College.
On January 14, winners of P/A's Seventeenth Annual Design Awards were feted at a luncheon on the Brown University campus in Providence, Rhode Island. The luncheon, where winners received commemorative certificates, was held in stately Sayles Hall. The 19th Century eclectic meeting hall is not far from the site of the projected top award winning dormitories for Pembroke College, the women's division of Brown University.

Gathered at the luncheon were a number of Brown University and Rhode Island School of Design dignitaries, as well as New England architects, designers, and the press. Guests included: Merton Stoltz, acting president of Brown; John Nicholas Brown, secretary of the corporation and senior fellow of the university; Alberta Brown, dean of admissions, Pembroke College; and Charlotte Lowney, associate dean. Also present were: Barnet Fains, chairman of the Rhode Island Council of the Arts; Gerald Howes, head of the Department of Architecture, Rhode Island School of Design; Robert Tiernan, congressional representative from Rhode Island, and Lawrence Anderson, dean of the school of Architecture at MIT.

Visitors entering the baronial hall, with its high hammerbeam ceiling, were greeted by a continuously flashing four-screen slide projection positioned under the organ loft. A large chromed stovepipe sculpture by Alice Lyndon (wife of Donlyn Lyndon, first award winner) carried projectors for the slides, while traditional 19th Century portraits of former trustees looked down from the walls.

Although program events bore the quiet dignity of traditional ceremonies, awards were presented to 70's minded architects who had designed buildings generally expressing a new approach to architecture. First on the list of ceremonies was a speech by Tim Vreeland, professor of architecture at UCLA and chairman of this year's design award jury. Accompanied by a slide presentation illustrating premiated designs, Vreeland discussed jury attitudes toward each of the winning designs. Comments by juror Robert Venturi further expressed the prevailing mood that distinguished this year's design awards from previous years: Venturi, himself a recognized apologist of the movement toward anti-monumental or "ordinary" architecture, pointed out that the current practice of emphasizing functional or structural elements was in effect reviving ornamentation by the dishonest inclusion of unnecessary physical elements. This year's awards were generally selected because of their simplicity and unassertive quality.

Following Mr. Venturi's speech, P/A's Editor Forrest Wilson presented the citation and award certificates to the recipients. Donlyn Lyndon of Moore, Lyndon, Turnbull accepted the first award for the Pembroke College dorms, a building complex the jury had described as neutral and anonymous but sensitively designed to meet the programmatic needs of the students. Mr. Lyndon further discussed the problems confronting an architect in designing a university building during a period of student unrest and anti-establishment sentiment. Often, as he explained, the physical environment becomes the focus of rebellion, and any new design must in a strong sense respond to the psychological needs and projections of the people it will shelter. The four simultaneous slide presentations that had been running continuously throughout the luncheon amplified that idea by depicting: 1) groups of people in an institutional situation; 2) how people personally lay claim to spaces; 3) different types of architectural images that were basic to MLTW attitude towards form; and 4) various residential images the college student brings with him to a campus.

P/A's last scheduled event never materialized. Brown and Pembroke students were to seize the hall protesting the new dorms amid the flashing cameras of photographers from the national media. While indeed missing this dramatic fracas to top off an otherwise staid affair, P/A nevertheless hoped this indicated student approval of the establishment's decision to give than an "ordinary" dorm.

Annual Design Award Luncheon

Above: Seated at head table, left to right, are Harrington A. Rose, associate publisher of P/A; Robert Venturi of Venturi & Rauch; Philip H. Hubbard, Jr., group vice-president of Reinhold Publishing Corp; Charles Moore of Moore, Lyndon, Turnbull; Merton Stoltz, acting president of Brown University.

Above: P/A editor, Forrest Wilson, presents citation to John Clair Miller of Levatich & Miller.

Left: Tim Vreeland professor of architecture, UCLA; Burton Holmes, executive editor, P/A; and C. Ray Smith, senior editor, P/A, seated at head table.
The Next Vietnam:
Notes on Environment, Ecology and Conservation

Government and industry seem to be competing to see who can protest more against pollution. One is tempted to suspect that for all the talk there will be little action, as Senator Edmund Muskie has declared, even though press coverage has been formidable. Realizing that it runs the risk, along with the rest of the media, of generating verbiage pollution, P/A nevertheless feels compelled to do its bit. Summarized below are the efforts of the new activists who realize that problems of the environment will not be acted upon by government and industry alone.

The Students

This spring a nation-wide teach-in on the environmental crisis will be held April 22. Organized by the non-profit Environmental Teach-in Inc., a specially formed group of graduate students operating out of Washington, the teach-in will be campus-based, but there is hope that communities will also be involved. The idea germinated at the University of Michigan's School of Natural Resources. Senator Gaylord Nelson backed it, and along with Representative Paul McCloskey and Sydney Howe (President of the Conservation Foundation), became co-chairman of the Teach-In Committee. The organization wants to spur the establishment of seminars and courses on the environment, local information centers, marches, rallies, picketing, and lobbying against government bodies. Communities are urged to get involved in lawsuits and other legal action to restrain polluters. Another suggestion is the organization of tours to pollution sites.

Meanwhile many colleges are getting into the act. Boston University's Ecology Action group held a two-day conference in the fall on the dangers of pollution, and the University of Washington's (Seattle) Committee on Environmental crisis held a similar seminar. The University of Texas is especially active with six different ecological organizations (although the University of Hawaii has twenty-two). Texas also plans to launch a statewide environmental newsletter and its law students are investigating courtroom strategy for environmental lawsuits. Student environmental organizations have become so popular that Stanford has created a Student Environmental Confederation to coordinate campus campaigns throughout California for more effective pressuring.

Universities themselves have introduced courses, formed departments and even started schools concerned with ecology. Columbia University has a graduate level program of environmental science, while Williams College created an undergraduate environmental studies major that crosses departmental lines. An interdisciplinary program of medical, biological, and behavioral sciences has been initiated at Stanford. Meanwhile:

Ohio State has established a School of Natural Resources with almost a doubled enrollment since its inception one year ago; California Institute of Technology students have organized an intercollegiate summer research project in environmental problems that already has attracted nearly $100,000 in foundation financing; and three universities, the University of North Carolina, Duke, and North Carolina State have formed a research consortium to combat air pollution. The universities plan to exchange information and faculty members as well as to offer advanced courses in air pollution and sponsor workshops, seminars, meetings, and conferences.

Gyorgy Kepes has stated the following about his Center for Advanced Visual Studies at MIT: "I see our role as environment creators. To change the environment, one's consciousness has to be opened to these potentials. We need to develop what I call 'ecological consciousness'. There are tremendous ecological tragedies and possibilities and the artist cannot escape from being a participant for better or for worse."

The Courts

While students are investigating legal procedures regarding environmental suits, more and more private citizens are finding lawsuits are the most effective way of dealing with profiteering special interest groups. Joseph Sax, Professor of Law at the University of Michigan reports that the number of lawsuits dealing with environmental interests are doubling every six months. Mr. Sax himself has drafted a bill, up before the Michigan House of Representatives, that would facilitate procedures by which the public could challenge private or governmental projects that lead to spoilage of the state's natural resources.

Sax urges the courts to take a more responsible role in preventing powerful organized interest groups from bulldozing their projects through legislative loopholes: Courts can issue injunctions, declare a moratorium until all interest groups are heard, and draw on the expertise of agencies not involved in the decision-making process.

Lawyers, as a group, are becoming interested in this kind of case: the next annual meeting of the Association of American Law Schools will have as its theme, "Man and Nature."

The Engineers

The Engineers Joint Council, a federation of engineering societies, has authorized the establishment of a commission of engineers to study problems of air pollution and how technology can best solve them. Called the National Engineers Commission on Air Resources, the group will educate, advise, and work actively with the public and federal
agencies, regional, state, and local
governments, industry, and other
professions.

The Scientists
The Scientists Institute for Public
Information will issue a series of en-
vironmental workbooks, according to
its new president, Margaret Mead.
The first books cover the problems of
air pollution and contamination by
pesticides, including specific facts
relevant to their solution.

The Architects
The national headquarters of the
AIA in Washington recently held
a Consortium on Environmental
Awareness and Public Education
where spokesmen for twenty-five pri-
vate organizations and Federal
agencies gathered to consider joint
action in classroom instruction, testi-
mony before government bodies, and
information to the public, all on
problems of the environment. Also
being considered is cooperation with
the national teach-in April 22.
Meanwhile, the New York Chapter
of the AIA is proposing that the fol-
lowing be considered for inclusion in
the upcoming revision of the organiz-
ation's ethical standards: "An ar-
chitect should act throughout his
practice to protect and conserve the
natural environment, safeguarding
against pollution of air, water, and
other natural resources."

The Museums
The American Museum of Natural
History in New York City has
mounted a two-year exhibition, "Can
Man Survive?" While many of the
aspects of the problem are effectively
presented through an array of multi-
media techniques, the content of the
show is aimed at making the specta-
tors aware of the situation rather
than presenting specific solutions.
At the St. Louis City Museum a
"space place" game has been installed
in a portable unit. Children are in-
vited to make decisions about the en-
vironment, including land, air, and
water use.

Who Said that?
"Is the possible damage to a body of
water sufficient to justify the capital
expenditure necessary to avoid that
damage?"
In answer to the charge that atomic
power plants are dangerous because
of radiation and the raising of water
temperature to a level harmful to
wildlife, came the following cir-
cuitous argument: "In a full-employ-
ment capital-scarce economy . . . the
expenditures of labor and materials
on cooling facilities for power plants
inevitably mean there will be much
less capital for dedication to new
housing, new schools, new treatment
plants, etc."
—Charles Luce, Chairman of the Board
of Consolidated Edison. (Con Ed recently
pleaded guilty to a Federal Government
indictment for polluting New York’s
East River.)
Put a Bally Prefab Walk-In Cooler-Freezer in the kitchen. It helps when happy vacationers, relaxed by sun, surf, or fun, seek fast service. With plenty of space it's a breeze to pre-prepare house specialties. If there's an expansion program ahead, it's easy to increase Walk-In size with extra panels. Equally easy to relocate. Write for 32-page booklet and 4 inch thick urethane wall sample.

There's an evolution in the kitchen
Los Angeles Salvagable?

L.A. has perhaps been best characterized as five suburbs in search of a city. With the firm conviction that any effort regarding planning bodes well for the city "where there's no there, there," P/A has asked its West Coast editor Esther McCoy to dig around for nascent stirrings of activity. The results indicate hopeful signs of planning efforts, but with regard to preservation, L.A. still doesn't know where it's at.

A Central City Plan

Reuben Lovret, city planner with the Urban Design Unit of the Advance Planning Division of the City of Los Angeles, has proposed "A Preliminary Concept in Planning for the Central City," which deals with an area one mile long and two miles wide. The scheme is issued as a staff working paper since a committee of twenty business men has been appointed by Mayor Yorty to select and advise a consultant to develop a plan for downtown. Evidently there is a reluctance on the part of the mayor's committee to turn the job over to local planners and Constantine Doxiades' name frequently crops up as a nominee for the job.

Lovret's plan is the first to treat the downtown area as a physical whole and to bring the edges into the structure. The area is divided into four cells each filled with what is compatible to it. The Plan acknowledges the supremacy of the car in central city by adding a freeway loop on the east which would complete a belt around the heart of downtown. This freeway belt would be snug, but inside it is a tighter belt and between the two are five large parking structures. Transit radials feed traffic from the inner belt to and through the parking structures to the freeway belt. The plan does not reduce the number of cars at the center (80,000), they are only concentrated. However, the present 50 per cent of land devoted to parking would fall to 35 per cent.

Street straightening, widening and closure would speed the movement of cars, and subsidiary transportation systems could speed the car owner to his parking structure. The plan operates independently of a rapid transit system, although Lovret believes one will be ready in the late seventies. In the meantime the elevated malls, stratified to accommodate eventual overhead transit stations (secondary system), and people movers (tertiary system) span the 80,000 cars parked below.

A major concern of the plan is upgrading the east side to stem the flow of the city to the west. The new Bunker Hill development, Music Center and commercial-financial center on the west are proving too successful; unless the east side can attract new office buildings, retail shops, and hotels the city may lose its vast investment in underground utilities and public works; particularly if the booming west side leas the Santa Ana Freeway and pushes westward.

An aim of the Lovret Plan is to make every block on the east side a "prime site for a hotel or office building" and bring back the middle class that left after the end of World War II. To raise the cultural level on the east, a complex called University Center (sometimes The Square) is proposed for Skid Row; in it would be a university tower and a new central library with plenty of parking. Skid Row would, according to Lovret, be "phased out"; railroads are also being phased out but it isn't as easy to cover over the quarter square mile of railroad yards left behind.

Revitalization of El Pueblo

Although the Plaza, birthplace of Los Angeles, is close to the Civic Center and easily accessible, it has none of the tourist appeal of other tourist favorites such as Marineland and Disneyland. (Only 1.5 per cent of out-of-state auto visitors ever visit the Plaza).

Pollak, Barsocchini & Associates' comprehensive development plan for El Pueblo de Los Angeles State Historic Park proposes that the area be named a state park and expanded to cover 44 acres. Parking would be located at the periphery, with the center a pedestrian island patterned with a grid of malls. In addition, re-routing of Sunset Boulevard would allow Olvera Street, the present chief attraction, to flow into the Plaza uninterrupted by traffic.

In 1929, Olvera Street was made a pedestrian way, paved, planted, and renamed Paseo de Los Angeles (later dropped). The El Pueblo Plan extends Olvera Street to the north by clearing out deteriorating neighborhoods and bringing in shops offering a greater variety of products of higher quality.

Restoration has also previously been undertaken on two historic buildings, the Avila Adobe, built by an early alcade of the Pueblo around 1818, and the two-story Casa la Golondrina, the city's first brick building.

Other restorations around the Plaza will also be undertaken. An es-

(Continued on page S2)
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timated $2 million has already been spent on restoring the 1869 Pico House, a Renaissance-inspired plastered-over brick building designed around an open court. This beautiful building now has the sterility typical of restorations in general, and its intended use is still in question, though some suggest it be used as a hotel, its original function.

One critic feels that the plan for the Plaza may have become too commercial: "The Plaza area should become an architectural museum representing the many different cultures coming into Los Angeles over a period of time, which the Pollak and Barsochini Plan embodies. . . . Ways should be found to fund it without making it a purely commercial venture."

How to keep the inner core of the city from emptying at 6 P.M. and make the high investment in reviving it pay off after six is a problem all planners face; but their planning, like their prose, too often falls into clichés. They call for Ghirardelli-type developments, but unfortunately, there is not a Ghirardelli type; there are only creative speculators who conceive a new kind of use for a city space or structure.

For his own part, planner Reuben Lovret has proposed for the El Pueblo District an International Zone with a Theme Center. It would be a "permanent world's fair" that would promote foreign trade and understanding by the display and sale of products.

**Difficulties with preserving the valuable: The L.A. Central Library, Pershing Square**

- Efforts to save the gardens of the Los Angeles Central Library have failed, with the result that the walks, fountain, and trees have been bulldozed to accommodate 119 cars for the librarians. Still too few car slots to matter much, most of the librarians will continue to walk several blocks from a parking lot to work. A city councilman's proposal to use city-owned property 4000 feet from the library for parking, with two city minibuses running from there to the library, was turned down by the Board of Library Commissioners along with other alternatives. Immediately following the decision a call was summarily awarded to blacktop the park.

The Central Library, designed by Bertram G. Goodhue in 1925, in his late Nebraska State House style, occupies 25 per cent of the ample site and is one of two open spaces in the booming commercial-financial downtown district. Three million square feet of office space is going up to the north, and diagonally across will be the new Convention Headquarters Hotel. A half block to the south, United California Bank proposes an 80-story office building.

There is little doubt that the dismantling of the library park is the first step in the destruction of the library itself. Robert E. Alexander, president of the Southern California Chapter of the AIA, who had led the fight to save the library and park, says "The value of the library site increases every day from the standpoint of a developer or some organization left out of this complex; its value increases just as much from the standpoint of the public and the general welfare of the Central City."

The most recent attack on the library itself is by the Los Angeles Fire Dept., who finds it "an immediate fire hazard." Alexander accuses them of playing into the hands of a city administration that apparently has made a commitment to a private developer to sell the property. He predicts that earthquake experts will now report that the building is unsafe, that "the vice squad will find perverts in the stacks and the Department of Agriculture will find pests in the trees."

In the new Lovret plan for downtown L.A., the library is gone but the site is called Library Park. Lovret advises solemnly that "the designers of any structure that replaces it (the library) would have a great responsibility to produce an architecturally significant building worthy of the site."

- With the library site up for grabs, the second open space in the financial-commercial core — Pershing Square — fares little better. It was taken apart in the fifties to build a parking garage below and, although poorly reassembled, remained an open space. Lovret's plan virtually covers it with an art gallery plaza on top which would "feature fountains, sculpture, and one or more open-air restaurants." The elevated plaza becomes a node in the east-west axis — Central Mall — of the four miles of proposed elevated malls; these will later be increased to ten miles of elevated and ground level malls — leaving no doubt that in a Lovret city there is not a tree. (Continued on page 40)
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Dodge House Dismantled

The greatest tragedy of all preservation stories concerns the Dodge House, designed by Irving Gill in 1916. In December, the house and its 2½ acres of landscaped grounds in West Hollywood was sold by owner Equitable Savings and Loan Association (formerly the Lytton Savings and Loan Association whose president, Bart Lytton, had bought it from the School Board and agreed to preserve it). Purchaser of the Dodge House was Riviera Management Co., a local developer. Prior to the sale, preservationists and the Southern California Chapter of the AIA had been hoping to prevent Equitable from disposing of the property to developers by means of a summary judgment, but it was overturned by Judge Robert W. Kenney. Particularly frustrating to preservationists however was that the December transaction was kept secret until February 1. By then it was too late to do anything—the house was already being dismantled. Immediately upon hearing of the sale, various parties did try contacting Riviera Management to protest demolition, but to no avail.

O'Gorman Cave House Disappears

One of the monuments of fantastic architecture has been destroyed without a single protest from architects, critics, or the artist-architect himself—the Juan O'Gorman cave house, covered with mosaics, in the Pedregal, Mexico City.

The house was sold last July to sculptor Helen Escobedo without any agreement that it be preserved, but her interest in the O'Gorman work was guarantee enough to him that it would not be destroyed. In November, without warning, it was demolished. Only the natural lava cave form of the living room apparently remains. The mosaics are all gone.

O'Gorman himself worked on the construction of his house, begun in 1953 and completed in 1956. The lava stone all came from the site. The core of the house was a circular stone stair, and the spiral continued above the roof line to form a curved face of a Chac Rain God. On the circular core of the house was a diving God (see photo) and a plumed serpent and other Aztec symbols formed the rail of the balcony off the bedrooms. Both the exterior and interior of the house was covered with mosaic figures that sprung from a rich and poetic imagination.

Mrs. Escobedo is quoted as saying, "We bought a piece of property as the deed clearly shows. The house was uninhabitable, particularly in time of rains." — E.M.

Calendar

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Architectural Historians Question their Methodology

The large rambling red brick Sherton Park Hotel in Washington, D.C. contained a packed house in late January with the joint annual meeting of the Society of Architectural Historians and the College Art Association. Sessions ran simultaneously as did trade talk. The theme of the SAH sessions was “The Classic” with such key speakers as Peter Collins, and David Gebhard. As a highlight of the conference, Professor Phyliss Lehmen received the 1969 SAH book award for Samothrace Vol. III, The Hieron.

Surprisingly, one of the most interesting sessions concerned architectural historiography. Along with the architectural profession currently examining its role, and architectural schools evaluating design courses, architectural historians are in the process of questioning the methodology of modern architectural history. Theodore Brown stated that although serious architectural study began in the twenties it has been based on the concept of positivism: the external fact is key to understanding — i.e. the building provides the objective evidence that corresponds to the reality of a particular age. As Norris K. Smith further elaborated, historians have been assuming that architecture reflects its culture, and that architecture is evolutionary in a genetic sense, eventually leading to an architectural utopia. Stanford Anderson declared that historical inevitability is an unnecessary restraint in understanding architecture: the reason for the design of a building may be more the personal decision of the architect or the institutional clients than the product of cultural forces of the particular era. It is important that the architect or the historian be self-critical, aware that he is not forced to move in a particular direction. Meredith Neil called for an architectural history that takes account of the psychology of perception: why people build the way they do at a certain time and place, and the original builder's and subsequent users' sense of space. Each of the speakers generally concluded that historiography must be found that will deal with the full range of architectural effort; a vital issue to architectural magazines, which, by their editorial decisions, run the risk of creating a distorted architectural history.

Museum Provides Exhibits for Contemplation

Despite its name, the Museum of Contemporary Crafts has been responsible for some of New York’s most future-oriented art and design exhibits in recent years. In keeping with this direction, they have recently staged an exhibition, “Contemplation Environments.” Composed of a number of art/technological environments, each is isolated from the other in a well organized architectural maze designed by Gamal El Zogby.

The rationale behind the show’s selection is the awareness on the part of the museum of the “individual's need for respite from the hectic pace and sensory bombardment of daily life” and the need for architectural environments to provide this mood in place of natural environments. On these terms, only two pieces — works of a craft rather than technological nature — are actually successful. One is a womb-like wood sculpture by Wendell Castle that you crawl into. Lined with wooly rugs and fur pillows, it is completely shut off from the rest of the world except for one aperture for light and air. The other installation, less escapist in nature and more contemplative in the metaphysical sense, is Ted Hallman’s woven fiber meditation room “for centering the self.”

As for the other pieces in the show, most are interesting and often successful uses of technology that explore ranges of perceptual experience and sensory awareness. Although they all share the characteristic of being geared to individual rather than mass audiences, their very participatory nature does not allow a person to contemplate — on his own thoughts at any rate.

Yale Announces Finalists For Math Building Competition

Five finalists were announced in the competition for the Yale University mathematics building to further develop their designs. Finalists are: John Fowler, John Paul McGowan, New Haven, Conn.; the office of Fitzhugh Scott — Architects, Inc., Milwaukee, Wisc.; Van Slyck, Callison, Nelson, Architects, Seattle, Wash.; Venturi & Rauch, Philadelphia, Pa.; Verman, Lepere, Petij, Philadelphia, Pa. Jury members: Architects Kevin Roche, Romaldo Giurgola, John Christiansen, Edward L. Barnes will announce results in May.
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Bruce Goff Exhibition at League

The situation is a familiar one: although Architect Bruce Goff currently enjoys a considerable reputation in Europe and the Far East, in the United States he has been treated merely as an historical incident in the evolution of modern architecture. The Architectural League of New York City has rectified the situation somewhat in an exhibition that ran from January 23 to February 11. In recent years the League has courageously taken upon itself to mount exhibitions more established museums shy from for fear such action will be interpreted as a definitive "stamp of approval" for posterity. Yet even the Goff show is one of the League's most worthwhile ventures. Not since P/A's article in December 1962 has such intensive coverage of the architect's work appeared publicly. Shown were most of Mr. Goff's numerous house designs including, of course, the Bavinger House, as well as the monumental Crystal Chapel project for the University of Oklahoma. Exhibited too, were some of his more exotic projects for motels and hotels (the Viva Hotel for Las Vegas undoubtedly would make journalist Tom Wolfe — defender of the Vegas design spirit — change his mind about uptight architects).

There is little expectation that the exhibit is going to bring much of Goff's work into the main stream of architectural history or cause a revival of neo-Wrightian visionary design. Nevertheless the exhibition's intention of familiarizing the public with the little known body of work of one of America's truly indigenous architects is reason enough to commend the League for the show.

Personalities

Richard Buckminster Fuller, AIA, FRIBA, will receive the 1970 Gold Medal, the highest honor awarded by the American Institute of Architects. . . . John S. Margolies has been retained by American Federation of Arts as a "resident thinker," assuming the newly created title of "Coordinator, Experimental Programs." He will continue as a free-lance writer on architecture, the arts and mass media. . . .

The Harvard Graduate School of Design has a new dean: Maurice D. Kilbridge, Professor of Urban Systems, who applies analytical techniques to city problems. . . . The NCARB announces that Samuel T. Balen will be the Director of Professional Services. He will assist Executive Director Hayden P. Mims. . . . Leon B. Kromer, Jr. has been appointed Executive Vice President of the Construction Industry Foundation in New York City, which has recently moved into temporary offices at 211 E. 51 St., New York, N.Y. 10022. The Board of Visitors of Virginia Polytechnic Institute has named Charles Burchard, dean of the College of Architecture. . . . Norman Coplan, P/A's IT'S THE LAW editor, has been appointed counsel to the New York State Assn. of Architects . . . . George Nelson, New York architect, has been elected a member of the board of Antioch College. . . . Gordon Johnson, member of the Southwest Washington Chapter of the AIA, was elected Mayor of the City of Tacoma, Wash. . . . Barbara Plumb has been named Architecture and Environment Editor of American Home magazine, effective January 1.

Toward Standardizing Specifications

The Construction Specifications Institute has taken the first major step in recognizing the need for an automated system of specifications in the construction industry. Pointing out that a common language software system needs to be established, CSI is having the Stanford Research Institute prepare a performance specification.

A whole software system is being researched rather than a standard master specifications text, since CSI sees master specifications as only one component of the necessary total information package. Other components should be accommodated such as cost information for general contractors and an information system for locating products by parameters rather than by names of products or manufacturers. What this performance specification will provide the architect is an open-ended system with wide latitude in the type of text he may use. As CSI explains, the system will ultimately create a total construction communications system network, bridging the gap between specifications, product, cost, and function information. In addition they hope to organize the structure to allow for storage and retrieval of vital companion data banks.
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Restaurant City
Houston, Texas
Bang-Scheyer Associates, Architects
(Dave Barker, C. Jackson Green, Jerol Springborn, Vano T. Wilson, project architects)

For motoring food-freaks, this restaurant franchise cluster represents a new concept in dining and in restaurant architecture. On a triangular 10-acre site at the intersection of a major street and freeway, seventeen restaurants and six shops will be contained in a pile of cube-like units arranged corbel-fashion around a central triangular open area. This arrangement permits not only an open outdoor dining area, but a covered outdoor dining area as well, on the edge of the atrium underneath zig-zag overhangs of the cubes cantilevering above. 15,000 sq ft of indoor dining is at a further remove inside. The 100 ft high pyramidal arrangement of light weight, space frame construction employs three main trusses and a number of plastic or stretched canvas panels on which advertising graphics may be boldly emblazoned. McDonald’s, S&W, HoJo’s, Carvel’s, Unite!

Hopi Cultural Center
Second Mesa, Hopi Reservation, Gonzalez Associates, Architects Arizona

This complex, designated for a remote site in a growing tourist region with no hotel facilities includes a 40-unit motel and a restaurant, as well as a museum and crafts center for the Hopi tribe. The architects wanted to provide a center that natives would use and would be a source of income, at the same time maintaining the scale and character of the true Hopi village. The museum is at the center of the complex; arranged around it is the craft center (left), the hotel with a pool (rear), and the restaurant (rt. front). Materials were kept appropriately simple: bearing walls are concrete with a mortar wash surface; interiors are painted white with exposed beams; floors are crushed granite. Construction is expected to begin in 1970.

The Stump Snowmass-at-Aspen
Aspen, Colorado
University of Colorado
Architecture Students

"America’s first totally master-planned resort community," Snowmass-at-Aspen will have one of its facilities designed and built by several architecture students from the University of Colorado. The students, Chuck Raleigh, David Kelty, Gregg Snowden, Steve Franek, Andy Yates and Joe van Sant projected a simple scheme consisting of a ticket booth, restroom facilities, and a snack bar for the base of a ski-lift. Directed by architecture professor Richard Whitaker, they had the opportunity to build it themselves over the summer months, under the supervision of a construction engineer. The Snowmass clients have been so pleased with the scheme that they plan to involve more students in future Snowmass facilities.

Tower Addition to Administration Building
California State College at Los Angeles
Architect: Maynard Lyndon, FAIA

This booming 17,000 student State College in Los Angeles County is so pressed for space by unexpected enrollments that a nine-story tower was built over a one- and two-story building that was occupied throughout construction. The new administrative building, almost ready for occupancy, is a 90,000 sq ft buff concrete tower lifted on piloti above the existing building and an internal court. The entrance to the building is now through the court, where there is an information center, map table, and display cases. On the south façade precise sun control is achieved by frameless slabs of glass supported between deep thin columns free of the window wall. The glass heat shield is slipped in slots in the 3-ft deep by 10-in. wide columns, leaving 3 ft between the outer glass and the windows. An aluminum baffle at the window heads screens out the high sun.
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• Suitable for all types of wood.
• Resists cracking, peeling, and blistering.

Available in ten colors: Bark Brown, Smoke Gray, Chelsea Gray, October Brown, Forest Green, Farallon Gray, Presidio Red, Cordovan, Redwood, and Black.

SAMUEL CABOT INC.
328 S. Terminal Trust Bldg., Boston 10, Mass. 02210
Please send color card and information on Cabot’s Decking Stains.

On Readers’ Service Card, Circle No. 334
Government Makes Moves on Environment and Minority Hiring

Putting Your Money Where Your Mouth Is

The enthusiasts espousal of conservation and cleanup of natural resources — both by the President and Congress — will have a side effect that will be a big boost for the construction industry and for architects.

It will be used as a chief spur behind moves to direct the U.S. population back to more rural areas — through creation of “new towns,” new types of housing and new business developments. President Nixon touched upon this idea in his state of the union message and later statements.

Obviously, if the burgeoning U.S. population can be prevented from gathering itself completely into a few major urban corridors, the problems of air pollution, sewage disposal, water supply, and in-city transit will be eased. In addition, there will be more reason to push rapid interurban communications, and governments can be held to a more human scale.

This is a sound political gambit in a political year. The only real contest (after all, who can be in favor of destroying the environment?) will be over which political party will get most of the credit for real legislative work this session on protecting ecological values.

Likewise there is no question of bipartisan support for: 1) Housing and Urban Development’s push for its “Operation Breakthrough” plans to produce cheaper, better housing in outlying areas; 2) other moves (detailed in the budget message) to manipulate financing to increase the amount of housing built (it fell, as predicted, to just over the one million mark in 1969 — mostly because of tight credit, high costs); 3) pushing further experimentation in high-speed ground transportation (acceptance of a 30,000-acre site near Pueblo, Colorado for construction of two 20-mile test tracks for linear-driven — electrical — vehicles); 4) tighter controls on industry concerning air or water pollution, and for a renewed push to force local jurisdictions into better over-all planning and regulation of damage to the environment. (Incidentally, industry — which had hoped for some sort of federal help in the form of tax concessions to help pay for needed pollution-control work — apparently saw its hopes glimmering, both in the State of the Union speech and further remarks by Cabinet-level officials. The Administration feels that the cost of pollution cleanup will have to be absorbed as a cost of doing business by the firm that produces the pollution).

AIA’s new President Rex Whittaker Allen added some push of his own in this direction. In a recent speech in Washington he insisted that architects “may have to reject some projects and criticize others if they are to help the public determine what development will not harm the world’s delicate balance of resources.”

Over-all, the budget ($200.8 billion, with a modest surplus of $1.3 billion) reflected this thinking: military, space, veterans and foreign-aid spending were marked for drops — but spending for health, education, conservation-related public works stayed the same or were marked for slight increases. This year — again, with an eye on elections — chances are good that Congress won’t exceed the overall Nixon total and may even cut a little.

HUD’s reluctant move to raise allowable interest rates on FHA-insured home mortgages from 7½ to 8½ per cent in early January could have some beneficial effect on the sagging housing market, luring back venture money that has been straying to other and more lucrative areas. But it could have an adverse effect too — total costs of new homes can be shoved out of sight for many middle-income buyers.

The furor over the Labor Department’s “Philadelphia Plan” (which sets up virtual quotas for hiring minority-group workers on federal construction projects) is a long way from over, despite the Senate’s last-minute refusal to go along with a scheme to kill the “plan” completely.

At least two court actions (in Philadelphia and Newark) have been filed challenging the plan as unconstitutional; the Comptroller General insists on his ruling that the idea violates Congressional intent, and that he won’t okay vouchers submitted by federal departments enforcing the plan; construction labor — with added muscle in view of the upcoming elections — continues adamantly opposed; and the Administration seems just as adamantly determined to enforce the plan.

But there’s a lot of sophisticated maneuvering going on, in an attempt to head off a full-fledged Executive-Legislative confrontation in the courts. One such move was the announcement that the plumbers’ union that it would cooperate with the small but economically powerful National Constructors Association to train some 500 blacks in the trade; another was the announcement that the Associated General Contractors had signed a $500,000 agreement with the Labor Department to “promote and develop” construction jobs for disadvantaged persons, working through its 127 chapters, with eight full-time specialists as counselors.

These moves might head off the kind of demand made by Washington’s loosely organized “Black United Front” which threatened to block construction of the city’s long-needed subway system unless 74 per cent of the jobs (the proportion of black to white residents of the Capital) went to blacks.
X-5: THE MOST VERSATILE DOOR CLOSER EVER INTRODUCED

Shallow depth...removable without removing the door...for stock doors and frames...butt hinge, offset or center pivotal hanging...including "Quick Spotter" installation fixture. For all interior doors. Install it in a prepared floor in 7 minutes...replace it in 3 minutes...and make most repairs in 2 minutes. Full control panel adjustments. Proven: Extremely reliable.

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A DIVISION OF RIXSON INC.
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It's all a matter of degree...

especially in a drawing lead. Sunny-side-up beach beauties come pale, pink, or pow! That's only three degrees.

Eagle Turquoise is the drawing lead that uses 17 separate formulas to make 17 perfectly graded degrees! Each degree so distinct its difference in shading is clearly visible to the naked eye.

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EAGLE TURQUOISE
The nation’s largest-selling drafting pencils and leads

Eagle Pencil Company, Danbury, Connecticut
On Readers' Service Card, Circle No. 341
Infrared Snow Removal

Fostoria Fannon, Inc. recently installed an infrared heating-snow melting system under the entrance canopy at Clarkson Memorial Hospital in Omaha, Nebr. 120 recess-type 1600 watt 227 volt infrared lamps provide 200 watts per sq ft heating.

Rolling Doors

The Crawford Door Co. recently published a 16 page brochure on their complete line of overhead doors. Included in the catalog are pictures, specs, and diagramatic installations of rolling doors, grilles, and shutters.

Handcrafted Doors

J. Zeluck Inc. has compiled a digest of their interior and exterior doors to be distributed to the trade. Included in the brochure are window treatment material and sliding panels.

Pre-Fab Walk-In Refrigeration

Bally Case and Cooler Inc., has recently completed their Working Data Catalog. The hard-bound looseleaf catalog has five separate sections including general design information, walk-in coolers and freezers, refrigerated warehouses, refrigeration and electrical components, and miscellaneous information including existing installations. Requests for the catalog should be made on letterhead to Bally Case and Cooler Inc., Bally, Pa. 19503

Urethane Foam Board

A rigid urethane foam board with a UL flame-spread rating of 25 and designed for use in metal skin industrial buildings was announced by the Celotex Corp. Technifoam-25 metal building insulation is a %" foam core with aluminum foil facer sheets on both sides. Able to span up to 5', Technifoam-25 is white embossed on the inner side to provide an attractive interior.

Vaportight Lighting

Appleton Electric Co. is distributing its bulletin of vapor tight and explosion proof lighting for industrial and commercial use. The 40 page booklet includes drawings, specifications, lighting curves, and accessory information.

Large Ceramic Tiles

The American Olean Tile Co. now offers both high and low relief 1 ft sq ceramic tiles for wall and floor applications. The American Tile Co. has included four new colors in their selection making a total of 12 available glazes.

Textured Copper

The Metallurgical Materials Division of Texas Instruments has successfully bonded copper to stainless steel in a sheet which allows itself to be greatly deformed with no signs of fatigue. This fabrication has induced the manufacture of bi-metallic sheets of great texture, copper color, and 20 per cent reduction of cost over solid copper.

Waterproof Deck Surface

The Miracle Adhesive Corp. has successfully tested its Promenard deck protecting system and is currently making a spec and data sheet available to the public. The system is basically a neoprene and Hypalon surface which comes with a five year guarantee.

Rust Penetrant

Ace Chemical Co. recently developed a truly effective rust penetrant and remover which can be brushed or sprayed on. Suitable for pre-painting industrial applications, the jelly when washed off leaves a thin residue which serves as a paint primer.

PVC Engineering Data Book

The Borg-Warner Co. has recently issued a new book of engineering data on PVC piping. The 64-page hard cover volume is described as a general guide for designing, specifying, and installing PVC piping.

(More products on page 57)
Presenting
The Horizontal Chandelier.

Looks suspiciously like a lighting louver, you say? Can't be.
Who ever heard of a louver polished like Sunday silverware?
Since when will a louver permit you to raise foot candle levels without increasing glare?
What louver is so precisely molded that each of its parabola-shaped cell walls is an optically perfect mirror?

Would a louver look as beautiful in daylight as it does when it's illuminated?

It's a horizontal chandelier, that's what it is. Available with either silver or gold metalized finish, it's injection molded in a single 2' x 4' piece. Send for a sample:
Parabolic 2020, 7700 Austin Ave.,
Skokie, Illinois 60076

The Parabolic 2020
by American Louver Company

On Readers' Service Card, Circle No. 321
Eames' Latest Designs
Charles Eames has designed a new group of chairs for Herman Miller Inc. The new Soft Pad Group includes six chairs and a chaise all covered with Best Aucht Leather. The furniture is well suited for office use. Circle 111 on Readers' Service Card

Sound Conditioning With Carpet
The Carpet and Rug Institute has done a study of the acoustical properties of carpet including sound absorption, impact and surface noise reduction. The 30-page color brochure includes charts, graphs, and government specifications. Circle 112 on Readers' Service Card

Guaranteed Waterproof Deck
The A-H Products Division of Anti-Hydro Waterproofing Co. announces a new material and service for waterproofing parking decks, malls, and other two course construction. A-H seamless deck membrane, a liquid urethane, is applied under supervision by the manufacturer, who offers a five year maintenance guarantee. Circle 113 on Readers' Service Card

Reflective Thermal Glass
Excessive glare and lack of privacy in the Divine Savior Chapel in Portage, Wis., led to the installation of Libbey-Owens-Ford Vari-Tran/Chrome 114 Thermopane glass. The thermopane unit consists of two glass panels separated by sealed-in air for insulation purposes. The inner surface of one of the panels has been coated with a microthin layer of reflective coating which reduces daylight transmittance to 8 per cent. Circle 114 on Readers' Service Card

Oxidizing Steel
Since its introduction little more than ten years ago, Bethlehem Steels' Mayari R steel has found its way into every phase of exposed structural construction. Mayari R takes on a deep-brown hue after being exposed to the weather. Applications vary from the Currigan Exhibition Hall in Denver to the Weathering Steel Bridge in Franklin, Pa. Circle 115 on Readers' Service Card

Suspended Sound Barrier
A sound and vibration barrier has been developed by Target Enterprises for suspended ceilings. The 4" long unit is 95 per cent efficient at 1750 cpm and will hold up to 120 lbs. Circle 116 on Readers' Service Card

Solderable Galvanized Pipe
United States Steel Corp. has announced the fabrication of a galvanized steel pipe which can be soldered in much the same way as copper tubing. The pipe has just been used on an experimental house at substantial savings over conventional piping. Circle 117 on Readers' Service Card

Sculptured Laminates
Formica Corp. is introducing 22 new patterns and colors into its 1970 line of laminates. The new patterns include sculptured slate in natural and black which represent Formica's entry into the production of dimensional laminates. Circle 118 on Readers' Service Card

Variable Depth Pools
Aqua Lift Pools, a division of Aquatic Industries, has made it possible for the conventional swimming pool to be more than just that. The Aqua Life Pool has a moving bottom which allows the pool to be used as a patio or dancing deck, a shallow wading pool, a sloping bottom pool, or a uniformly deep olympic type pool. Circle 119 on Readers' Service Card

Rubber Matting
The Mitchell Division of Royal Industries introduced a new line of molded rubber mats and matting. The new Airstrip II incorporates several distinctive features including an easy sweep surface and air pocket cushion underside. Suitable for restaurant and industrial application. Circle 120 on Readers' Service Card

Hardboard Wall Paneling
Evans Products Co. has recently added two patterns to its line of hardboard wall paneling. A durable melamine surface protects flecked or gold-laced patterns on a wide variety of color backgrounds. Circle 121 on Readers' Service Card

Porcelain-On Steel Panels
A 12-page brochure by Alliance Wall Corp. features specifications for porcelain-on steel and aluminum building panels including available colors for three dimensional Belgrano finish. Circle 122 on Readers' Service Card

Air Distribution
A new 28-page engineering manual is available from Connor Engineering Corp. covering their new CV-74 air distribution system. The manual contains a description of the system, components, performance data, dimensional information, rating tables, typical system layouts, typical floor plans, selection procedures, and specifications. Circle 123 on Readers' Service Card

(More products on page 59)
Mo-Sai follows acoustical design

Structural Mo-Sai wall panels, 8 x 25 feet, follow the acoustical design of the auditorium, imparting the unique shape of the building. The Mo-Sai units support a steel truss roof system and provide the complete auditorium wall. An acoustical material was applied to the interior side of the Mo-Sai units with a steel furring. Plates cast in the Mo-Sai were welded together at the vertical joints. Steel dowels align the walls and hold them into concrete footings. Laboratory and classroom areas have a matching Mo-Sai curtain wall and fascia. Exposed buff quartzite and tan pebbles provide the distinctive Mo-Sai surface.
PRODUCTS & LITERATURE
(Continued from page 57)

Concrete Sealer

The Coatings and Adhesives Corporation is announcing the production of their acrylic concrete and masonry sealer White Roc M650. The sealer imparts no discoloration or stain of its own and is compatible with paints and other sealers.

Circle 124 on Readers’ Service Card

Roof Ventilators

Aerovent Fan Co. has assembled a catalog on its new line of roof ventilators. Contained are specs and detail drawings of the most recent innovations in roof ventilation including lightweight fiberglass units.

Circle 125 on Readers’ Service Card

Landscape Power

The Wiremold Co. offers a new catalog of contemporary bathrooms. Included in the brochure are photographs, drawings, and technical information.

Circle 126 on Readers’ Service Card

Steel Joist Data

The Steel Joist Institute has just published the 1970 edition of Standard Specifications and Load Tables. The 32 page manual includes all information needed for fast, accurate specifications of joists to carry uniform loads on spans up to 96 ft.

Circle 127 on Readers’ Service Card

Accent on Bathrooms

The Eljer Plumbingware’s 36-page catalog of contemporary bathrooms features their latest bathroom designs and fixtures. The catalog serves as a reference source and makes a fine idea file for designers.

Circle 128 on Readers’ Service Card

Multi Vapor Lamps

General Electric’s Lucalox lamps have recently been installed as the exterior lighting at the Baha’i House of Worship in Wilmette, Illinois. The lamps are high pressure alkali metal vapor (primarily ionized sodium).

Circle 129 on Readers’ Service Card

Desk-Top Communication

The AVC-10 desk-top audio-video communicator, a new concept for inter-office communication, has been introduced by Concord Electronics Corporation. The operator of the AVC-10 can communicate with as many as five different locations simultaneously.

Circle 130 on Readers’ Service Card

Apartment Communication

The NuTone Co. announces the distribution and production of Direct-A-Com, a communication system for apartment house installation. Also available is a coordinated mail box system similar in design to the Direct-A-Com.

Circle 131 on Readers’ Service Card

Contoured Cylinder Chair

Enfield Designs has created an executive and conference room chair with a swivel and tilting mechanism container within a stainless steel base. Bases are available in other metal finishes as well as fabric covered and wood.

Circle 132 on Readers’ Service Card

Movable Partitions

War Steel Products Co. has begun production of its Adaptawall partition system for use in both large and small offices. The system includes features not found in other partition arranging designs.

Circle 133 on Readers’ Service Card

Ceramic Wall Tile

Amsterdam Corp. is offering an 8-page brochure illustrating more than 75 different ceramic wall patterns, textures, sizes, and hues offered in the new “Serie Exquisit” line manufactured by Villeroy & Boch.

Circle 134 on Readers’ Service Card

(More products on page 66)
A New RIXSON Company: CHECKMATE

with a complete line of overhead door holders, stops and specialty hardware; designed, engineered and manufactured for superiority.

8 SERIES HOLDER-STOPs
(heavy duty or regular)

Contemporary design . . . exceptional service . . . fingertip hold-open control . . . powerful shock absorber installed beyond halfway point on door . . . optional decorative cover . . . surface mounted and non-handed. At highly competitive cost.

A CENTURY product from:

CHECKMATE
A Division of Rixson Inc.
9100 W. Belmont Ave.
Franklin Park, Illinois
In Canada: Rixson of Canada, Ltd.

On Readers' Service Card, Circle No. 410
Concept: a swimming pool pavilion that changes with the seasons.

by Lutes and Amundson, AIA

One of a series of design innovations commissioned by Weyerhaeuser Company.
Weyerhaeuser Company has commissioned a number of leading architectural firms to create design innovations highlighting the potential of wood in public and commercial buildings. This original design by Lutes and Amundson, AIA, of Springfield, Oregon, is the twentieth in the series.
Wood and water combine to create a movable roof.

This Olympic Swimming Pool Pavilion and Activity Center is envisioned for a community that has an interest in developing a year-around aquatic sports program in conjunction with other group recreation activities.

Focal point is the pool area, which covers half of the 3-1/2 acre space. The other half consists of a multipurpose activity pavilion for ice skating, hockey, tennis, theatrical and musical events.

The lightweight plywood roof moves easily back and forth, allowing the pool to be open and sunny in the summer; covered and protected in the winter.

Movability of the roof is achieved through the major functional medium of the facility—water. A simple hydraulic system, employing roof floats in linear channels, floats the roof and supports it when moving. By filling the channels, the roof is floated from over the pool to cover the multipurpose sports pavilion. Then the water is released and the roof returns to rest. Only a small force is required to move the huge roof.

This concept becomes feasible in a wood structure because of its low weight-to-span ratio, rigidity of structure and economy of construction. Wood in its various forms becomes the most logical building medium to solve the technical problem while still adapting to an exciting architectural solution.

John M. Amundson
"The light weight of the plywood structure provides its most dynamic potential."

Out of the floating roof idea, uniquely conceived by Lutes & Amundson, emerges the lightweight feature of wood as a major design consideration.

The pool cover is a stressed skin structure of truncated plywood pyramids and laminated wood chords acting as a box beam truss. Two faces of the pyramids are shear panels carrying horizontal and vertical shear forces; of the remaining panels, one carries a compressive force and the other a tensile force. The shop fabricated pyramids are Weyerhaeuser Prefinished Siding/Panel 15® aluminum faced plywood, which resists the high humidity environment of the pool. Plywood decking in continuous lengths of 36 feet provides the top skin.

Weyerhaeuser believes that a whole new world of ideas is open to architects who can ingeniously extend the principal features of wood products.

To help you make the most of wood, we maintain the largest single source of technical data in the wood products industry.

For information of any kind pertaining to wood, call on your Weyerhaeuser Architectural Representative. Or write to Box 8-6743, Tacoma, Washington 98401.
New concept for special-care facilities — a home-like atmosphere.

Haws drinking fountains were specified because they look better...and they last.)

The Las Trampas School for the Mentally Retarded features extensive use of maintenance-saving materials—redwood siding, copper flashings and downspouts, and concrete shakes on the mansard roof for long wear and fire resistance. Up-to-date facilities are embodied within a home-like atmosphere. The 2½-acre campus in Lafayette, California, includes our buildings on different site levels, which harmonize with the country setting.

First impressions are important. As you approach Las Trampas the feeling is one of welcome, of progress and happiness. First impressions are important with Haws fountains, too. The new Model 3120 square pedestal design is rugged, handsome, and built to last. For details write Haws Drinking Faucet Company, 1441 Fourth Street, Berkeley, California 94710.

Architects:
Perata and Sylvester A.I.A., Lafayette, California
On Readers' Service Card, Circle No. 353
Engineering In Wood

Timber Structures Inc. is distributing a 24-page catalog illustrating contemporary applications of laminated beams, trim trusses, rigid frames, and domes, all of which are constructed of wood. Catalog includes specifications and information concerning quality control in the factory.

Circle 135 on Readers' Service Card

American Sauna Bath

Am-Finn Sauna, Inc., a division of Urethane Fabricators, Inc., is marketing its Mark 64 American-styled Finnish sauna. The unit is entirely redwood on the inside, mahogany veneer on the outside with 1\%" of polyurethane foam in between. Also included in the package is an Underwriters approved electric heater which warms up to capacity in 14 to 30 minutes.

Circle 136 on Readers' Service Card

Weslock Keylock

A full color, 4-page brochure has been prepared by Weslock Co. on its complete line of one piece entry handle keylocks. The units are available in seven designs in a total of 28 finishes providing a broad array of exterior keylocks and doorpulls.

Circle 137 on Readers' Service Card

Translucent Walls and Ceilings

Kalwall Corp. is now offering a series of brochures on their various series of translucent wall and ceiling panel sections. The brochures contain various applications of the Kalwall system in both commercial and residential situations.

Circle 138 on Readers' Service Card

“Woven” Ceramic Tile

Wenczel Tile Co. is distributing their brochure of ceramic tile that features a complete selection of their Wenczel Weave, a ceramic tile with a woven texture. Illustrated in the brochure are various kitchen and bathroom applications.

Circle 139 on Readers' Service Card

Seamless Floors

Allied Chemical Corp. has just installed one of their Florock seamless floors in the new Daniel J. Flood Elementary School. Florock is a process by which a liquid polymeric coating is applied to a surface that dries to a hard glaze resembling marble or terrazzo.

Circle 140 on Readers' Service Card

Fire Retardant Paint

Seagrave Corp. is marketing a new paint called Firehold 10, which has been listed 10 by Underwriters Laboratories, the lowest rating ever granted a paint. The .0006" paint film foams to 200 times its applied thickness to provide a 30 minute safety margin at 350 degrees.

Circle 141 on Readers' Service Card

Laboratory Paints

Fisher Scientific Co. offers a catalog on a line of finishes that provides maximum resistance to chemical and mechanical attack. The epoxy-based paint protects critical surfaces in manufacturing plant or laboratory. Included is a table of resistance.

Circle 142 on Readers' Service Card

People come and people go. That's why we're always working on better ways to open doors.

More efficient, more dependable ways of opening and closing doors... more attractively. That's our ever-present goal. But we don't stop there. We insist on making sure there's always instant service available... just in case. Door controls by Ronan & Kunzl, you can be sure, will meet your needs for design, safety and function. Let us tell you more.

RONAN & KUNZL, INC.
1225 S. Kalamazoo Ave., Marshall, Michigan 49068

On Readers' Service Card, Circle No. 408
Spectra...

Lighting has never looked better!

There are beautiful new lines throughout Wide-Lite's beautiful new line! Crisp, clean modern lines that make Spectra the obvious choice where high lighting levels and attractive luminaires are essential.

Dramatic Spectra models usher in a new dimension of beauty—and better visibility—for shopping centers, parking lots and other outdoor areas. They offer efficient night lighting, and in the daytime become a new, exciting element of architectural design.

The Spectra Series makes something wonderful happen to indoor lighting, too—it provides higher lighting levels than any other practical system, and combines this increased lighting with clean, uncluttered, decorative ceilings.

Want more facts on the exciting Spectra Series? Just write Wide-Lite Corporation, Dept. PA-3/70-1020, P. O. Box 191, Houston, Texas 77001.

Wide-Lite®
P. O. Box 191, Houston, Texas 77001
Also Manufactured in Australia,
Belgium, Canada, Great Britain, Mexico.
A Division of Esquire, Inc.
Architect John A. Benya must love All-Electric design. It gave him the freedom to design a heart-shaped bank.

John A. Benya won't build anything unless it's All-Electric—the most flexible approach to total environmental control. The people at the Creve Coeur Bank in Creve Coeur, Missouri, bought this concept when they asked him to design a new bank. Now the town of Creve Coeur (French for broken heart) has an All-Electric bank in the shape of a heart. Two years ago Mr. Benya used the freedom of All-Electric design to build a football-shaped bank.

For the Creve Coeur Bank, Mr. Benya used electric baseboard units plus supplemental heating units in the environmental control system. This system allows the bank to heat one area while cooling another. The system is totally flexible and it gives the freedom to expand the building when necessary.

Electric heat is clean. And there's no loss of energy because the source of heat is right in the room. So you don't lose heat transporting it down the line.

With these advantages, you can understand why so many commercial buildings are going All-Electric. Talk to your electric utility company today.
Comparisons are never more apparent nor quickly drawn than when, thrust into a foreign environment we strain every fiber of our being to absorb and order alien impressions. During a brief period we are capable of rapid intuitive assimilation. Paradoxically, lack of knowledge seems to enhance our perceptions. The contributors to the first article in this month's P/A are writing, for the most part, with a traveler's assurance.

The border between Finland and Russia is one of more than historic friendships and antagonisms. It is a division of two conflicting priority systems, mirroring, in a sense, the causes and contradictions that beset us. We can see in these two countries the split between individual freedom and institutional freedom, social responsibility as law and social responsibility as individual whim, of the individual state and the individual within a state, of the right to be different but not to be old and the right to be free but not to be different. To the traveler each country seems to polarize the contradictions within our borders.

The contrast between the sensual and social revolutions seems typified in the cities of Leningrad and Helsinki. The streets of Leningrad, arranged in unfaltering grandiloquent fashion preclude neighborhoods. Each is a pretentious statement where the single human figure stands amid converging lines of limitless perspective, excluding the smaller scale of modest buildings, for simple tradesmen or simple people.

The restoration of this autocratic city by a socialistic people can only be explained as an act of cultural affirmation. The Russian culture appears a pretentious way of life. Long lines of people queue before neoclassic buildings to tramp through endless corridors crammed with bric-a-brac. This nationalist reverence is paid to acres of kitsch lovingly accumulated by feudal landowners who were ashamed to speak their native Russian language.

The streets of Leningrad seem deserted. Yet 300 feet below the surface of this museum city of the past, Soviet men and women of today ride what must be one of the finest subways in the world. Trains run frequently and on time. They depart from spotless platforms and travel through immaculate tunnels. Traffic patterns are intelligently channeled — each station individually designed.

Helsinki on the other hand, despite its sedate Empire façades seems to be a "happening." Mini skirts bob, long hair blows, Marimekko fabrics mingle with beards, jeans and bare feet in a mind-blown world of personal freedom and self concern. The downtown streets of Helsinki are often crowded, boisterous, impossible because of beautiful young people. It gives the impression of the world of the "easy rider" where getting there is all the fun.

One can walk in Helsinki's narrow winding streets all day without tiring. A third the distance afoot on the grandiose Leningrad boulevards is exhausting.

Architecture has always been the primary art of Finland — "Good Design," her major export. Yet Finnish architecture, like that of much of the western world, is beginning to depart from its absolute serious functionalism and show signs of formal fun fantasy.

As a poor outpost of both east and west for most of her history, vicissitude paved the way for good Finnish design. Its richness was gleaned from a poverty of developed national resources. Finnish cities were made of wood, and they burned frequently. The Finns became the world's most adept town planners by necessity.

The characteristic of most periods of intense change, sensual, sexual, or social is that contrasts are easily drawn but values impossible to ascertain. In a very short period of time in our own country we have watched, the ugly become beautiful and the beautiful a cliché, the profound trivial and the trivial esoteric, the monumental mundane and the mundane high art.

The contributors to this month's lead article are assessing contradictory cultures. What are the values implied when the artifacts of an autocratic feudal regime become the national art treasures of a socialistic state, when a totalitarian city is restored by a collectivist people, when a supreme effort made toward the ideal of universal housing results in ugly buildings? On the other hand how seriously can we take "good design" as a major export item? How profound is the major art of a serious people when it becomes fun?

Travel has become a form of research for environmental designers. All societies have contradictions inherent in their priorities. Historically when contradictions cannot be contained within existing frameworks, systems rupture. A major concern of American travelers is searching out and contrasting other cultures with their own.

Our authors, including editor Don Raney and myself, reported spontaneous impressions, rapidly assimilated and intuitively judged, trying to fit them into a framework of objective truth that may not be very important at all. What is important is that we found people living successfully and happily within a context of greater contradictions than our society seems willing to allow. The lesson to be learned from this is that perhaps the rupture of social systems is not due to contradictions, but instead occurs when the attempt is made to eliminate them.

Forrest Wilson
The Gulf of Finland separates Russia from Finland. Often in the past, cultural influences have traversed this gulf, traveling from Russia to Finland. But now the direction is reversed. Vibrant, mini-skirted Finnish girls and long-haired young men, able to travel to Leningrad in great numbers, are influencing the more somber Russians. In response, the Russians are becoming more design conscious. However, this influence is new. As can
be seen in these two photos, Russian streets (right) frequently lack those "extras" which, in Finland (left), help public spaces to function humanely. This article deals with many of those "extras." It is the result of a tour by editors Forrest Wilson and Don Raney, and also contains five contributed papers, offering views on architecture, architectural practice, and the education of the architect in Finland and Russia.
First impressions of Helsinki airport, from the parquet-wood floors to the no-nonsense directness of the design, create a valid introduction to contemporary Finland.

Architecturally, Finland is unique in that permanence is relatively new. Compared to the Continent, Finland has few extant examples of its architectural heritage. Buildings in the past were wooden, and they burned often. Those that did not burn by accident, such as many churches, which may well have represented the most genuine architectural contribution made by Finland, were razed in a “war of extermination” against wooden churches at the end of the 19th Century. Only a few remain.

Russia Is an Early Influence

Urban culture was formed late, during the 18th Cen-
tury, and most of the wooden buildings of the early cities were also eradicated by fire. Consequently, the rebuilding of the oldest major cities, Helsinki and Turku, date from 1808 and 1827 respectively. Both of these cities were strongly influenced by the Leningrad Empire style with its characteristic straight streets and extensive squares. Having been completely replanned so recently, the center of Helsinki, designed by German architect Carl Engel, stands as one of the last great examples of the traditional ideal of "the city as a work of art."

Two and three story monumental stone buildings were constructed only in the city center. Their brick façades, plastered and painted yellow ochre with white details, glisten against the dappled blue waters of the bay. Surrounding the Senate Square are residential districts comprised of wooden flats detailed to imitate the stone Empire buildings. They were planned to the neoclassical ideal of blocks of detached buildings in order to meet the prescribed fire regulations.

As has always been the case with Finnish architecture, the detailing of the Empire style is austere compared to the flourished detailing found in Leningrad. In many ways this austerity befits the shy, quiet character of the Finnish people. When compared to the ornate Russian Orthodox Church, the trappings of Finland's national Lutheran Church appear minimal.

Nationalism in the Arts

Concurrent with the rebuilding of Helsinki and Turku, Finnish literature developed in the early part of the 19th Century when Elias Lonnroth collected and published the ancient *Kalevala*, the national epic poem which inspired the rhythms of Longfellow's *Hiawatha*. But it was late in the century before Finnish nationalism in the arts began to outweigh the efforts towards Russification by the Czar of the then Grand Duchy of Finland.

In the 1800s a group of artists seeking a truly Finnish expression came together. Included were composer Jean Sibelius, artist-designer Aleksii Gallen-Kalela, and architects Eliel Saarinen, Herman Gesellius, Armas Lindgren, and Lars Sonck. Members of the group were inspired by Carelian log-house architecture, still found on the eastern borders of the country, and images from the *Kalevala*. A characteristic feature of this period is the tendency to make the buildings integrated works of art. Craftsmen, artists, and architects cooperated to assure harmony of all details.

As the National Romantic Movement accelerated, the sharp-featured hunting owl (drawn from the *Kalevala*) proliferated in detailing on the masonry buildings that replaced the Empire wooden structures throughout Helsinki. Today, few of the old wooden residential buildings are left on their original sites. Some have been moved to an island museum, but most have perished.

While the Helsinki center which Engel conceived and built in 25 years (a feat few architect-planners ever achieve) has been restored to its original condition, the rest of the city has changed drastically over...
Many levels of interpenetrating walkways add excitement to a casual stroll.

The concrete band around City Center's façade, at right in photo, has caused many Helsinkians to call it "sausage center."

The last 162 years. The short-lived National Romantic Movement, which reached its high point with Sonck's St. John's Church in Tampere (1894) and ended with the completion of Saarinen's Helsinki Railway Station in 1916, left its mark on the city. But most of present-day Helsinki postdates Finland's international reputation for architecture (which began with the recognition of the Helsinki Railway Station). Many buildings date from the building boom of the thirties when Finland wholeheartedly embraced functionalism.

A Humanly-Scaled City

In plan, modern Helsinki is an excellent compromise between neoclassical formalism and humane sensibilities. The streets are generally straight and at right angles to each other, but the grid is frequently softened by alleyways around, through, and under buildings, affording the kind of surprising views one expects from a medieval town. While the center of the city is primarily for business, people still live in flats clustered around courtyards off the tree-lined streets. In the summer, balconies projecting into the courtyards are covered with red geraniums, morning glories, and green plants. Flower stalls and icecream stands, at least every two blocks, are an integral part of the street scene. In the center of town, beside the wharf area, is the market—colorful Marimekko fabric stretched over the cobblestoned horizon.

To walk through the city is to experience miles of flowing blond hair; mini-protected, masterfully-created legs; and architecture which never fights, but complements the scene. Helsinki is certainly one of the most underrated and humane of the major cities in Europe. And everyone seems so young. Perhaps this is due to the traffic situation. There are too many cars, and almost no traffic lights. It is possible that when one reaches the stage of lethargy, he either starves at the curb waiting a break in traffic, or gives it a fatal try.

Traffic, every city's choke-collar, is viewed by the Helsinki Planning Department as the priority problem. A subway is planned to alleviate most of the congestion, but it is not yet under construction. As more and more people from all over the country are attached to the suburbs (like famous Tapiola) in search of jobs in nearby cities, the situation worsens. For example, the slowness of the Planning Department to act on the problem recently prompted young, committed planners within the department (80 per cent of these planners are under age 35) to threaten a mass walkout unless the department heads used their influence to stop the petty political bickering that has held up subway construction because of con-
Heikki Castren's "City Center Building" preserves Helsinki's characteristic "preforations," passages which allow one to walk through the city "behind" the streets.

stant route changes and station location alterations.

In one case, a subway station was built near the railway station at a cost of about $2 million. It was completed because a building was being constructed above it. Now the route has been changed, and the city has no idea what to do with a subway station that has no subway. One suggestion was to make it into an underground swimming pool.

A future, major-road system is being planned by the National Planning Office. Fully realizing the implications this system holds for the development of the country, the problem is being studied in conjunction with United States consultants Wilber Smith & Associates. The National Planning Office is still suffering from a miscalculation in the national school building program, which caused far too many schools to be constructed in rural areas where population was declining because of migration to the cities. Now many rural districts have excellent schools with hardly any students.

The Busiest Corner in the Country

Another problem Helsinki faces is the growth of business within the city. Space is needed, but the city cannot expand because it is on a peninsula blocked on all sides by natural barriers. It is difficult to amass land because owners will not sell. As one solution, the planning office is relocating all heavy industry outside the city limits as quickly as sites can be prepared. This is being done according to the City Plan for Helsinki prepared by Alvar Aalto. But another brilliant solution, conceived by the late architect Viljo Revell and carried out by his partner Heikki Castren, involves tearing down some old structures (in itself a feat because all buildings are protected by a
Timo Suomalainen's Tempelaukion Church was built into the granite outcropping in order to preserve a park which neighbors had enjoyed for years.

landmarks preservation law) and allowing the individual plot owners to retain title. The land owners then form a corporation to construct a building on the whole site. It could not be done in any other way since the lot sizes are always too small for a major office building.

The first building constructed in this manner is across the street from Saarinen's railway station. Because of its location, it has become the most important and most used building in Finland. The busiest corner in the country is now a building. Before this City Center building was constructed (because of the shape of its railing some call it Sausage Center), thousands of people going to and from work were forced to cross the wide, heavily trafficked boulevard in front of the railway station. Architect Castren envisioned a natural underground circulation path through the building to the station. The city did not have funds for this project, but agreed to allow shops in the underpass to stay open two hours past the 8 P.M. curfew if the passage could be privately financed. Not only were all shops in the underpass immediately successful, but because of the pedestrian traffic drawn through City Center, all shops in the building profited.

The City Center works magnificently. Shops and restaurants are on three levels, with offices and a parking garage above. And the building has done much to preserve the pedestrian quality of the city.

Such functional approaches to design are well within the Finnish architectural image — an image begun by Saarinen but expanded greatly by Finland's prince of architecture, Alvar Aalto. Recently, Aalto has been at work on plans for the new building at Technical University of Helsinki at Otaneemi, which has been criticized as a summer school because of the long distances students must walk between buildings in the winter snow. Another building which has caused some controversy because of its siting is an office building for Helsinki, sited at the water's edge, aside the market place. Many Finns feel the crisp white marble structure clashes with the old waterfront buildings, and does a disservice to an old onion-domed church by blocking it from view. Rather, the building seems to enhance the site and works better with the clean lines of the Empire style, waterfront façades.

Religion in Rock

The Finnish compulsion to preserve nature at all costs is well known. It is said that roads frequently
The plan shows how the church's interior was hollowed out of the solid granite outcropping, leaving exposed, blasted granite walls, topped by a translucent dome.

make hairpin changes in direction to avoid a tree. The Finns will go to great lengths to save an open space, as in the case of a private park in Helsinki.

This church-owned land, a large section of which was a granite outcropping, had served the area as a park. The park's owner announced an architectural competition to place a church on the site, to the distress of the people. The competition was won by architect Timo Suomalainen because his design pleased all concerned. It placed the church in the granite rock and left the park on top. Like building a road around a tree, the resulting church is an expensive technical answer to a natural problem. Some younger Finns, angered by the cost of this solution, spend their evenings painting "Biafra" in large white letters on the solid granite walls of the church. In the morning the police scrub the letters off. But this does not detract from the architecture. In fact the solution is beautiful as well as unique. Placing religion in rock lends solidity to both the material and the concept.

Design Is a National Interest

Design is of great public concern in this country, where often all of its citizens are invited to participate in architectural competitions. To our knowledge a non-architect has never won a major competition, yet the idea that one could must do much to peak public interest in architecture and the environment.

Within the normal historical scheme of thesis, antithesis, synthesis, it seems that the young designers of Finland are entering an era of antithesis, an antithesis to the Bauhaus-white functionalism which is very much a part of the Finnish architectural image.

One of the most brilliant of these new young designers is architect Reima Pietila. His student union building Dipoli, and his Kaleva Cathedral at Tampere have received international attention. While these buildings function excellently for those who use them, each contains disconcerting elements that, although extraneous to function, are essential to tone: in Dipoli, a marvelously proportioned and lighted stairway leading to nowhere, in Kaleva, certain odd shapes that crop up in unexpected places. The architecture is witty, but never out of control. In form, the plan of Kaleva is related to the elevation of Pietila's chairs for a small coffee shop in Tampere, and also to the elevation of Dipoli. The line is jerky, hesitant, almost in direct opposition to Aalto's flowing rhythms, or the long land-hugging horizontal of the white housing blocks. Pietila lives in a less graceful era.
A short one hour and forty-five minute flight across the Gulf of Finland brought us to Leningrad. Like the Finns, the Russians, through the medium of airport architecture, have expressed what lies beyond. In Moscow for example the holdroom structure is an impressive, round, steel pavilion; massive in scale. However, in Leningrad the terminal consists of two buildings; one a neat steel and glass structure which serves as an international departures building, the
other, a poured-in-place concrete structure painted with murals depicting Soviet scientific achievement.

Incidentally, all public toilets are in the newer of the structures, and had probably existed on the site from some ancient structure around which the new building was constructed. As an aside, (they had probably been cleaned only when new) Russian graffiti parallels our own.

Two Lines of Tradition

There are two lines of tradition in Russia—pre- and post-revolution. The form most architecture takes is definitely post; solid, serious, and structurally systematic. Yet the mood of the architectural setting is almost always prerevolution; neoclassic, only expanded—pulled apart, with spaces between structures based upon some ideal gargantuan scale. Because of budget problems, the “spaces between” are frequently left unfinished.

But the mood of the architectural setting is based upon more than distance between buildings. It seems to be something ingrained in the character of the nation and in the land. The mood of each of the more than 800 new cities and towns constructed since the revolution appear almost predestined, perhaps by Peter the Great when he founded St. Petersburg (now Leningrad) in 1703.

Sited on the marshes between Lake Ladoga and the Gulf of Finland, St. Petersburg attracted little at first, except mosquitoes and wolves. Since people did not flock to his new swamp creation, Czar Peter ordered Russians from all over the country, including nobles, to move their homes to St. Petersburg. They came, as did the convicts from all of the country’s prisons—the people to populate the new capitol of Russia, the convicts to build it.

Life for the inhabitants was miserable. Not only did they have to put up with putrid water and mosquitoes; they had to fight off wolves as well as the convicts. In order to protect themselves, barriers were constructed at each end of every street. Aside from serving guard duty at the barriers, the townspeople never left their houses, unless it was absolutely necessary.

Although the barriers no longer exist, the street vitality of most Russian cities, especially those constructed after the revolution, is on a par with old St. Petersburg. Of course life exists, especially in the business districts of Leningrad and Moscow and around certain government monuments. Outside of these areas the quiet treeless streets, devoid of cars, people, and advertising, are like deserted museums containing remnants of a culture about which no one cares.

No One Picks the Apples

The four- and five-story housing blocks of the fifties and early sixties contain people of all age groups.
From the outside these old buildings appear cared for largely because of the flowers which hang from the balconies and grow in narrow plots along the buildings. Between the buildings, the tenants grow apples. No one picks either the flowers or the apples. On their first day of school, new students are each given a handful of flowers and an apple, which they carry to school in a colorful procession.

The interiors of the flats are drab by comparison to the West, but in most cases, adequate. Frequently a television is among the furnishings (perhaps due to its propaganda potential). Homes of divorced women with children are most poorly furnished, often without refrigerators (they are expensive and still hard to obtain). Divorce is a growing problem for the Russians; since it costs only about $80, the Russian divorce rate exceeds our own.

The only place life exists on a vibrant scale comparable to the West is in the famous subways of Leningrad and Moscow. It seems an inversion of social values to have more going on underground than on the streets. On-grade potential is rarely realized.

As architect Morris Ketchum saw it during his trip to Russia, “Even new parks and boulevards — the lungs of the city — are not fully developed. The housing environment is the loser. Cultural, educational, and sports centers found in the urban core are seldom related to new housing communities. Variety of scale, the mingling of high- and low-rise units, the contrast value of closed and landscaped areas, lighting and graphics, are not fully realized.”

Preservation Is a Priority
Long gone is the excitement of the constructivist

Far below the Moscow streets, the famous subways, immaculate and on time, carry four million passengers each working day.
movement, the last vital surge of Russian architecture. While some constructivist buildings still exist, they are in disrepair, unlike the churches, many of which have been brilliantly restored as part of a move by the government to preserve Russian tradition and give the people a sense of continuity with the past. Many palaces also have been restored in this program. Pushkin, one such palace, almost totally destroyed in World War II, has been perfectly restored along with its splendid parks.

Although 80 per cent of buildings are constructed by prefabricated methods, certain buildings like the new sports center or the Communist Trade Center, both in Moscow, have received individualized design attention, and are first rate.

When asked how he felt about new nonsystems buildings, consulting engineer Lev Zetlin, recently returned from Russia, told us, “When a team of designers is assigned to a nonsystems building, such as a public theater, because of a lack of competitiveness, and because they generally must work with available concepts, there is no encouragement to search out new ideas. In general, the nonsystems building construction is on the same technical level as our construction of thirty years ago. I found no advanced engineering techniques being applied to structure.”

However, the Russian architect no longer lives in isolation from the world. As more and more architects and bureaucrats travel outside Russia, the demand for a better living environment no doubt will increase inside Russia.

The articles that follow will discuss these demands, and some of the initial steps on the road to that environmental ideal.

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*Life in the old cities, like Leningrad, goes on behind the streets, in charming courtyards such as this, where children play within their mothers’ watch.*

*A Constructivist theater preserved from the last highpoint of Russian architecture, the 1920s.*
The entrance hall of the Helsinki Theater. Fine materials, used sparingly, contribute a solid, lasting quality to the space.

Finland: Where architecture outlasts us

by Edward Marc Treib

An architect who teaches at the University of California, Berkeley, Mr. Treib studied at Finland.

Although Finland is a small, not very rich country, the Finns build to last. Fortunately, the American concept of a building as a largely economic product has not had much influence. The Finnish basic desire is to build a good building. Clients identify with their projects; it is not enough merely to have a building and to make money from it. A good building is a source of pride and accomplishment.

The interior passage onto which all stores front in Henry's Market in Tapiola makes winter shopping more comfortable.
In general, in the post-war years, Scandinavia has been noted as the land of good design. Like the other northern countries, Finland must export to exist, and export products must, of course, be better (or cheaper) than those found in the countries that import. Corporate management has realized that good design is cheap in the long run if it sells, and Finnish-designed glass and cloth sells.

Since the Finnish economy depends so heavily on design, the public has a design consciousness which carries over to their architecture. It is difficult to argue with their architecture. Although at times it may seem conservative, it looks and acts like architecture for people. And, it will last.

Export Design and Nature Influence Architecture

While “export design” has been a subtle educator for the Finns, nature has had the strongest influence on architecture. Even the simplest structure is built so solidly and so well that people have been colder in California than in Finland. Double glazing is the rule, as is central heating, and has been for many years. Aalto, for example, has made use of a variation of the two-panel system of glazing (a narrow ventilation panel, and a wider, key-operated, semi-fixed sash), building the narrow panel of an opaque material related to the facade materials, while sandwiching venetian blinds between the two panels of glass.

Typical Finnish site planning strives to disturb as little of the land and natural environment as possible, and to insure that there is sufficient landscape surrounding the building after construction.

Natural materials still reign supreme, challenged only by the pristine painted white of the newer buildings—the “natural” color during the winter months. Finland is rather unique in its use of white buildings; seldom are any seen in Sweden, just across the water. Although Finland and Sweden have similar natural climates, the aesthetic climate of the two countries varies greatly. In their search to build good and substantial buildings, the Finns are not as concerned with being up-to-the-minute-modern as are the Swedes. It seems Sweden has never passed the diagrammatic level, while Finland produces often less striking, but more substantial results.

Light, an important and critical consideration in the design of artificial environments, is of utmost importance to a country which lies one third above the Arctic Circle. One section of the standard building code requires that each working and living space must be provided with a natural light source or it may be ruled unfit by the local building commission.

If, by chance, a variance is granted, employees are paid an increased “hazard fee.”

Changing Urban Patterns

The Finns build for winter, but they live for summer. Finland, it is said, has nine months of winter, and six months of summer. Almost everyone, no matter what his social position, has a summer house with sauna in the country. In the summer, Helsinki is almost deserted—everyone is in the country. One senses that the Finns still find “urban” conditions nearly intolerable. But as everywhere else, more and more people are city bound.

Helsinki, the capital and largest city has a population of 450,000 people—about ten per cent of the country’s total. Presently, there are unusual amounts of green space, with a park or square every few blocks. But architects fear this must change as the housing shortage, resulting from migration to the city, increases.

Apartments are bought as living places and investments, usually in one of the new developments in the growing Helsinki suburbs. There is no reluctance to buy since Finnish society is not “mobile,” and because housing is expected to last at least eighty years. Also, there is pressure to buy, rather than rent dwellings, exerted by the state tax structure. Consequently, it is said that only the very rich can afford to rent an apartment.

The essential concern for design in Finland is seen in almost every city. Each has its city architect and perhaps, a facade committee. Both, especially in Helsinki, exert a much stronger influence on policy than American planning boards, since Finns are more partial to personal rather than corporate structuring. Not too long ago a national law was passed which provided subsidy to towns with a plan and planning body; as a result, even small towns have a plan for growth. In architectural design, Finnish architects are beginning to react against the pristine days of functionalism. Tired of simple, geometric shapes, they are finding a need for curvilinear, living, even playful design. Marimekko, perhaps, began the trend perhaps, a facade committee. Both, especially in Helsinki, exert a much stronger influence on policy than American planning boards, since Finns are more partial to personal rather than corporate structuring. Not too long ago a national law was passed which provided subsidy to towns with a plan and planning body; as a result, even small towns have a plan for growth. In architectural design, Finnish architects are beginning to react against the pristine days of functionalism. Tired of simple, geometric shapes, they are finding a need for curvilinear, living, even playful design. Marimekko, perhaps, began the trend with their textile designs. Now Finnish printed textiles are alive with bold colors and large scale prints. Glass has turned from simple crystalline cylinders to designs in color or is decorated with pressed flowers. And plastics add more.

In architecture, the change is just beginning, and will no doubt increase in keeping with the slowly growing population and growing community problems. But it is difficult to believe that there will be any radical change in the near future. The Finns change slowly.
Practicing Finnish Architecture

New architectural talent in Finland usually emerges through the competition system. Winning a competition enables a young architect to open his own office or, in some cases, provides a student with enough money to complete his education comfortably. At the turn of the century, architect Lars Sonck won an important competition for a church, while still a student.

The juries for the ten to fifteen yearly competitions always include two members of SAFA (The Society of Finnish Architects) and depending on the project involved, the mayor, councilman, or corporate representative.

Once a young architect begins to practice (unlike the United States almost all graduate architects practice), he enters into the highest rank of professional society. Finns speak of architects with the same reverence applied to doctors and ministers.

Eight hundred and fifty of Finland's 950 practicing architects belong to SAFA which is the only architectural association, although there is a branch of the association called "Architecta" for the over 200 women architects.

Finnish architects may not advertise, but they may copyright their designs. A copyright law was established in 1961 and infringements of the law are rare.

The team concept of architecture has come to Finland. The recent trend has been for architects to set up bigger offices which include engineers, sociologists, and community planners. But the trend is just beginning; in 1969 the average size office had 5.8 professionals.

Except in 1968, when there was a general business recession, the architects-to-work ratio is good. Unlike the United States, almost all buildings are designed by architects, further explanation for the fine quality and excellent reputation of Finnish architecture.

Education of the Finnish Architect

Finnish architects are educated at one of three universities, which are regulated by the Finnish Society of Architects (SAFA is the equivalent of the AIA). Curriculum is such that examinations similar to our state boards are unnecessary. Entrance examinations are difficult since there are only about 100 openings a year and generally about 600 applicants.

Although tuition is free, most students work part-time in architectural offices for the seven or eight years it takes to complete a degree. This on-the-job training roots the young graduate firmly in the practicalities of architecture. In fact, many design courses require relatively complete working drawings for presentations.

Reflecting the Finnish motto, "Things take Time," schools rarely place fixed deadlines on projects. Instead, a project is submitted when it is complete. One instructor remarked that in this way things were more likely to be on time, and because of decreased pressure on the student done more thoroughly.

Actually, this is a fairly new attitude for the Finns, and it may be the result of a recent student revolution that changed the architectural curriculum practically overnight. Once a completely specified course curriculum, students now have the option of electives, in a more American-like system of credits.

After graduation, the typical student will either continue to work at the office in which he trained, or go abroad for postgraduate work.
Practicing Russian Architecture

There are no private architects in the Soviet Union. All architects work in one of the State design offices located around the country. The Moscow office has 2500 architects designing major projects for the whole country, and also for foreign countries like Cuba and some African Nations.

The average wage is the equivalent of $200 per month. Small bonuses, not based on building cost, are given for building designs.

While eighty per cent of building is pre-fab, the remaining twenty per cent is designed by teams consisting of ten to fifteen architects. Lately, social scientists and economists have been added to some of these teams.

Once housing goals are set by the Municipal Councils, either architects are brought in to design the buildings, or building trusts (page 90 “Russian Building Systems”) take over.

The Union of Architects is the professional organization representing all architects. One is invited to join as an honor, after a few years of successful practice or after winning a competition. Most of the 13,000 Soviet architects belong to the Union. Forty per cent of architects are women.

The Union is funded by dues ($13-$18 per year), and by the State (seven per cent of the combined wages of all architects). With this money the Union provides a variety of services to its architect-members: it builds cooperative housing, operates four resorts, aids in case of illness, sponsors research trips, and runs architectural competitions.

Talented architects gain their reputations by winning a competition. Two competitions were run in Leningrad recently, one for a sculpture park to mark the harbor entrance, the other a poster contest with the theme, “Save the Churches.” Entries in both competitions were highly imaginative: a mixture of abstract as well as representational approaches was evident in both.

Education of the Russian Architect

In Russian society, both architects and engineers share the same social level, somewhere below scientists. Among architects there are three sublevels, depending on type of education. However, all 1500 yearly graduates spend the same amount of time—six years—working for their degrees.

The most prestigious architects are graduated from the Academy of Fine Arts in Leningrad, where drawing and design are stressed. It is a Beaux Arts education which, turns out 30 architects a year. Most of these architects stay on to do graduate work at the Academy, and eventually teach there. Some specialize in restoration work.

All other architects come from technical institutes. The largest number graduate from the Institute of Construction Engineering which, as the name implies, orient its students toward structure. In Leningrad there are approximately 150 students in each grade. The other institute is for design, but is more practically oriented than the Academy. The Leningrad Design Institute produces 50 architects annually; landscape architecture and interior design (page 96 “Inside Russian Architecture”) are not stressed. Planning is a graduate specialization.

Students begin specializing in industrial facility, housing, hospital, or public office design in their fourth year. They have access to many foreign books and periodicals, and respect for American architects especially Louis Kahn and Robert Venturi both of whom have visited Russia.

Recently, students have begun to push for more realistic design projects. In response to this demand, teachers have been assigning projects for the rebuilding of North Vietnam.

Graduates (forty per cent are women) are considered full-fledged architects who, according to one Russian architect, are sometimes given responsibilities beyond their experience and knowledge. But most architects enter one of the vast design offices in Leningrad and Moscow.

For the past few years many young architects have been requesting work at the Siberian frontier where they can gain more varied experience, under slightly less bureaucratic conditions. Graduate architects are in such demand they can usually choose where they want to work.
The Soviet phenomenon in architecture and planning is a direct result of the dramatic interaction between political-ideological and economic forces. It is unique in many respects and cannot be measured against the architecture of capitalistic countries without taking into account these shaping forces.

The post-Revolutionary period with its policy of collectivization and industrialization, brought the problems of Soviet urban conditions into sharp focus by forcing the government to cope with the relocation of millions of peasants who poured into the rapidly growing cities. The problem of reconstructing and modernizing existing cities after the Revolution and building new cities after World War II became a matter of extreme urgency.

Out of the chaos a Soviet bureaucracy evolved as a control device and as an instrument for the management of modernization. It is necessary to understand the role of this bureaucracy in the building process because it illustrates the interaction between political-ideological and economic forces in the creation of a new type of bureaucracy — a politicized one. The development of Soviet bureaucracy was not a gradual response to technological or demographic change. It was rapid and revolutionary, based on ideological propositions that required the control of the people, rather than on administration. Hence, the scope and functions of Soviet bureaucracy have not
been entirely rational: it was a means to an end, but to an essentially unrealized end, the total remodeling and control of society.

Soviet bureaucracy is comparatively new. Traditions of bureaucratic government and management such as existed in pre-Soviet Russia rendered no help in the development of efficiency; rather they established the precedent of proverbial bureaucratic indifference toward the needs of the individual. The major charge against all bureaucracies, unresponsiveness to the human needs they are supposed to serve, is particularly applicable to the Soviet institutions of architecture and planning. The striving for predictability, expressed in detailed planning of the collective aims of the masses, not only multiplies the functions of the bureaucracy, it also enhances uniformity and regimentation. The official outlook, the Party and its leadership, puts little value on the individual and prefers to stress aggregations of people — classes, strata, groups, or collectives. But this type of bureaucratic unresponsiveness cannot be viewed as inefficiency, but as the ideological standpoint of the Party.

Inefficiency can be carried to another source within the bureaucratic structure; the high level of insecurity associated with responsibility. In a society that is supposedly engaged in creating the best of all possible societies that ever existed, it is understandable if poor performance is viewed with unusual sternness. A drop in the production of housing units may seem to endanger the structure of Communism. Political sanctions against non-political errors create a sense of insecurity that has a variety of negative effects on administrative efficiency — meticulous overcompliance — with bureaucratic procedures regardless of circumstance and the paralysis of initiative. For example, if one plan for a new housing complex comes within the prescribed budget and is highly praised, the same plan will be repeated regardless of environmental factors. Soviet bureaucracy shares forms of inefficiency with other bureaucracies, yet many of them do not share the magnitude of the responsibilities and complexities of synchronization of Party-State relations.

**New Models of Architecture**

Decisions made by the Central Committee of the Communist Party have completely transformed the mode of living. The emphasis has shifted to community affairs; to use all the energies of the individual for community purposes, during and after work. This enables the Party to increase the working potential and manpower in industry and agriculture, besides indoctrinating the population with the Communist ideology at an early age.

This new mode of living requires new forms and new models of architecture and planning. After recognizing the impracticality of the extremes of pure socialistic conceptions in the years following the Revolution, the Party has made many compromises between the needs of reality and the Communist ideals expressed by Marx, Engels, and Lenin. Many idealistic city planning theories have evolved but have been scrapped as they trickled down the pyramids of decision-making in the Soviet hierarchy.

**Housing**

The interpretations of Communistic ideals have produced the most important type of construction — the communal dwelling, a multiapartment unit with up to 6000 apartments. The aim of the communal dwelling is to collectivize private living as much as possible. This type of housing has become the basic unit for new town construction. Within the basic unit there is a communal kitchen, some private kitchens, a cafeteria, a “club” which provides cultural and entertainment facilities, nurseries for children, shops, and elementary schools. Besides the communal dwelling, there are two other types of urban housing: individually occupied apartments and communal apartments. The first type, with ample room and modern conveniences is restricted to those individuals deemed most useful to the State. The second and most economical, the communal apartment, is usually a three-room apartment occupied by three families, one family per room with a common kitchen and bath.

**Industrialization**

The Soviet government has been making a determined effort to overcome the persistent housing shortage through large-scale industrialization of the building process. Standardization, a by-product of industrialization, is a natural architectural expression of the collective aims of the masses; every element must exist only when it is useful and economical and only when it can be manufactured in mass quantities. In the Soviet view, architecture must serve as an image of the State, consequently little recognition is given to personal architectural expressions. Again, it is important to stress the political premises of Soviet industrialization because they are often passed over too lightly. The Soviet regime which carried out and is still carrying out forced draft industrialization is a one party dictatorship which tolerates no opposition, maintains a monopoly of the media of mass communications, and mobilizes and allocates resources with only incidental concern for the wishes of the individual. It does not have to bother about a critical press, opposition parties, independent trade unions, or the prospect of being ousted in the next election. The decision-making process is dominated by a narrow ruling group, and its deliberations are decisive.

Unfortunately, because of this ruling group, Soviet investment in military armament, at the expense of housing, has not undergone any major change in recent years. Both the United States and the Soviet Union should re-evaluate their priorities and set new ones.
Russian Building Systems: The Architect Returns
Russia is producing housing for the masses with unusual speed and at a high level of technology. But Russia has not been providing her people with high-quality, low-cost housing.

Russian architects have taken a back seat during the past decade. Except in rare cases, they are never employed by the factories, which produce about ninety per cent of all buildings. (When architects are used, they are relegated to the minor roles of interior and exterior decorators). Soviet officials blame this on a shortage of architects, but there seem to be other reasons.

Soviet architects are starving intellectually and professionally. Standard plans, standard construction methods, and standard materials tend to stifle creativity, but that is not all. There is a deterioration in design talents simply because architects are not being used often enough.

Compare the typical United States architect with the Russian architect. The American will have designed at least five to ten buildings a year and sometimes more. On the other hand, the Soviet architect is lucky if he works on one building in two years. There is good reason for this. A combine manufacturing a 16-story apartment block, cannot afford to retool every time an architect decides he can design a better building.

Catalogue System—Architectural Hope

There is hope that in the future Soviet architects can flex their architectural muscles and give life to the monotonous typical multistory “house.” Hope lies in the so-called “Catalogue System.” The State Committee on civil Construction and Architecture, one of the committees of Gosstroy (overseer of design and construction) has developed a series of catalogues for prefabricated building elements that have mandatory use both for designing and manufacturing. Theoretically the system will provide for interchangeable components and will allow options of choice that will free the Soviet architects from unreasonable restraints. It is a great idea — there are all the benefits of mass production and the opportunities for choice. The architects have hopes of a brighter future; a return to the busy construction scene, particularly to housing, where the human values related to architecture may be part of a building’s plan. Even more important, they will have the chance to provide the masses with spatial amenities and pleasant places to live — a far step beyond just “giving them a roof over their heads.”

Just when the catalogue system will begin to operate is another question. One official was very pessimistic. He said that “such a system is still just a dream and far from reality.” Others were optimistic and felt that if this system didn’t work, then other means would be found to relieve the awesome sameness of the typical neighborhood unit. In the main office of Gosstroy in Moscow, an official summarized the situation. “We readily admit,” he said “that there are too many buildings of the same type and the districts are looking too much alike. The government is taking action so that the factories can function more flexibly. One target is to create new factories, each of which will be able to manufacture more than one type of house. We are also seeking ways for the various factories to build interchangeable components that will encourage cooperation among the various combines and specialized trusts. We see the need and are taking steps to create conditions that will allow architects, engineers, manufacturers, and builders to provide dwelling blocks that will vary in character, size, and height.”

The Present Systems: Panel vs. Box

The Soviets should be credited with developing building systems that are technologically advanced and that keep on-site labor to a minimum. Their various systems must be classified as “closed systems,” in fact, they could not be more “closed.” A typical combine trust, an organization that manufactures the concrete components and erects the building to a turnkey situation, generally builds only one “model” every three or four years. And it is a stock plan house, pure and simple. Regardless of where the house is built it is the same; when 50 are built, each is the same height, has exactly the same floor plan, with varying lengths and external appearance. The crying need for housing makes this kind of design acceptable, when people move in they are happy to have that roof over their heads.

The Panel System

The Soviets have demonstrated that they can stack large concrete panels in place with considerable speed. To erect a nine-story apartment house (15,000 to 20,000 cubic meters), designed with large panels, takes about nine months from site preparation to turnkey. It should be remembered, however, that combines or building trusts have a running start since they receive a year’s advance notice about the building. Nevertheless, the panel system can be classified as one that permits a building to go up in a hurry.

Combine No. 2, Leningrad, has some ingenious answers to problems inherent in the panel system, particularly to the temporary connection of the panels until grouting sets. A steel sprocket link, somewhat like a screen door hook and eye, holds the panels in place temporarily until the joints are grouted. After grouting sets, the steel then serves as reinforcement.
to strengthen the corners. There was no attempt to hide the joints between the panels, and about an inch of space was deliberately left to articulate the connections. In this groove a rubber-like waterproof gasket is installed. Aesthetically this frank expression of the panels is far more successful than attempts to make the joints flush, which generally result in indecisive form.

The Kiev Box: An Architectural Opportunity

The great disadvantage of the usual box system — something like Moshe Safdie’s “Habitat” — is its inflexibility. Rooms are generally too small by our standards and they can’t be changed; the box walls are load bearing.

The experimental box system developed in Kiev was designed by an architect to allow architects more latitude in interior spaces. Essentially, he “busted the box.” The unit is not a load-bearing boxwall, but more like a structural frame cage. Vertical loads are carried at the heavily reinforced corners of the “box.” This permits large openings in the walls, when needed to open the interior space. In this way architects have more freedom. Interior walls, for example, are only about 2½ in. thick. In addition to the opportunity for a certain degree of open planning, large areas of the walls may be knocked out during renovation, in itself a feature. Exterior walls are only 3½ in. thick, counting insulation, that also allows more fenestration opportunities. Such a structural system carries both the advantages of the box system and the structural frame.

An experimental house, although relatively small (four stories), had all of its boxes in place in ten days. One apartment had a large opening between two boxes — the living room and supposedly the dining room — which gave a spacious appearance never found in the other box system apartments.

Another feature of the Kiev box system is the opportunity to provide cantilever balconies, bay windows or extensions of certain interior spaces. The so-called box is factory-built, without a bottom. Where extensions are desired, the precast floor slabs are simply made larger. (Incidentally, factories run 24 hours a day).

“The Case of the Busted Box” opens up the highly restricted box system figuratively and physically and offers many more architectural opportunities than either the panel system or the usual box system. But the problem of manufacturing the thin walls still exists.

What’s more, it is a complicated and expensive box. A “suspended ceiling” must be contended with, and it is larger than boxes previously produced — 5.8 meters long, 3.4 meters wide, and 2.7 meters high. Apparently the box system does have a future. Re-
recently a law was passed authorizing 27 factories throughout the USSR to make five-story and nine-story houses from “3-D components.” That puts the box “in.”

One very enthusiastic Russian official, a proponent of the box system said, “Boxes are better than panels. And cheaper. At present the cost of labor to build a 3-D house is 2½ per cent less than conventional construction. We have a target to raise that to 10 per cent cheaper using half the labor.” He went on to say that the box system total cost could be broken down to 15 per cent labor, 60 per cent materials, and 25 per cent other items such as transportation cost and equipment. It is not clear whether these figures represented a target or a fact.

Putting the Pieces Together

Another problem being faced by Russian housing officials, and one of interest to us, is whether the combine trust (manufacturer-contractor) or specialized trusts (similar to general contractors) should do the building. One official came out very strongly against combines. He said, “Let the builders build. A builder is always a builder. Let the manufacturer make things. He should not build. We manufacture everything except bird’s milk, and this includes machines to manufacture machines not to mention large houses.” He argued that when the manufacturer tried to build he would be tempted to put the “rejects” into the buildings so that the factory would show a greater profit. He emphasized, “We believe in specialization. Our job is to manufacture the elements. Let other specialists build the building. When we deliver an element to the job, it has to be good. If not, it will be rejected by the builder and that is the way it should be.”

These views are not shared by many other officials. Most believe that the combine solves the problem in a much more efficient manner than the specialized building trusts. It provides total construction — materials, manufacture of structural components, erection, and finish — and it is under one authority, allowing standardization of building and construction methods. Also, this system is faster with less need for extensive communication.

Feedback is another virtue of combine trusts. For example, the large housing project located on the right bank, Niva River, District 13, Leningrad, House 39 had a very spacious stair well, but very small kitchens. Because of current pressure for larger kitchens the combine decided to “change the model” and make the kitchen larger. By the first of the year the factory will be retooled to produce a modified model which provides for larger kitchens and a smaller stair well. The building will remain the same length and square footage. This is viewed as a major change and will take one year and two months. Minor changes such as improving a connection detail, moving an electrical outlet, or changing the color of trim or pattern of wallpaper obviously would not take as long. At the main Gosstroy office one high official said, “We have found that the best system is to combine the manufacturers and the erectors.”

While the Russians continue to produce a “below-our-standard” housing product, they are looking to the future and are aware of the need to change. Hopefully, they will allow architecture to help in making the changes.
The subject of housing in the Soviet Union is a labyrinth of surprises and contradictions overlaid with a layer of confusing data and a dense cloud of preconceptions. Our innate ignorance of the social and historic context and our impatience with the time-and-space perspective of the over-all plan combine to leave an impression which is decidedly superficial and less than complimentary. Architects, however, respect the Soviet effort and its results. They are becoming aware, too, that the Soviet experience is a showcase of what can be done, as well as what should not be done, on our own terms. Three aspects of this professional reaction to Soviet housing are worth noting.

Production Figures Are Staggering

Housing was placed high on the agenda in the days of the boisterous Chairman Khrushchev, in the period between 1959 and 1965 one-third of the entire population of 220 million received either new apartments or improved accommodations. In the last decade half of Moscow's population of six and one-half million has been rehoused. These statistics are reflected in buildings varying between 9, 12, 16, 19 and 25 stories, and which dominate the horizon in every direction. (The five-story "Khruschobi" walk-up plan has been abandoned). According to Sergei Kulkoff, architect on the planning staff of the City of Moscow, some 120,000 "flats" were erected last year; this amounts to approximately eight times the population of Co-op City which contains almost all of the housing built in New York last year. Leningrad meanwhile boasts of completing an average of 130 apartments per day. The end is envisioned in the year 2000, when every citizen will enjoy not only his legal minimum of shelter but 22 square meters of greenery as well.

From the point of view of the planner, the Soviet approach to housing is enviably direct. It is a fundamental claim of the Soviet ideology that the land belongs to the people, and cynics have pointed out that this simply means that all land belongs to the State. They ignore the fact, however, that without impinging in any sense on the rights of the individual, the State has overcome an obstacle which plagues every community the world over. There are none of the maddening "zoning laws" which grant autonomy to the tiniest suburban locality with no regard for metropolitan needs. Nor are there any vested private interests who cling tenaciously to their interpretations of property values, and there are no suburban areas that must be demolished.

The State Is Its Own Building Contractor

Mr. Michael V. Pasokhin heads an architectural staff of 11,000 (of which one-half are women); Mr. Vladimir Promyslov, chairman of the municipal council of Moscow (in other words, Mayor) is also in complete charge of the Glov Mostroi, the city construction force of 1.2 million that is responsible for 80 per cent of all building in the Moscow area. The State also operates the world’s first and largest automatic concrete-prefabricating plant. The “Vibro-Rolling” process, invented by Engineer N. J. Koslov, produces concrete panels in 170 types on an assembly-line basis at the rate of 9 million square feet per year. The production of panels, as well as paving slabs, ducts, piles, and related products, is fully automatic, with the exception of the placing of reinforcement and the removal and storage of the finished product.

Complete floor, wall, and partition panels are produced on huge moving platforms on a 10-hour cycle and in three shifts. The entire operation is controlled by a staff of four, in a plant where 20 per cent of the labor force, including crane operators and welders, are women.

According to chief plant engineer Evgen Surat, a single-rolling assembly line can provide all the ele-
In Moscow alone, about 120,000 units such as these were constructed last year.

ments of 1300 fully assembled dwelling units annually.

The principle of continuous mechanized operation is less significant for its application in this context than for the fact that two plants with four lines each have been in existence in Moscow since 1963, all built and operated at government expense.

Russian “Breakthrough”

The same centralized authority has developed an experimental branch which has already produced two significant pilot projects. One project consists of a 25-story apartment building, one of the first of its kind to be designed entirely with the use of preset slab concrete. In addition to the novelty of construction, its appearance is ample evidence that Moscow architects are keenly interested in the visual aspect of multi-story apartment buildings, as well as in improved engineering and construction techniques.

The other project, headed by architect Nathan Osterman, is the background for a novel experiment in living. It consists of two 16-story blocks with two wings each, connected at ground level by a host of community facilities, and is called “The House of The New Life.” Apartments, totaling 800, are one, two, three and four room, and are provided with kitchenettes in place of full kitchens. In theory residents may eat their major meals in the small dining rooms serving individual floors or enjoy the group facilities at ground level where the cultural and health centers are located. The money saved on kitchenettes alone, according to the architect, is spent on a great variety of health and cultural facilities; the time saved by eliminating the drudgery of housework is measured in free hours per day and improved health throughout the year.

As with every experiment so closely associated with everyday life, the plan and the building both have aroused much discussion, centering largely, however, on the extent of cooking facilities. Since the large majority of Russian women work, it is likely that more than enough families at the professional level will apply, not necessarily to profit by the elimination of housework but to enjoy the swimming pool, the cinema, and the exceptionally well-finished surroundings, even at the extra price. The “Dom Novavo Vita” may, on the other hand, be more of an experiment than the housing authorities intended.

In any case, it is an experiment which costs 6 million rubles, or approximately 6.6 million dollars, and it is significant in our terms because it illustrates an attitude toward pioneering in domestic living with full awareness of the psychological as well as the financial pitfalls.

The average Muscovite earns $125 per month, and pays approximately five per cent of his salary for a three-bedroom apartment (as compared to the average of 20 per cent that prevails in the United States). He pays 18 cents per person per month for gas and water, and 4½ cents per KW for electricity, and that is all. Repairs are free; Mayor-Engineer Promyslov pays out $77 million of state funds annually for maintenance.

If the worker prefers, he can join a cooperative group and own a two-room apartment costing $4500, by making a 40 per cent down payment — and paying interest on the remainder at ½ of one per cent. The “average” apartment in the United States, by FHA standards costs a minimum of $17,500 with interest at 7½ per cent.

In the final analysis the eventual standard of housing conditions in the USSR, as in all countries, is a matter of emphasis. A regime that is capable of producing the Palace of the Soviets, where design, structure, and realization leave nothing to be desired, and the legendary subway, whose taste may be challenged but whose performance, along with those giant high-speed escalators, is a marvel of engineering, is fully capable of producing a top-notch dwelling place.
Inside Russian Architecture

by Brock Arms, AIA, AID

Mr. Arms traveled to Russia in 1969 with the American Institute of Designers. His own design office is in Glencoe, Illinois.

Interiors in the Soviet Union generally are drab and poorly kept when measured by the Ladies Home Journal, House Beautiful, and manufacturers' product mock-ups in America. There are some exceptions: buildings that are in themselves a matter of national pride, such as the palaces and cathedrals of Czarist days; public buildings used for entertainment, cultural events, or sports and the apartments of a few gifted persons who generate income from outside Russia.

In the first group, St. Isaac's Cathedral is an excellent example, with its columns of lapis lazuli and malachite, and its splendid mosaics so fine in execution that the surface gradation is mistaken for painting.

October Hall in Leningrad is viewed by many sophisticated travelers as an unequaled concert hall in its degree of interior finish, its audio visual and stage effects, and its facilities for artists as well as comfort for the audience. It is newer (and somewhat smaller) than the Palace of Congresses in Leningrad that seats 6000, and is also superbly built and equipped. The interiors of such buildings are however, basically architectural; October Hall and the Palace of Congresses are unequivocally contemporary by international standards.

What happens on the stage is perhaps a greater reflection of public taste; it is not startlingly contemporary, although it is startling. Russian stages are built for stage effects so thrillingly illusionary that theater as thrill reaches its peak. The sets, while often breathtaking, are almost always traditional in effect. And so is much of the public taste.

Restorations Are Magnificent

While World War II was still in progress restoration

A room in Pushkin Palace which was totally reconstructed after it was bombed in World War II. Russian architects are expert in the reconstruction of palaces and churches.
teams were being trained: wood carvers, gilders, and
fine artists began their work recapturing the magni-
ficence of Czarist life by sorting the shards and
splinters, collecting the drawings, renderings and
photographs, and assembling, in incredible splendor,
the glory of a vanished way of life.

Despite the question of whether so much money
should be spent on palaces when other social needs
were pressing, by emphasizing historical restora-
tions the Soviet Government apparently filled two
needs. One was to provide a war-weary, devastated
people with a source of pride in their heritage as a
measure of future aspirations; the other was to keep
alive the arts, crafts, and culture for which these
projects were a training ground.

It is necessary to keep in mind that Russia, like the
United States, is a huge country with special region-
al characteristics. There are as many differences in
taste between the Crimea, Leningrad, and Moscow as
between Savannah, San Francisco, and New York City.

In Leningrad the heritage of old St. Petersburg is
so great that present laws forbid changing the ap-
pearance of the city from its Czarist days. If a build-
ing is about to collapse, a crane plucks out its innards
and a new building is built behind the old façade.
The finest of the old palaces and town houses are for
government use, the best of these are used as
“Friendship Houses” and cultural centers.

The problem of the general state of interior design
in the Soviet Union, as one might suspect, is one of
official policies. Since the government controls
what will be produced and often how much, and since
the Soviets are trying to balance their manpower
against their social needs, private option in interior
design is limited. The home is furnished with those
few products available on the market.

A Word About Products

Ceiling lights are the principal lighting in most
rooms in Soviet apartments regardless of the pur-
pose of the room. Many of these fixtures are quite
unattractive. It is amazing the number of crystal chandeliers produced for the market, and they are used not only in apartments, but in bakeries, shops, and other places with pretensions to quality.

You can buy household products, especially plastic articles for the kitchen, well made, well designed, and reasonably priced, everywhere. You can buy good high-fidelity and television sets, cameras, and sporting goods. But furniture is not yet a prestigious enough consumer product to receive much attention. The models available are rather poorly made copies of early Swedish modern.

The Soviet Union has several design-conscious countries on its borders and within its economic sphere of influence. First and foremost is Finland. In Leningrad one constantly sees mod young Finns in bell bottom trousers and mini-skirts, exerting a tremendous influence on the Russians. Their Finnish elders are equally influential, busily selling chairs, tables, lamps, and such other products as theater seating — not so much to be distributed for purchase by the Soviet citizen, but for the hotels, theaters, and government buildings that are being built.

Incidentally, the most important new hotel, the Rossia in Moscow, was originally carpeted with an unlikely mismatched assortment of carpeting. Before it had been open a year this carpet was threadbare. In places there is threadbare carpeting lying over even more threadbare carpeting. There is no contract carpeting such as we know it.

Generally, fabrics in the Soviet Union are cheaply made. The stores are jammed with what we would consider “bargain basement stuff.” However, for the restored palaces, exact duplicates of the original silks, damasks, and velvets have been made, using shreds from the original. They are not available to the public.

Ingenious Use of Interior Space

The Soviets are ingenious about their needs. Socially useless buildings which are sound nonetheless, are not torn down. They are converted. Nowhere is this more disarmingly evidenced than by the churches.

For example, less than two blocks from each other in Leningrad are two fine old churches. One is the old Kazan Cathedral, designed by a former serf educated in architecture in Italy. It is now the museum of atheism, dedicated to leading the visitor to the inescapable conclusion that all religion is superstitious and harmful to man.

Another church is a golden ochre building on the opposite side of the street with a forecourt reached between two other buildings. One is simply told that the church is closed, although people are streaming in and out. The narthex doors to the nave have been eliminated. All routes seem cul-de-sacs. By climbing the stairs to the balcony one can regard the full length of the nave and the apse. Where the altar stood are diving boards, and the nave has been dug out for an Olympic swimming pool.

Education of the Interior Designer

Historically, interior design in the Soviet Union was the collaboration of architects, artists, artisans and craftsmen. Since the Revolution, it has been limited by manpower allocation and pushed aside by social needs. Interior designers do not exist in Russia in the same sense that they do in the United States.

Two schools in Moscow do train students to perform this function, however. The School of Archi-
exquisite bits of architectural detailing which the Russians have been careful to preserve.

tecture and The School of Arts and Crafts are staffed by candid, well-trained, dedicated men who are eager to improve Soviet education, Soviet design, and Soviet life. Each school has become aware of interior design in its “contract” sense. And, there is talk of beginning specialized departments in interior design at each of these schools, since each sees the field as an extension of its own specialty.

The development of interior design as a specialty would seem to be dependent upon greater buying power of the masses, broader response of production to public demand for design variety and availability, and an awareness on the part of the Soviet government that interior environment is important enough to warrant special development of an interior design profession. This is not yet the case, although dedicated architect-educators in Russia seem aware of the great gap between current practice and the ideal.
The mist rising up the sea cliffs and drifting inland across the ocean meadows at Sea Ranch discovers that something new has been added these days. When P/A published the definitive examination of this now-famous northern California second-home complex in (pp. 120–137, MAY 1966 P/A) the central building was a small wooden structure by Joseph Esherick housing sales offices, a "general store," and a restaurant seating 50 diners. Now, Alfred Boeke, who is an architect as well as being Vice-President of Operations for Oceanic Properties, Inc., a subsidiary of Castle & Cooke, Inc., owner of Sea Ranch, and Louis McLane, planning director of Sea Ranch, have doubled the size of the original building and also provided what Sea Ranch desperately needed before, a lodge for transient visitors.

Heretofore, vacationers in this vicinity, if they were not lucky enough to have a friend with a house or condominium apartment at Sea Ranch, were com-
pelled either to move on or find shelter at an old hotel in nearby Gualala, a former logging town not noted for being hospitable to hippy, jet set, or mod types. Boeke and McLane have relieved that unfortunate condition with a gracious lodge in the Sea Ranch wood-sided, slant-roofed idiom that furnishes 18 single rooms and two two-bedroom units. In addition, they have doubled the size of the restaurant, added a supergraphiced bar and solarium, a lounge, a library, and enlarged sales and office spaces consider­ably. Facing the entrance to Sea Ranch from the coast highway is a long wooden and shingle front porch that extends the length of the restaurant-store building and connects with the boardwalk leading to the lodge. The architects note that the inspiration for the porch is from the old Western-style buildings that can be seen in ghost towns and on “Gunsmoke.”

Following another Sea Ranch practice, the lodge is planned in a cluster arrangement that echoes the theme of the nearby condominiums by MLTW/Moore-Turnbull. The interconnected buildings are both single- and two-story to capitalize on spectacular views and at the same time provide maximum privacy for each unit. There are 11 single bedrooms on the ground floor and two double bedroom suites for larger groups. Seven single bedrooms are on the second floor levels. No two units have exactly the same plan. Rooms have either fireplaces or deep corner window seats. Interior furnishings, which were designed by McLane with the Design Group of Portland, Oregon, are intended to complement the ruggedness of the exposed wooden structure. Rich textures and warm colors are used, such as bedspreads of Haitian fabric, colorful throw rugs, sailcloth window hangings, sisal matting as floor cover, upholstered window seats. The rooms are enlivened by an occasional shaft of light or unexpected view from an overhead scoop or an eccentrically placed slit window. A number of bentwood pieces were designed for the lodge to soften the angular lines of the structure. In the future, Oceanic plans to build another 20 units to the south and west of the present building.

A somewhat difficult assignment faced the architects in designing the new elements of the store-restaurant. In just the few years since its completion, the original building, together with Moore-Turnbull’s condominiums and Esherick’s hedgerow houses, had become quite a familiar architectural symbol of Sea Ranch and the kind of angular, warm, relaxed architecture it represented. Inside, they have succeeded admirably, with an extremely pleasant and invigorating series of levels and spaces, punctuated by visual and spatial events such as framed sky views, glimpses of the supergraphics in an adjoining room, an airily suspended exhibition of Ernest Braun’s exciting color photographs of the Sea Ranch terrain, and a splendid glassed-in conservatory-type space off the bar from which to watch an overwhelming view of cliffs and the Pacific while putting away a few sundowners. The dining room is a generously proportioned space overlooking the ocean, while the bar and lounge are appropriately turned inward for social conviviality and sitting by the fire. Barbara Stauf-
Facher’s enormous Supergraphic in the bar is a curvilinear reflection of the ram’s horn logo she did for Sea Ranch’s logo four years ago, and which she redid on the façade to conform to the increased scale of the building.

Speaking of the exterior this writer takes mild exception to the “western style” front porch. Although it observes all the rules for “Sea Ranch style,” it just seems obtrusive, inappropriate, and unfortunately heavy handed in treatment. There does not seem any need for a huge porch here; the visible interplay of the building’s main forms and volumes would have been far more interesting, as they are in the condominiums and even the new lodge. Perhaps it was an attempt on the part of the designers to use a simple technique to tie the old and new structures together. If so, it cannot be called notably successful (the ocean side of the store-restaurant is much more convincing than the more-often-seen land side).

Another cavil is in order for the lodge rooms. Though interestingly planned, with the quirks and surprises mentioned earlier, they seem a bit mean as far as space is concerned. This is emphasized by the necessarily vertical feeling given by exposed siding and structural members. Weather at Sea Ranch is often nasty enough to make one stay inside and look out at it, so that spatial amenities in interiors become quite important. Still, the over-all ambiance of Sea Ranch is so splendid that we would gladly overlook this slight annoyance.

Following the pacemaking methods of “dynamic conservation” established by Lawrence Halprin & Associates and the Sea Ranch staff for the 14 miles of coastline, the much more modest landscaping at the lodge and store-restaurant succeeds in respecting the unharmed grandeur of the larger site. The architects state, “It was our objective, as in the past, to retain the natural rugged character of the existing landscape around the exterior areas adjoining the structure. In patio and court areas we used flowering plants and trees as these areas are more intimate spaces and, hence, appropriately designed in a more playful way.”

In some instances, just after the main buildings at Sea Ranch were finished and private houses were going up in different portions of the site, a few designs slipped in that repudiate all the careful and admirable planning that went into the original concept. Fortunately, McLane reports that design control is more effective now, and that the appearance of a typical suburban-type house at Sea Ranch in the future will be most unlikely. In the meantime, he and Al Boeke have faithfully fashioned a commendable exercise in le style du pays in the lodge and commercial building.

By James C. Burns Jr.
An emphatic verticality of design is evident in this living unit of the new Lodge.

Interior furnishings complement the ruggedness of the exposed wooden structure.

The dining room, which faces the sea and the north coast, has been doubled in size and can accommodate 100 to 150 persons.

In the glass-enclosed Solarium Bar, which is north of the dining room, Barbara Stauffacher's Supergraphics are strikingly evident.

Selected Details:

STAINLESS STEEL ELEMENTS

PARTIAL ELEVATION

3/4" X 3/4" STEEL STUD

CEILING

CALKING

4" X 4" X 4" ANGLE X 3" LG WELDED TO 4" X 2 1/2" X 4" LG PLATE WITH #3 REBAR ANCHOR

NOTE:
PRECAST CONCRETE PANELS WERE MADE BY USING STAINLESS STEEL FRAMES AS FORMS. AFTER CONCRETE HARDENED STAINLESS STEEL WAS POLISHED & PANELS ERECTED

PLAN SECTION AT 'A' (PANEL TO PANEL DETAIL)

FL. LINE

CALKED

3/4" X 3/4" STEEL STUDS

CONCRETE PANEL

TYPICAL STAINLESS STEEL EDGE DETAIL

NOTE:
ALL 1" INSIDE RADII

16 GAGE TYPE
304 WELDABLE STAINLESS STL
EDGING NO. 6 FINISH

STAINLESS STL EDGING NO. 6 FINISH

AMERICAN AIRLINES TERMINAL BUILDING:
Washington National Airport
ARCHITECT: Giuliani Associates, Washington, D.C.

SELECTED DETAIL
Stainless Steel Framed
Precast Concrete Panels
HEATING UNIT ENCLOSURE
5/8" ST. STL.
DOWEL

3"x4"x1/4" STAINLESS
STEEL BENT
ANGLE 3" LO.

3/8" STAINLESS
STEEL STUDS

UNISTRUT INSERT

POCKETS LEFT
IN CONCRETE
FIREPROOFING
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A simple game translates rigorous systems analysis requirements into a program meeting the complex needs of a new hospital.

On a warm and sticky Monday morning last spring in Galveston, a team of architects, programmers from Caudill Rowlett Scott met with their clients to turn a "long and nearly impenetrable maze of tasks, sub-tasks, and sub-sub-tasks" into a hospital program. From systems game to end game—or the agonies of simplification.

The prime contractor was a Chicago management consulting firm, A.T. Kearney Company, whose systems study had been exhaustive; the physical evidence of their efforts was "the Bible" — a 12-lb volume of 28 parts, or Functional Packages. The job at hand was to program and plan a new Public Health Service hospital for merchant seamen. The clients were the PHS and administrators of the existing hospital.

With ATK's work in hand, the architects' problem was to reverse the highly sophisticated iterative process, and translate an intricate conceptual system into a workable scheme for a physical system.

Caudill Rowlett Scott, therefore, proposed a week-long charrette. A specialty of the house, it was developed to speed up planning processes for clients at inconvenient distances from home base in Houston. Dubbed "squatters" by a crusty, and apparently chauvinistic, Oklahoma client, the crash teams have been transferred from Caudill Rowlett Scott's usual school work to more complex hospital planning — a relatively new field for CRS. At the Galveston squatters, however, a new team tool emerged. The story of its spontaneous invention is related in the following firsthand account taken from an informal report by Bob Douglass, co-captain with Bill Cannady of the squatter team.

"Time was running out and the Functional Packages were not complete. We persuaded ATK to bring the entire team together with the PHS Hospital team in Galveston for a CRS-type squatters to try to wrap up the entire systems integration task in one week of concentrated effort. The study had been going methodically along for almost a year and we were proposing to make-or-break it in one week, so it was not without some apprehension that ATK agreed. The conference was held in Galveston the week of March 28 [1969].

"CRS & ATK met for breakfast early Monday morning in Galveston, and then went to the hospital where we set up to go to work in a complex of trailers on the hospital grounds.

There was a big communication problem right away. The ATK team was put off because the architects hadn't studied the Functional Packages, though more put off, I suspect, because our team was young and loose and didn't seem to be taking it all seriously enough. Our team was frustrated because even if the packages had been complete, the language and tone were all but impossible for non-industrial engineers to absorb. When our team would ask a question, the answer was always, 'It's in the book.' Also, the ATK guys kept their coats on. They went to one end of the room and started doing their own thing, and we went to the other end and started doing ours.

"At their end of the room the industrial engineers started to use their standard techniques to diagram the procedural flows and functional relationships of all areas to all others, as per contract requirement. They soon discovered that the industrial engineering techniques were far too detailed and that the results were totally uncommunicative because of their complexity.

"In the meantime the CRS team had been trying to get a handle on the problem by simplifying and generalizing the total hospital package. Zones of like activities and like spaces were identified and color coded, colored squares were cut to scale to represent the various functional areas, different movement systems were represented by color coded cut-out arrows, etc. I think I was using them to conduct a quick course in hospital design when the flashes of color caught the engineers' eyes and they came to see what
Movement of people and things was the organizing concept of the game played. See next spread for list of players.

Transition from game board to final program for two-story hospital (Plexiglas model below) called for several changes in layout, but plan remains essentially the same.
was up. They stayed and became intrigued at the clarity and ease of manipulating the elements, the spark of communication and respect jumped the gap and the ‘game’ was on.

“It had taken most of the day. That night, Bill [Cannady] and I talked about what had happened and realized that it was the game-like quality of what we had been doing that had catalyzed the two groups and had started them working together — we decided to try to keep the momentum by structuring the rest of our week around the game idea.

“The game we devised was not a sophisticated theory-of-games game. It was more like a real kid’s game with a game board, simple rules, pieces to move, and different positions or roles for various players. The game was scored by all the information in the Functional Packages, but mainly by the Master Cross Relationship Diagram. This diagram had been developed as an abstract, quantitative expression of the idealized proximities and reasons for the desired proximity for the total hospital. The more relationships on the game board that agreed with the Master Cross Relationship Diagram, the more points that particular scheme received. The areas that lost points were identified, the scheme was modified if possible or abandoned if not.

“The game board rules were based on the idea that the thing that makes a building different from a totally abstract system is that people and things get into it and move around. These concepts — access and movement — were the ordering elements around which the squares of colored paper began to organize themselves. By simplifying our process into the most elementary terms that anyone could understand, and into a format that didn’t intimidate by looking like DESIGN, anyone could play and become a designer.

“Through the week the players included not only the programming team (ATK/CRS) and the PHS Hospital staff, but the president of the University of Texas Medical Branch in Galveston, members of his staff, PHS headquarters personnel, the Mayor of Galveston and the Congressman from the District. The way the gameboard catalyzed communication, the spontaneous and furious ricochetting of ideas around the gaming table, was fascinating.

“The ATK/CRS team became four teams with rotating and overlapping assignments. Two teams worked in parallel. The Gameboard Team tested alternative configurations, and the Functional Systems Team developed and tested organizational concepts and support systems, each team influencing the output of the other. A third team concentrated on Cost Benefit/Cost Effectiveness, testing systems and configurations. The fourth team refined the program and researched information, interviewed hospital personnel, and prepared new players for the game.

“The early stages of the game were a little chaotic. Everyone was the authority on everything. As the broad issues were defined, we assigned various team members who were expert in the various functional areas and their PHS Hospital counterparts the job of advocating only the interests of their own area, without special regard for the other parts of the hospital. This started a cycle of idealized arrangements of the total hospital for each functional area. As the cycle was repeated again and again it spiraled ever closer to a consensus at the center. Eventually, consensus on the two-dimensional layout was achieved and the pieces were pasted down. The 2-D gameboard was then hung on the wall as the basic guide to developing alternative functional configurations in 3-D. At this point, the Systems Team and the Configuration Team became one team.

“To develop alternative functional configurations in 3-D, we simply transformed the gameboard into three dimensions. Some panes of glass were borrowed from the hospital shop and stacked in layers to form a three dimensional planning matrix. The relationships from the 2-D layout were translated into 3-D by distinguishing between requirements for vertical and horizontal contiguity, available area on the site, the implications of mechanical movement systems, etc.

“In the process of developing candidate alternatives, we tested the basic concepts that dominate hospital design today: One maintains that a vertical-core-centered hospital will operate more economically than any other because it permits maximum utilization of labor saving and automated support systems; the other claims that only a horizontal hospital can deliver the best in patient care, but sacrifices the operating economies of the vertical hospital. Out of our evaluation, influenced by these seemingly conflicting philosophies, we developed a third alternative that seemed to incorporate most of the pluses from both concepts, as well as our own subjective preferences. It may be a basic flaw in the system,
Diagram of Functional Space Relationships

The importance of fast, direct traffic flow determined the proximity of functional areas. Weighted chart above, developed by ATK, formed the basis for scoring the game.

but it is hard to imagine an approach that would not require that the final decision be based on human judgment. To no one's surprise, the solution we liked the best won — but the decision was not uncontested. "The final task was constructing a plexiglass model that recorded and dressed up the 3-D result that tested out most favorably. Construction of this final model started around 3 AM Friday and was presented to PHS and UTMB [University of Texas Medical Branch] staff and officials just after lunch.

"After the conference, there was some wrapping up to do, and we still must "interfere" with the A/E contractor who finishes the job. The problem-solving episode, however, was over when we left Galveston." Which all goes to prove that fun and games can be serious business. And the simple board game that expedited the Galveston job is now being refined and expanded by CRS in their latest hospital project.

— Allis Runge

LIST OF PLAYERS
Besides the ATK/CRS team, the cast included:

1) All medical, paramedical and administrative and technical support personnel from the PHS Hospital in Galveston. (About 40)

2) Personnel from several divisions of the U. S. Public Health Service headquarters in Silver Spring, Maryland. (About 10) Project Director: Lisa Weil. Disciplines represented among the PHS personnel included architects, architectural engineers, industrial and systems engineers, and medical and paramedical personnel.

3) The President of the University of the Texas Medical Branch (in Galveston) and members of his staff. (About 5)

4) The City Manager of Galveston.

5) The Mayor of Galveston.

6) The Congressman from the Galveston District.
Selecting Building Materials

Considerations of function and service life of materials that are to be specified for a structure are discussed by the Chief Specifications Writer of Skidmore, Owings & Merrill, New York City.

There are many factors to be considered when selecting building materials. Not only must materials serve their intended function, but also they must last over some acceptable service life. For function, materials are chosen to provide sound reduction, thermal efficiency, fire safety, weatherproofing, and other similar requirements. For service life, materials should be selected to resist wear, corrosion, degradation, chemical interaction, and other hazards.

The initial determination in the selection of a material must of necessity deal with function. If sound absorption is required in a particular area, there are a host of acoustical materials from which to choose. If fire prevention is essential, there are again numerous materials and methods of construction that can be employed to accomplish this end result. Where heat loss or gain is to be reduced or minimized, there are certain insulating materials or details of design that can be selected or followed that will accommodate this requirement. However, in each instance where a functional requirement is achieved in the selection of a material, one must then take into account the other variables that are concerned with the useful life of the material in place. The service life of a material is related to a combination of environmental factors which influence its durability.

For example, a function involving sound control in an enclosed swimming pool area would require the use of an acoustical material. However, because of the significant amount of moisture present in the space, the durability of the acoustical materials selected to withstand the effect of moisture is of prime significance. A gypsum or wood-fiber product would be susceptible to swelling and damage. A ferrous metal-suspension system would be subject to corrosion. The search for an acceptable system would be narrowed to the selection of a corrosion-resistant and moisture-resistant material.

The most nominal factor for exterior materials is their relationship to weather conditions. Weather factors that interact with materials are water, ozone, ultraviolet light, temperature variation, and combinations of these elements. The environment for materials inside a structure is composed primarily of people usage or industrial processes. In public schools, materials are subjected to vandalism and rough usage. In industrial plants, materials are exposed to industrial fumes, fork-lift trucks, and skids.

A good deal of experience has been amassed with the use of traditional materials for specific functions. Their service life can almost be predicted based upon similar conditions of use. However, there are no universal materials and there is a constant search for new manmade materials to attempt to overcome the deficiencies of the traditional materials. But the materials derived from chemistry are not a panacea. Great strides have been made, but not always with immediate success. It is difficult to predict the behavior of manmade materials based on laboratory tests. These tests, in many instances, are empirical, and do not necessarily simulate true environmental conditions. Test methods and procedures usually undergo considerable change based upon familiarization with problems, and eventually these tests can predict more truly the behavior of the materials under conditions of use. Test methods for elastomeric sealants and for water infiltration of curtain walls have undergone considerable change since these methods were first promulgated. The changes are obviously the result of a better field understanding of the behavior of materials which are then reflected in the updating of the test procedures.

Although we can predict the behavior of individual materials based upon laboratory tests and field usage, we are bound to encounter chemical reactivity of one material upon another when they are placed in juxtaposition. This is because, first, the specifier or user is not completely cognizant of the chemical nature of materials, and, second, the manufacturer does not necessarily test the interaction of his material with every other building material that may come in contact with his material. For example, through field use and not the laboratory, it was learned that polysulfide sealants and bituminous-saturated, preformed expansion-joint materials interacted and caused a softening of the sealant.

It is probably easier to forecast low service life based upon physical deterioration than it is upon chemical degradation. We can measure abrasion due to wear. We can replace glass with plastic in school buildings to reduce breakage. But it requires a knowledge of chemistry to forecast interaction and degradation of manmade materials due to water, temperature, and solar radiation. Moisture can cause galvanic action in metals that will cause one of the metals to corrode. Ultraviolet light can cause the deterioration of certain organic materials. Temperature increases can cause materials to hasten their chemical attack upon one another.

The designer and specifier must take into account function and environment so that the material selected will provide the optimum solution.
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Corporate Involvement in Architecture and Engineering—Part II

This second of a two-part article further discusses the legalities of corporate involvement in the practice of architecture and engineering.

In January, we discussed the case of Food Management Inc. v. Blue Ribbon Beef Packing Inc. (U. S. Circuit Court of Appeals), which considered the lawfulness of the practice of architecture and engineering by a corporation in Iowa. Under the Iowa Registration and Licensing Law a corporation is permitted to practice architecture if all the architectural services that are performed are "by or under the responsible supervision of an architect or architects qualified by registration." The court held that the corporation had violated the statute because ultimate responsibility for the work was in the corporation rather than in the architects retained to perform the services. The court further held that in collecting data in connection with the building project, the corporation was exercising a professional function in violation of the Iowa law.

The corporation had argued that any services it rendered, as distinguished from the architectural and engineering firm it retained, constituted an isolated transaction and therefore did not constitute a violation of the statute. In support of this argument, the corporation relied upon a New Jersey decision in which the court concluded that its licensing statute was directed against the engaging in or pursuing the profession of architecture and professional engineering as opposed to a single isolated incident arising from unusual circumstances. The U. S. Circuit Court of Appeals concluded that this legal precedent was not applicable, stating:

"One instance of untrained, unqualified, or unauthorized practice of architecture or professional engineering — be it an isolated transaction or one act in a continuing series of transactions — may be devastating to life, health, or property. To exclude an isolated transaction from the proscription of the registration laws would seriously weaken the purpose of such laws at a point where their prohibition of professional services may be most needed. It is therefore clear to this court that the Iowa Legislature intended to require registration as a prerequisite in all cases to the practice of engineering or architecture. We therefore agree with the obvious holding of the trial court that one instance of rendering unlicensed engineering or architectural services is sufficient to bring the act within the ambit of the Iowa registration statutes."

The corporation sought to recover from the owner in this case not only the fee for professional services but for other nonprofessional services as well. The Federal court ruled that although architecture and professional engineering contracts which violate licensing statutes are generally unenforceable, it did not necessarily follow that the corporation would be denied recovery for services it had rendered which did not violate the licensing and registration laws of Iowa. The court said:

"In an attempt to harmonize the public policy of the registration statutes with the policy of the law to sustain contracts where to do so would work no violence, and in view of a court's natural aversion to unjust enrichment, we encounter no difficulty in concluding that the contract here is divisible into two parts — legal and illegal. This illegal portion of the contract relates to the architectural and engineering service which Food Management agreed to perform in violation of the Iowa registration statutes. The legal portion of the agreement relates to those services which are neither architectural nor engineering services."

The owner in this case had sought restitution of the moneys it had paid to the corporation for professional services prior to the termination of the corporation's contract. The court concluded that it would not be equitable to allow the owner the benefit of the services and at the same time a recovery back of the moneys paid. The court stated:

"We now turn to Blue Ribbon's counterclaim seeking restitution of the $24,000 it paid to Food Management prior to termination of the contract. There is no provision under the Iowa registration statutes for the recovery back of money voluntarily paid under an architectural or engineering contract to an unlicensed party. To allow both retainment of services and recovery back of money paid is not necessary to effectuate the public policy of the licensing statutes, and there would be no inequitable harm to Blue Ribbon in not invoking restitution because, as found by the trial court, it obtained the service it had bargained for."

The owner further sought to recoup the fee he had paid by contending that the corporation had guaranteed the costs of the project which had been exceeded. No such guarantee or limitation was contained in the written contract. In this connection, the court stated:

"It is the general rule that an oral cost limitation imposed upon an architectural or engineering design, where not contradictory to the express terms of the written contract may be admitted into evidence. . . . It is also the general rule that there may be no recovery for engineering or architectural services where the actual cost of the structure substantially or unreasonably exceeds the estimated cost limitation, unless the cost excess is attributable to the owner's action."

The court concluded that the owner could not recover back the moneys paid on this ground as the owner had not in fact established that a cost limitation had been imposed upon and accepted by the corporation at the time the agreement was made.
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New Haven, Connecticut • Ontario, Canada
Reviewed by Dore Ashton. The reviewer, a well-known critic and historian, is head of the Department of Art-Architecture-History at Cooper Union, and author of the recently published A Reading of Modern Art.

Here is the irony of the situation: A serious cultural commentary on the packaged nature of current aesthetic experience issues forth in the form of a package. If an essayist as intelligent and civilized as Rosenberg were published in France, for instance, he would probably still be between the thin yellow covers of a small, sparsely illustrated book, a reading book. Here, in large format with 171 illustrations, is a frank admission that the packaging mentality has gone so far in our country that commentary itself must be packaged, or will not be.

These essays were once packaged in the back pages of the New Yorker Magazine (with the exception of the lead essay, "Art and Its Double") which, having been first published in France, shows a bit of French culture in its play on Artaud in the title.) They are consequently diverse, and often the direct response to what happened to be around for comment. And though Rosenberg resolutely opposes the artificial production of historical labels rampant in New York, he has had to resort to them extensively in these essays which were once, after all, monthly reviews.

The high value of Rosenberg as a reviewer resides in his being, like Baudelaire on whom he comments in this book, partial, passionate, and political. He is partial to cultural rather than technical and art historical analysis; he is passionate about those artists whom he best understands (chiefly deKooning), and he is political in his shrewd distinctions between the true and the less true modes of presenting works of art. Rosenberg's forte is still his fundamentally political assessment of culture — political in the sense that he is interested always in the social organism as a whole.

Within the organism lies the realm of art which, he tells us in the provocative title of his book, is being subverted by that other much more powerful presence in society, the media. No matter how specific some of these essays are (those on individual artists such as Pollock, Gottlieb, Cornell, Klee) Rosenberg is able to broach his general urgent themes with impressive skill. They are: the changing nature of art in a technological society; the pernicious influence of art history and, implicit rather than clearly enounced, the superiority of the "action" painter as defined by Harold Rosenberg, and redefined and redefined.

He sounds his warning note in "Art and Its Double" when he rhetorically asks how, given the similarities between works of art and the art products of the media, can art be distinguished. The answer is: through art history, and its main perpetrator, the museum. By its reference to itself and to its putative future, art today distinguishes itself (barely, Rosenberg implies) from those other packages dealt out by the media. "The sum of it is that the history of art as a distinct category of artifacts seems to have reached a dead end. If art is to survive as an activity different from that of media craftsmanship it will have to find a more fruitful basis than mere interest in itself and its past."

Otherwise, as he points out in "Time in the Museum," a review of a Museum of Modern Art exhibition purporting to summarize the 1960s, serious misrepresentations occur, and they occur because of the packaging collective mentality of art-history entrepreneurs in the museum. "That living artists were being expelled from the present . . . was hardly to be taken lightly." They were expelled, Rosenberg observes, because "Time in the Museum is a grocery list of the most actively publicized names, labels and events." He notes the tendency to expel middle-class values ("the aesthetic of cleanliness has a political dimension; the fuss about banning thick paint . . . derives from the wish to affirm middle-class tidiness and security") and to welcome the tendency to curtail individuals in favor of objects. All of this, in his view, is a clear manifestation of the encroachment of the media. Museum entrepreneurs, as he points out repeatedly, are no longer the keepers of tradition, or the chroniclers of periods and styles in art, but are handmaidens to the media, using media techniques throughout, including even the old advertising trick of producing a new vogue by dint of handy slogans and subliminal repetitions.

Although Rosenberg never prescribes an antidote, it is clear that he regards the attitudes of those artists whom he once dubbed "action painters" as healthy buttresses against media mentalities. Theirs is the most openly Bohemian, seeking "a recasting of life" that extends painting into the issues of politics, ethics, psychology, and the future of culture. They are best able to live up to Rosenberg's definition of art as "an activity that engages the entire being of individuals." Because of their interest in ethics (the action of their action on the canvas is, by his earliest definition, ethical), they are best geared to the vital act that will remove them from the art-history-college-outline package. That act is psychologically established as metaphysical and not merely the exercise of a set of skills, or a knowledge of the stages of modern art.

The one problem with Rosenberg's reassessments of his original doctrine of the action painter is that he has failed to see that aspect of Pollock and deKooning which resists best the history makers—their form-making originality. Since Rosenberg's appreciation of these two outstanding practitioners of action painting is based on his admiration for the principle of process, and since he sees them as incantatory rather than formal, it is natural enough that he avoids close analysis that (Continued on page 128)
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Gothic Europe

By Sacheverell Sitwell

Reviewed by Walter Kidney,
The reviewer is a farmer Associate Editor of P/A.

It is not really unkind to say that from a Sacheverell Sitwell book one seems to learn as much about Sitwell as about his subject. True, his personality tints, and for that matter distorts, his theme. He is not pretending, however, to "cover" the sub-
ject; his method, rather, is to freshen it up by bringing to it his experiences, his mental associations (sometimes very personal ones), and the fragments of knowledge he has gathered here and there. Since his range of experience is a very rich one, and since he writes remarkably well, his public willingly does without a complete coverage of the subject, which after all can be found, often with greater accuracy, in other books.

Anyone who wants to know all about Gothic architecture, then, had better go elsewhere: to the appropriate Pelican history, or to John Harvey's *The Gothic World*, or even to Viollet-le-Duc's *Dictionnaire* of a century ago. Sitwell's Gothic is old-fashioned aesthete's Gothic—not ethical and rational construction, not a jungle gym of forms and symbols for art historians to clamber nimbly over, not even a crystallization of and witness to the True Faith, though structure, symbolism, and religious feeling have a part in his account—but an affair of lively silhouettes and forms in the sunlight, of motifs, and patterns, and colors, creating wonder and delight in the Here and Now and inviting empathy with the natives of the There and Then that had the spirit to contrive these things. The choice of monuments is personal and subjective, just as it is, for instance, in the guides that Ian Nairn is writing, but the presentation is done in a gentler manner, one that might be termed neo-Victorian. The words flow comfortably and a little oddly, now describing a detail in a perfectly objective way, now comparing, for instance, a red sandstone cathedral* to the dark red engines of the Midland Railway running from St. Pancras in the Edwardian period. The odd bits of knowledge and the fragments of personal reminiscence crop up constantly. Seeing a medieval Arcadia in southwest England, he remembers reading about "the Kingston 'black apple', from which a dark or even blood-red cider was produced; 'and it was the custom till within the last few years for rustics on Christmas eve to go to every orchard and sing to the apple-trees to make them abundantly fruitful.' " And he relays to us that, at All Saints Pavement, York, a "'lamp was hung at nightfall as a beacon for travelers on their way to the city through the for-"
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(Continued from page 133) est of Galtres." Again: "Twice in my life I have heard the hej-nat — the fanfare from the high tower, blown at every hour in the four cardinal directions, and stopping in the middle where the Tartar arrow killed the trumpeter — in Cracow where Dr. Faustus studied in the schools of magic." Or of Seville: "Perhaps in this city of the sequidilla and the sevillana it is only to be expected that there should be dancing with castanets before the high altar." One intriguing side issue that crops up here and there is the symbiotic relation of the nineteenth century to the Gothic as we know it. Victor Hugo (in Notre-Dame de Paris), Balzac and Dore (in the Contes Drolatiques), and Viollet-le-Duc in his writings, sketches, and restorations, created a Gothic that was at least partly illusionary but that had a wonderful vitality of its own and that has perhaps conditioned our view of the "real" thing. Indeed, Sitwell cites an article asserting that the famous grotesques of Notre Dame (including the pouting Stryge, shown on the jacket) were made up out of whole cloth by Viollet-le-Duc around 1850: accepted by almost everybody as true Gothic, they are really magnificent pieces of pastiche art replacing the originals that had been destroyed a hundred years before.

More specifically, the book is divided into halves. The first of these deals with English Gothic — towers, cloisters, fan vaults, roofs, flushwork, etc. Characteristically, Sitwell approaches the theme of the tower in a leisurely manner, with references to medieval England and medieval building, and a tour through the landscape of one of Breughel's impressions of the Tower of Babel. Most of this first part concerns architecture, but it ends with a chapter on opus anglicanum, the rich appliqué work on ecclesiastical vestments that was highly prized all over Europe. The second section begins with a "fantasia on the Gothic," then goes on to describe the Gothic of Germany, France, Italy, Spain, and Portugal, with a chapter on Tapestries, and ends with a "charivari of the Gothic," which deals, surprisingly, with architecture in North Africa and the Near East.

*He abominates red sandstone, which puts him at odds, more or less, with cathedrals of Worcester, Lichfield, Freiburg-in-Breisgau, and Strasburg, as well as with the Lorenzkirche in Nuremberg.

(More Book Reviews on page 138)
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On Readers’ Service Card, Circle No. 398

(Continued from page 136)

Towns and Buildings
By Steen Eiler Rasmussen

Reviewed by Walter Creese
The reviewer is Professor of Architecture at the University of Illinois (Urbana).

This is a serious and hopefully lasting essay, delineated by charm. The MIT Press has for some while been reprinting “modern classics” and surely here there is no misnomer. The date of first publication in Danish of 1949 signifies its earliest motivation. It embodies one of those rare moments in the 20th Century where there is open acknowledgement that architecture and planning are affirmative representations of the impulses of human intellect, and this process should not be drudgery. Coming after the hurt and stress of World War II, the mood is not only retrospective, but expansive. Professor Rasmussen never lets us forget that the finest manifestations in a city, whether a huge square or a single building, arise from many and diverse factors—art, science, climate and politics—but he never ignores the necessary ties of custom and place, and the unique nostalgia and fragrance of memory that arise from that specific condition.

We roam through Peking, as well as Rome, Paris, London, Turin, Copenhagen and Amsterdam; he goes as he pleases; we visit the ideal cities of the Renaissance, the villa, the banlieues, and our guide is ever willing. He understands the British so well, as was also demonstrated in that earlier Rasmussen masterpiece, London: The Unique City. In Towns and Buildings, in the chapter entitled “A Tale of Two Cities,” comparing and contrasting London and Paris, in its own place, indeed we welcome the experience. In the same manner, we are not offended but pleased that a description of European cities begins with a description of Peking. It is this slight offbeat that captures the attention in exposition and illustration. The reprint gives a richer and blacker tone to the many line drawings than even the original edition. One senses this, especially in the tiny marginal vignettes, such as “Etched sketch by Claude Lorrain,” or “The medal struck to commemorate the laying of the corner-stone of Charlot-
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Obituaries

Architect Ernesto Rogers died near Milan on November 7, 1969. He was best known as the reviver and editor of the distinguished Italian journal *Casabella*, a post he held since 1954, and was one of the foremost leaders of the architectural *risorgimento* in postwar Italy. Born in Trieste in 1909, Rogers graduated from the University of Milan in 1932, at the
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1939 Sterling Hall of Medicine Ext.
Architect: Grosvenor Atterbury
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Architects: Douglas Orr and L. I. Kahn, Associates
1952 Accelerator Laboratories
Architects: Saarinen & Saarinen, Douglas Orr, Assoc. Architect
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ARCHITECT—Major midwestern architectural firm has opening for a project manager with proven administrative and design ability. The position involves supervision of project teams, client contact, and co-ordination of engineering and other disciplines through to project completion. Diversified, nationwide practice includes highest quality educational, industrial, institutional and urban projects. Superior opportunity to progress with the firm and move into key position. Moving expenses paid. Salary open, but commensurate with qualifications. Send resume in confidence to Box #1361-910, PROGRESSIVE ARCHITECTURE.

ARCHITECT—20 years independent practice, 25 design awards and numerous published works, seeks association with medium sized office in charge of design and production. Medium sized southern city preferred. Box #1361-960 PROGRESSIVE ARCHITECTURE.

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ARCHITECTURAL DELINEATOR—One of the nation's finest architectural rendering firms seeking nation's top talent in field. Key personnel required in all phases, cars, figures, landscaping, interiors and perspective layout. Send samples, resume, wage requirements. (All replies acknowledged.) Art Associates, 4041 W. Central Ave., Toledo, Ohio 43606.

ARCHITECTURAL DESIGNER—Design oriented, West Coast Architectural and Planning Firm has opening for a creative designer to develop concepts, work with clients, and control design development through production phases. Diversified and expanding nationwide practice. Send confidential resume including salary requirementsto: Walter Richardson Assocs. A. I. A., 230 E. 17th Street, Suite 200, Costa Mesa, California 92627.

ARCHITECTURAL DESIGNER—Design oriented, medium-size architectural and planning firm, located in the midwest area, has opening for a creative designer to develop outstanding concepts, work with clients, direct design teams and control design development through production phases. Diversified and expanding nationwide practice includes significant educational, industrial, institutional, housing and urban projects. The position offers excellent opportunity for professional development and association. Liberal salary based on talent, capability and experience. Replies will be handled confidentially and should contain sufficient information to establish a basis for further discussion. Box #1361-913, PROGRESSIVE ARCHITECTURE. An equal opportunity employer.

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DRAFTSMEN—Association of long established architect firms has openings of two to three years for six experienced draftsmen for producing working drawings for new state medical school and other public projects. Write giving full information regarding experience to: Mr. G. Kinoshita, Moffat & Kinoshita, 55 Eglington Avenue East, Toronto 315, Ontario, Canada.

LANDSCAPE ARCHITECTS—Opportunities with New York State, starting salary $10,195, $12,325 or $15,590 depending on experience. New York State residence required. Write: N.Y.S. Dept. of Civil Service, R-897C, Albany, New York, 12226.

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PROJECT ARCHITECT—A leading midwest architectural firm with a nationwide practice needs imaginative and ambitious architect to direct and coordinate project design teams on a wide variety of large scale institutional, industrial, educational, housing and urban design projects. Excellent salary and meaningful opportunity for advancement. Applicant must possess high professional standards and leadership capability. Send confidential resume to Box #1361-915, PROGRESSIVE ARCHITECTURE.

PROJECT ARCHITECT—Expanding Architectural/Engineering firm has opening for "talented" Project Designers and Draftsmen. Located in Western New York and maintaining a regional practice through the states of New York, Pennsylvania, Vermont, New Hampshire and Connecticut, Continued on page 162
Prestressed concrete offers many advantages and Newport Towers Apartments feature most of them

When Nicholas Pollaro, President of Danpolgo Corporation, started planning his 238-unit Newport Towers apartment complex, several 'musts' were stipulated: All units must be soundproof and fireproof. Construction must move rapidly. Good aesthetics must be evident. Shoring must be eliminated to enable all trades to work quickly. And the job site must remain relatively clean during construction.

Mr. Pollaro's list of 'musts' made his development a natural for prestressed concrete construction. Prestressed concrete provided Newport Towers with the strength, safety, economy and good looks demanded by Mr. Pollaro . . . and by many of today's architects and developers of residential, educational, transportation and business construction projects.

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JOBS AND MEN

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this firm can provide exciting challenges to architects oriented to the design of medical, educational, commercial and industrial facilities. License and/or degree helpful, but not mandatory. Please send confidential resume, including salary requirements to: Mr. Franklin D. Guidone, AIA, Director of Design, The Cannon Partnership, 2657 Main Street, Niagara Falls, New York 14305.

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SITUATIONS WANTED

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ARCHITECT—M. Arcel, N.Y. registration 11 years varied experience in school, sports stadiums, hospitals, shopping centers and interior space planning. Offer to check and coordinate architectural, mechanical and electrical drawings for overburdened offices. P. O. Box 793 FDR Station, New York, N. Y. 10022.

ARCHITECT—AIA-NCARB—20 years experience in all phases of work. Present duties as Project Architect, client contact through supervision, in multi-million dollar range. Desire position of responsibility and opportunity. USA or abroad. Married with family. Resume and references upon request. Box #1361-965 PROGRESSIVE ARCHITECTURE.

ARCHITECT—AIA, NCARB, M. Arch, 32, family, design oriented, rendering ability, over eight years comprehensive experience. Desire position offering diversity and professional growth with associateship or partnership potential. Resume upon request. Box #1361-966. PROGRESSIVE ARCHITECTURE.

ARCHITECT, AIA, Ohio license since 1957, Age 37, family, last 10 years as associate in Architectural & Engineering firm as Architectural Department Head and specifications writer in medium size firm, industrial and commercial work. Box #1361-967 PROGRESSIVE ARCHITECTURE.

ARCHITECT, AIA, registered several New England states, married, 30, family. 10 years diversified experience all phases of practice. I am presently a project manager in a New Jersey office and would sincerely like to move to a New England office offering equal or better growth opportunity. Box #1361-968. PROGRESSIVE ARCHITECTURE.

ARCHITECT—AIA, CSI, NCARB, 44, family. Phasing our fourteen successful years of own practice including wide range of building types and experience. Seeking position as Project Architect, 11 major firm or staff architect with institution or corporation. Preferably west coast or abroad. Resume, references on request. Box #1361-941 PROGRESSIVE ARCHITECTURE.

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ARCHITECT—married w/family. Desires to relocate in southern California, 18 years experience in widely varied types of buildings: highrise banks, department stores, shopping centers, housing, hospitals, business interiors, educational, public and recreational facilities. Mostly in development of working drawings, coordination and supervision. Resume on request. Box #1361-971 PROGRESSIVE ARCHITECTURE.

ARCHITECT—Registered, Illinois, Michigan, Indiana, Florida, NCARB. Desires associate status in progressive architectural firm. Will invest towards partnership. Fourteen years experience involved in a multi-million dollar project and down, as project architect job captain, designer, specification writer, inspection. Age 36, married, willing to travel. Resume available upon request. Box #1361-972 PROGRESSIVE ARCHITECTURE.

ARCHITECT/DESIGNER—AIA, NCARB—28, Six years as designer and production coordinator. Nationwide projects include university housing complexes, highrise commercial, schools, churches. Seek permanent position in growing, design oriented firm. Southwest/South/Midwest. Resume and slides on request. Box #1361-973 PROGRESSIVE ARCHITECTURE.

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LIBRARIAN, M.L.S., highly experienced in special libraries, available to establish or maintain architectural library. N.Y.C. Box #1361-974 PROGRESSIVE ARCHITECTURE.

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JOBS AND MEN
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architectural practice with institutional, educational, ecclesiastic, industrial and residential projects. Also having administrative ability, specification writing, client contact through supervision of projects, complete coordination and follow through of all engineering disciplines to project completion. Seeking associateship and/or business arrangement with a progressive contemporary oriented architectural firm to participate in the growing process of the firm at the project architectural level with full responsibility and to achieve growth with highly motivated architectural environmental oriented team. Location confined to the Boston area. Reply to: Box #1361-977 PROGRESSIVE ARCHITECTURE.

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ARCHITECTS’ & DESIGNERS’ PERSONNEL AGENCY—667 Madison Avenue, N.Y.C. (61st St.) Templeton 8-3722 Muriel Feder maintains close contact with the entire architectural & design fields, for the past 22 years. The “professional” job consultant for New York City and the nation, at all levels in the areas of architecture, planning, construction, engineering, interior design, space utilization, product and industrial design and exhibition design. Office personnel for the above fields. Confidential interviews by appointment.


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Outstanding results—designed for Cemeteries, Public Buildings and Factories—allowing covering, thin as 1/6 inch.

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Can be feather-edged sets overnight
Griat Stronger than Steel

For spalled or cracked concrete
STA-CRETE Epoxy held when beam is broken

For bonding new concrete to old
No chipping or taffing necessary

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14 decorator colors in stock. Match color available in quantity.

Also in colors
Synthetic rubber caulking compounds for expansion joints and window glazing.

Reliable
Test Patch—you’ll be convinced. Trial kit $2.00 to cover handling.

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1 Nothing to it. TRIMWALL movable partitions merely snap together like this.

2 Then you hide the joints with an easily inserted batten strip.

3 And you have a handsome wall, pre-decorated in simulated wood grain, a pattern, a texture, or other dramatic effects.

4 And what a wall! The panels are FLINTKOTE® Gypsum Wallboard. Solid. Strong. Fireproof. And acoustically they have sound control to an estimated STC 40.

5 TRIMWALL partitions look like they’re built for the ages. You’d never guess you can take them down and set them up again at the drop of a vice president.

Get the facts now about TRIMWALL movable partitions.

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See the Alma Series 8100 in our showrooms in High Point and Chicago (Space 1140, Merchandise Mart). For a full-color brochure illustrating this and several other Alma Series, write Alma Desk Company, Dept. PA-02, Box 271, High Point, N.C. 27261.

On Readers' Service Card, Circle No. 320
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Ready...set...go! Now, Kentile invites you to be as daring and diverse as your imagination allows. By combining Blairwood® Solid Vinyl tiles and planks, you can custom-design one luxury floor after another...and never repeat the same design twice! Start with Blairwood tiles as your elegant, traditional parquet base. Then add Blairwood plank borders to create intriguing checkerboard, basketweave, bold horizontal effects...and more. Both tiles and planks are available in four handsomely contrasting colors: English Walnut, Weathered Cypress, Silver Teak, and Royal Pecan (shown below).

Thickness: ⅛" Tile size: 12" x 12". Plank size: 4" x 36". For a complete set of Blairwood samples, call your Kentile® Representative. And always consult him for professional, unbiased advice on everything we make.