To the executive a Hiebert BFC desk is a command post from which he commands. A professional tool with these executive features. • A center drawer large enough for small items. • Three man-sized side drawers for man sized storage. • A large knee-hole designed for not only knees but legs. • A large top for large thinking. • Polished aluminum legs that will stand the weight of time. • The desk that is appreciated by all... deserved by few.
WOOD/LINE accents the texture and patina of real walnut with the cool (allover glow) diffusion of milk white plastic to provide the handcrafted look in lighting.

WOOD/LINE is constructed for the quality conscious user whose building demands an integrated specially designed atmosphere that specifically yet subtly infers quality. WOOD/LINE provides that aura and still fulfills its basic photometric requirements to provide lighting and brightness levels that are in keeping with quality illumination. WOOD/LINE is structurally engineered to take into account the permanence and beauty of natural hard woods and the structural strength of the reinforcing steel which form its basic backbone. WOOD/LINE is specially designed to be installed as a basic part of the GLOBE unitized electrical system. (see page 3)

ORDERING INFORMATION

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*Tandem fixture supplied using 1-96" wiring channel, 2-48" UEA's, and 2-48" diffuser assemblies.
U.E.A. by GLOBE ... "plug-in" interchangeability of 2 and 4 lamp assemblies into a common wireway, achieves a lighting system that is rearrangeable. Troubleshooting and fixture maintenance is done away from the ceiling line. Simply plug-in a spare Unitized Electrical Assembly as you remove an inoperative one. No more office staff interruptions or lengthy "on ladder" maintenance. Movable polarized receptacles adapt to modular requirements.

WOOD/LINE is the newest fixture series which has been specially designed to integrate with GLOBE's unitized electrical assembly system.

This unique system permits instant fixture replacement and rearrangement by its plug-in construction, for tomorrow's changing lighting needs.

Since the WOOD/LINE U.E.A. system may be specified as a complete fixture or as various components for specific lighting arrangements, complete flexibility is assured when wireway closure plates are specified to close off sections where the U.E.A. has been removed.

As shown in the cross sections below the installation characteristics of the remote wireway prevents ceiling temperatures from exceeding 70 degrees C . . . Isolation of the ballast outside the lamp chamber provides ballast temperatures that are well below maximum recommended rating. Lamp heat is conducted away and radiated into free air space.

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GLOBE's unitized electrical assembly system

Lightweight continuous wireway with sliding female power receptacle permits instant fixture rearrangement.

Completely prewired unitized electrical assembly with sockets, ballasts, and lamps "plugs in" for light — plugs out for fast maintenance.

Hooks on...lift and hinge diffuser basket provides immediate access to lamps.

WALL/LINE is designed for ceiling mounting. However, it may be pendant mounted by means of GLOBE'S S2-N stem assemblies.

WOOD LINE SPECIFICATIONS

The fixture shall consist of three separate and complete assemblies...a wireway, a unitized electrical assembly (U.E.A.) and a hingeable and removable shielding assembly. WIREWAY — for ceiling or pendant mounting, individually or in continuous rows. Each 48" section shall accommodate a polarized female receptacle. Suitable joiners shall be provided for continuous row mounting and alignment. U.E.A. shall be a complete assembly consisting of reflector, socket, ballast and associated wiring, terminating in a polarized male plug. Ballasts shall be ETL certified, thermally protected.

DIFFUSER BASKET assembly shall be constructed to hinge from either side without latches or other mechanical devices.

Full length of all metal reinforcing members shall be affixed along the entire length of the wood structure. This member provides additional structural stiffness to the entire diffuser assembly.

FINISH — white enamel, electrostatically applied over zinc phosphate undercoat. Bondorite labeled.

All visible wood surfaces shall be manufactured from select clear grain walnut. All mitered joints shall be of doweled construction, with glued tongue and groove interlocking sections. All walnut surfaces shall be clear satin gloss lacquer over natural walnut.

MOUNTING — fixture shall be UL listed...approved for direct mounting on combustible ceiling.

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Not many sculptors can ·permit themselves to dream ·in Renais­
sance scale ·anymore; and when they do, their reveries are usually
rudely cut short by economics.
Among the few 20th century sculptors fortunate enough to realize
their visions in monumental scale is Isamu Noguchi. With several
previous large-scale projects under his belt, Noguchi was ready to
tackle a truly classical problem when he was approached to design
a sculpture in a closed court of the new Beinecke Rare Book and
Manuscript Library at Yale.
The result is the marble “garden” recently completed — a prodigy
of thought, skill and topographical perfection. Closed in by four
glassed walls, the courtyard can be seen either from above, where
the spectator sees a resplendent marble plaza on which a pyramid,
a circle and a square block standing on its point, compose them­selves in a singular unity. In its marble totality, this plaza takes on
a sacred, aristocratic, classical aloofness entirely congruous with
the principle of a rare book library (although it is not damply
sepulchral as the building itself is.)

Seen from below, that is at ground level, the courtyard is like
a great Renaissance plaza. There is a feeling of extending prospects,
cleverly induced by Noguchi’s patterning of the marble pavement
in intersecting circles and squares. The arcs and straight lines,
controlled like magnet filings, radiate and give the illusion of great
expanses. One portion of the expanse is dominated by a pyramid
which rises in perfect symmetry, catching the sun in all its seasons.
Off-centered, and close to the glass wall, is the giant pierced disk,
like an ancient bracelet, carved so subtly that as the spectator
moves his eye on its surface, the circular center appears to be an
oval. As the pyramid, rising from the marble pavement, symbolizes
the earth, so this towering circle symbolizes the sun, or a magnet,
or just plain energy. Noguchi, with his characteristic interest in
cosmic mechanics, has made of this shape a crucial gathering point
for all the shapes in the ensemble. The sharp edges of the marble
block on its point, and of the slanting walls of the pyramid seem
to refer back to the continuous circling motion of the great disk.
Here, by the way, the wonderful quality of inner illumination
germinns, has made of this shape a crucial gathering point
for all the shapes in the ensemble. The sharp edges of the marble
block on its point, and of the slanting walls of the pyramid seem
to refer back to the continuous circling motion of the great disk.

Isamu Noguchi and marble water garden. Photo by Arthur Lavine

Noguchi likes to fantasize the possibility of defying the ineluctable
laws — which he does in the dense block resting so precariously
in air.

This instinct for the natural space man experiences — that is,
the spaces he not only knows, but feels — is dominant in another
project almost completed, the water garden for the Chase Manhattan
Bank in New York. This is again an enclosed space — a glass-walled,
circular well sixteen feet below an open plaza. It is intended to
be a pool punctuated with a landscape of natural rocks, its bed
designed by Noguchi to undulate in concentric patterns.

As the water patterns were not yet worked out when I saw the
garden, I can only speak of the ingenious way Noguchi handled
the rocks. Varying in size, they were selected by him in Japan for
their shapes and patinas. They come from the swift-flowing Uji
River whose current has fashioned Bernini-like concavities and
bosses, or smooth-walled, massive curves. Noguchi has placed them
irregularly, some standing on points (which is what I mean by
fantasy). It is his defiant answer to the oriental rock garden,
intended to be at one with earth and the principle of gravity.

The sensation of levitation, characteristic of much of his recent

Isamu Noguchi, Court Sculpture.
work, is not only counter to the oriental principle, but counter to the nature of the rock itself. The assertion of the artist is made in such audacious terms that it convinces.

It is to Noguchi's credit that in this "garden", nestled in the heart of skyscrapers, he fashioned a classical oriental rock garden, as he did, for instance, in the Paris UNESCO building.

* * *

The odd career of Morris Louis, a Washington painter who was born in 1912 and died in 1962, is incompletely explored in the present Guggenheim Museum exhibition. The show limits itself to works from 1954 to 1960, when, according to Lawrence Alloway who selected it, Louis arrived at his characteristic style.

But arrived from where? The exhibition avoids the question. Its purpose is to show that even though Louis only attained recognition in his last few years, he is an authentic representative of what is known as the New York School. Once identified as a New York school painter, Louis then moves back into the perspective of his own generation — those artists who were born before the end of the First World War, and whose rebellions were so important for American painting.

I don't object too much to this emendation of the record, since it really doesn't matter who is first or last in the exploitation of a living style. But I'm not so sure that the careful selection of his paintings doesn't leave out too much. I feel that Louis' tentative explorations of the early final statement. The very unity of the exhibition, its polemical intention, gets in the way of understanding Louis' temperament.

For as I remember, Louis himself had a difficult time determining how exactly to execute. The first paintings I ever saw by him were frankly indebted to Jackson Pollock. Louis had taken the whipping arabesques of Pollock's abstract works and set them in fine turmoil on unprimed canvas, accelerating his tempo with overlays of gold and silver paint and creating feverish commotions from edge to edge.

These paintings were probably dated 1955 and 1956, although they were exhibited in 1957, and Alloway tells us that Louis destroyed many paintings from that period. But surely not all! At that time Louis would already have been influenced by Helen Frankenthaler, whose technique of floating thin color on unprimed, unstretched canvas on the floor, he had adopted. Signs of her conception of space — as an unlimited ether in which loosely determined forms glide — were apparent in those paintings where thinly stained backgrounds provided a sensation of depth.

The implication in the omission of those paintings is that Louis was temporarily waylaid by a style inimical to his personality. Earlier, as Alloway demonstrates by including paintings from 1954, he had worked with considerable reserve, or rather, timidity. Those paintings are thin and flat, and, in the down-trailing verticals, pre-embrow.

The Maryhill Museum of Art, Vashon Island, Washington

* * *

As far as I can tell, Louis' idea was to find a different, entirely personal kind of picture space. If at times this image transcends his "problem", as it does in several of his late paintings, that is still only a secondary concern. What matters is to watch Louis as he cuts down his palette, simplifies his forms almost to the point of no-form, applies a principle of symmetry, and uses his colors mainly to create the concealed space peculiar to his own vision.

All this is most easily seen in the colossal (in size) paintings of 1958 and 1959. In these, Louis' habit of floating film upon film of thin acrylic color results in gloomy greenish-rust monoliths — huge, centralized shapes that rise heavily toward a rainbow apotheosis. At the crest of these flattened-out anvil Louis weaves a garish pattern of acid primary colors, the kind you see in Chromo reproductions of sunsets. These rainbow arches are layered, as clouds seen from an airplane. This crest of billowing color is Louis' region. That is, he indicates the origin of the flat gesture, and poses his problem: how to give a sense of space without portraying space. It is an interesting problem which did lead him to paint several striking canvases.

One of them particularly, a gigantic vertical wall in the shape of a geyser, successfully scales the terrifying emptiness to reach an apocalyptic crest. Its mauve and green understones give dramatic suggestions of portentous, supra-human events. There is something Goyesque in the starkness of this particular image, and I was genuinely moved by it. Even its ragged edges, falling away from the central form, contribute something awesome.

But such sobriety and monumentality only occur in a few of Louis' late paintings. One or two others, with strange phallic and fungus shapes and neutralized color also offer a stirring strangeness, but such paintings are decidedly in the minority.

In other works, Louis' use of scrims of fully saturated color, and his insistence on symmetry have something in common with the ornamental weakness that lurked in the heart of art nouveau. Repetitive forms, such as the spear and glacier shapes in a yellow painting of 1958, show Louis indulging in an ornamental facility that makes of so many of his paintings the pleasant, lightweight canvases they are. Ornamental is always a suspect word (ornamental like Matisse, or like Dufy?) and need not necessarily be taken in its pejorative sense. In Louis' case, it would mean only that in his absorption in his "problem", he accepted the handiest solutions too often. His problems themselves are too readable: how to establish the plane, how to make the colors "read", how to avoid conventions of intricacy that would spoil the idea of the flat plane and controvert Louis' concept.

Louis' ornamental urge was most apparent in the last paintings which are unaccountably excluded from this show — the large, simple swaths of stripe huddling at the center vertical axis in which Louis elucidated his concealed space with an economy of means that defied his purpose finally. Via these paintings Louis came to be known as a colorist, although to my eye he was maladroit in getting the most from his saturated canvases. He was far from the optical precision of a Mondrian, an Albright or a Delaunay.

In his introduction, Alloway coins a term for painters such as Still, Newman, Rothko and Lewis. He calls them "field" painters, for whom "the painting must be seen as a single field, a field not devoid of incident, but equally, not reducible to a scale of different sized texts and marks." This is true — very true — for Newman, of course, but Still, and Rothko? In Still it is precisely the jagged, different-sized forms and fretted textures that hold the eye to the field, and insist that there is more than meets the eye behind the plane. Rothko also insists on what goes on behind the flat plane, leaving the precise nature of his sub-plots relatively ambiguous. It is only Newman who works with the inviolate plane.

Now where, among these "field" painters, does Morris Louis fit? Somewhere between Still and Newman, I suppose, but lacking their toughness. He was tempted by the idea, came to believe in it with an exclusive passion, and ultimately painted it. But his illustration of the idea shows only that the idea itself is academic and inhibiting.

Morris Louis

Acrylic rein paint on canvas, 917/8" x 140"

Courtesy The Solomon R. Guggenheim Museum.
HISTORY — IS IT A DOCUMENTED LIE?

It is well periodically to reassess our past, but not in the Orwellian sense of correcting or destroying embarrassing portions of it. "So very difficult a matter is it," wrote Plutarch, "to find out the truth of anything by history."

Correction seems to be the intent of The Gilded Age (U. of Syracuse, $5.50), an absorbing collection of monographs on the period 1865-1900, edited by historian H. Wayne Morgan. By studying many facets of that earlier ginger-bread and "public-be­damned" era, these highly readable and thought-provoking essays by modern historians, provide some fresh insights into the Age that has been called Gilded and Guilty. Ari Hoogenboom writes in his treatise on "Spoilsmen & Reformers", one of the most pro­vocative of the collection: "All the world loves a scandal, and the historian is loath to abandon the pleasure of dispensing 'vicarious sin'." This, states Hoogenboom, is the reason for the bad press which the post-Civil War generation has received. Other chapters point out that despite penny-dreadfuls, Horatio Alger could boast of a Mark Twain or a scientist like Josiah Willard Gibbs, second only to Einstein in the field of theoretical science. The Gilded Age, a valiant attempt to correct much of the record, fails to dispel the aura of corruption and consciencelessness which clouds the period. Despite the heaping up of facts, the interpreta­tion of trends and moods of the era, the refuters can not wipe away the fact that this was a period of great political, economic and high financial skullduggery. There is one reference to historians — by the same Ari Hoogenboom, Associate Professor of History at Penn State University — which purports to explain the "bad name" which the Gilded Age has received in our history books. "The historian," he writes, "is usually liberal, more often than not a Democrat . . . typically hostile to big business, an advocate of government regulation, of strong executive leadership. The post-Civil War era stands for all the historian opposes."

If this be the basis of evaluating the history of historians, then historian Hoogenboom ought to re-read Beard, Muzzey, Link, James Truslow Adams and Thomas A. Bailey — all of whom offer a conservative view of American history, yet all of whom are united in characterizing the Gilded Age as the Age of Vapidity, Dishonesty and Nonentities.

H. Wayne Morgan, the editor of The Gilded Age, is on firmer grounds in his re-evaluation of the twenty-fifth President in William McKinley and His America (U. of Syracuse, $9.00), the first full-length study of President McKinley in many years. McKinley, who campaigned on his Canton, Ohio, backporch and is perhaps better remembered for his death (assassination) than his life, here emerges as a much more dynamic figure than historians have previously depicted. He was a consummate politician who had a great sense of both history and popular will. He was not, Morgan stresses, a Mark Hanna puppet, and was, in fact, far in advance of his Republican Party and of the times. He understood the demands and the needs of Labor; he saw the necessity for an internationalism which his Party then abjured; he was, according to Morgan, a Reformer who meant business. He won all accounts a first-rate figure, the first, to occupy the White House since Lincoln. He died before he could begin the monumental task of taming the Trusts, a work which was to be carried on by his suc­cessor, Teddy Roosevelt, and later William Howard Taft. Mc­Kinley always considered himself a symbol of the people and of its will, and it is this portrait which most clearly emerges in this outstanding biography so filled with excellent vignettes — Mark Hanna, the irascible politician; Admiral Dewey, the bumbling national hero; Bryan, the Boy Orator; Speaker Reed the brutal politician; Teddy Roosevelt, the conservative, irresistible dema­agogue. What is so clearly stated is that McKinley had those qualities which our great presidents have exhibited: a sense of the symbolic and the courage of executive leadership.

What shall the historian of the future say of Jules Henry's Culture Against Man (Random House, $7.95), a very perceptive survey of the American scene as it exists in this year of 1963? This is not a moral indictment, an apologia, a justification. The author wisely lets the facts speak for themselves. And what facts they are! We applaud the "somewhere clock" which ticks off our growing population; yet we are not necessarily concerned with the growing problem of automation. Our national advertising is geared to untruths, exaggerations, distortions, paced for the sensuous, the competitive, escapism and sexual conquest; yet we are not fully aware of the problems of our psychotic children, or of the terror of human obsolescence. Henry, a consultant to the National In­stitution of Mental Health, has written a very sage and a very bitter analysis of our epoch and the poisons which we have spilled into it.

West and Non-West: New Perspectives states the crucial prob­lem which currently exists in the relationships between the Western nations and those of Africa and Asia in an incisive and brilliantly written series of articles, edited by Vera Michele Dean, Professor of International Development at NYU and Harry D. Harootunian, Associate Professor of History at the University of Rochester (Holt, Rinehart & Winston, $5.95). An initial series of essays set the scene for contemporary events: Western man's emergence from the Dark Ages into comparative freedom, bringing with it national­ism followed by colonialism and imperialism, which resulted in the non-West's first important contact with their European mas­ters. Why did the West seem to reach technological excellence so far ahead of the non-West? Certainly, as one of the initial articles stresses, it has nothing to do with biology or anthropology, but rather with the strictures of the colonial system itself. And now the emergent nations emerge, and we are impatient with them because their democratic procedures are wanting, because they adhere slavishly to tribal shamanism. But there are positive re­sults: colonialism has resulted in political independence; in many cases the West left some of its best traditions and institutions to
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Add $1.50 postage for each foreign gift subscription.
the emergent non-West, although in some African republics the automobile now kills more inhabitants than the bush.

An important section of the book deals with the diplomatic, economic and social inroads of Communism as compared with the legacies of the democratic powers. Here Barbara Ward points out that we have not yet resolved what she calls our own “Deep Souths and Notting Hills,” and cannot expect new nations to develop party systems, checks and balances and Western political traditions without going through some history and travail of their own. If some new nations seem reluctant to embrace the West, it is because the West has already been there. West and Non-West is current history written by as prescient a group of contemporaries as ever was gathered in one volume of history: U Thant, Arnold Toynbee, John Galbraith, W. W. Rostow, Clinton Rossiter, Harold R. Isaacs and Gunnar Myrdal among many others. For those who would understand contemporary affairs, this is a must!

A neglected phase of our contemporary history is the apparent growing conflict between the Soviet Union and China, and none is better equipped to evaluate the epithets, the slights and slurs, the name-calling and the border raids, the ideological pull and haul between the two Mammoths of Marxism than Edward Crankshaw who reports the struggle in the just published The New Cold War: Moscow v. Pekin (A Penguin Special, 65¢, not a reprint). Fundamentally, states Crankshaw, the London Observer’s correspondent on Soviet affairs and the author of some of the most authoritative writing on the Soviet Union today, the rift occurred because of China’s economic and agricultural failures, failures which discredited Communism, the ideal and the ideology, in the eyes of Asians and the rest of the world. Soviet Communism could not afford such a fiasco, and there was nothing for the Kremlin to do but to disown Mao Tse-Tung’s brand of Marxian socialism. For the Chinese there had to be a counterattack, and the clashes of 1956 and 1960 and most recently the border “crossings”, told of by Crankshaw in his book months before they were officially revealed by the Soviet Union, are the fruit of this internal dissension in the Communist camp. The New Cold War: Moscow v. Pekin for its sharp analysis, its excellent reporting may become one of the most important reports of the decade.

BOOKS TO WATCH FOR

As far back as 1945 the then Secretary of State Edward Stettinius once called Berlin the “world in microcosm.” The validity of his description is borne out in City on Leave: A History of Berlin, 1945-52 by Philip Windsor (Frederick A. Praeger, $5.90) a history of the quadripartite city (now only divided in half) and a very scholarly and carefully documented account of the early attempts to govern Germany and Berlin on an equitable and harmonious basis by victorious allies. Political trouble, states the author, was inherent as a result of the Teheran and Potsdam meetings, compounded by mutual distrust and the Soviet’s understandable yet insatiable appetite for goods and other reparations from the Germans. Even as the Allies discussed withdrawal of troops from another’s Zones, the order had gone out from Moscow to install Moscow-trained German Communists to begin the work of “rebuilding” Germany. The first solid clue to Soviet intentions came in the shotgun marriage of all political parties in the Eastern Zone (including Berlin,) into the S.E.P. (Socialist Unity Party,) by command of Marshal Zhukov in February, 1946. From that point on, ideological, economic, political and cultural cleavage was an established fact. City on Leave stresses that ultimately the DDR (East Germany) must recognize western rights in Berlin; and the Bundesrepublik must reconcile itself to DDR interests in the traditional German capital. Till then, says Windsor in this excellent account, Berlin is a tinderbox — waiting for peace or war.

Still Flying and Nailed to the Mast by William Bronson, Introduction by Oscar Lewis (Doubleday & Co., $5.95,) still another view of the American Past and the American Present, is an exciting, illustrated history of one of America’s boldest insurance companies — Fireman’s Fund Insurance. A fascinating bit of Americana that had its beginnings in the fires and catastrophes of early San Francisco. The Fund has moved far beyond Market Street of the Sixties and Still Flying traces its history through disaster, harrow, flood and fury. The Fund touched and still touches on almost every facet of our nation’s history, and William Bronson’s approach never flags in color or interest.
MERCE CUNNINGHAM RESTORES THE DANCE TO DANCE

Grimness, social protest, psychological drama portentously wrestling with symbolic narrative, a playing-card angularity of tension-relaxation,whelmed in heavy seriousness and seldom capable of release in comedy: that had been Modern Dance from the mid-thirties through the forties into the fifties.

Beauty had been an unwilling word through all the arts of this period. One could suffer with, one could admire, but one could seldom let go to enjoy this playless art. Modern Dance had become a dedication, on a higher plane of unrelenting emotion, from which audiences fled to relax by viewing the classical ballet.

Modern Dance wrenched backs, pulled muscles, tore ligaments, as if defying any natural movement of the body; it would not be less disciplined than the ballet in requiring the body to subserve its purposes. So while the ballet pirouetted its inherited technique, delivering its annual routine of Tchaikovsky, its perennially vacuous Giselle, or bent its derivative habits to accommodate a newer music, Modern Dance symbolically labored to convey its darker overload of spiritual chaos.

Granted that seldom did Modern Dance decline to the blatant theatricality of the Broadway stage. It held its sexuality high and symbolical, however writhing; its imaging might lack variety but would not condescend. Solemn as a ritual, it explored all meanings conveyable by movements of the body.

Between the emotionalized prettiness of conventional ballet and the Mary Wigman, Martha Graham, Lester Horton symbolic emotional extremes (artists who would not evade the years they lived in), individual choreographers created a variety of distinctive styles.

The art of Martha Graham remains for the admirers the concentrated epitome of its thirty-year reign. George Balanchine blended Russian ballet tradition into sophisticated union with a native American experimentalism, each of his compositions a renewed effort to find a balance between the tou-tou abstract and the veristic. Jerome Robbins and Agnes De Mille successfully mingled the conventionally realistic—Hollywood, musical comedy, the short story—with the ballet tradition, to make a pleasurable action at a high popular level of good taste. Carmelita Maracci from time to time brought to New York from Los Angeles her unique composite of intensely personal drama and abstract free movement, with a Spanish slant, over a solid foundation of ballet. Maracci’s intricate art of movement, circling the entire stage area, kept free of the static diagonal axes, the St. Andrews cross of Modern Dance. She could move in a single unit between tragedy and playfulness, needing no scenario or mythic reference to explain the agon of an art that turned often to the music of Domenico Scarlatti.

I had seen Merce Cunningham’s work, a couple of times, as late as 1955, appreciating the individuality of his approach, his manner—clown, Pierrot, fantasist—still anchored to the diagonal axes and the expressive exaggeration of gesture which had made him for several years a leading dancer of the Graham company, though already freed, as I now realize in retrospect, of the mythic, monumental formality. He was aiming at release, an art that, speaking with itself, does not express, does not convey, but tosses its flight of feeling before the public, without effort to persuade. Yet there was in his work a confusion of means which I disliked, even resented.

Already in his movement the curve, the rounding gesture, the weaving path were imparting new dimensions to the expressionistic repertoire. While with Graham, from 1940 to 1945, he taught Modern Dance at the American School of Ballet. In 1949 he danced with Tanaquil LeClerq of the New York Ballet his own Amores and Games.

Games points a direction. Amores is danced to one of the earlier John Cage compositions for prepared piano (bolts, washers, fruit jar rings inserted in the piano strings, altering the sound and pitch). Cage and Cunningham met at the Cornish School in Seattle, where Cage came to play for the dance classes and started the percussion orchestra. In 1947 they were commissioned by the Ballet Society (now the New York City Ballet) to do The Seasons.
During 1948, 1949, and 1951 they toured together. Since 1951 Cunningham has been
bargaining his future on the underlying esthetic consistency, within apparently extreme
divergence, of Cage's composition by chance. Together they broke entirely with the
idea that art should present, say, express, communicate anything, of whatever seeming
importance, not intrinsic with itself. In the field of chance — which Cage in more recent
years has preferred to call Indeterminacy — what are the advantages? One fact is
obvious: composing by chance you cannot tell a story.

Great showman though he is, Cage had not been able, before this association, to
command a public. His appearances, however exciting, had been occasional. With
Cunningham he was able to bring his inventions before audiences, which although not
unaware of his presence and influence, need not commit themselves to accept or reject
him. This continuity of appearances, supplemented by his individual work as composer,
lecturer, and, often with pianist David Tudor, as performer, turned back the repeated
rejections, the mockery, which might have overcome him.

Cage's influence helped free Cunningham of the clinging and — in my experience —
somewhat cloying symbolic vestiges of Modern Dance. If art, particularly dance, need
not present, say, express, communicate anything, then it is free to be only gesture, color,
motion, a field — turning to the dictionary: "... a sphere of activity or opportunity...; a
region or space traversed by lines of force...; all the competitors in a sporting contest...") Or one thinks of a playing field or a field as an open, unobstructed space.

So the agon returns to its source, the Greek communal enjoyment of the body in an
athletic dance contest, combining beauty, skill, and strength. The associations of such
art are in the mind of the beholder, and if they are not nothing depends on it. There is
pleasure in merely watching and, when self-consciousness has turned aside or lost itself,
pleasure in free imagining. The need to verbalize, to conceptualize or explain, established
in habit as the normative response to art, however presented, may feel frustrate. What
a role then does one become aware that one need not? After hearing John Cage's Concert
for Piano and Orchestra, a work of indeterminacy, I wrote: "Listening to the Concert
is like walking out in the mountains under a night full of stars, a lazy enormousness and
nothing in the way of anything else."

Between 1955 and 1963 Merce Cunningham had acquired and trained a troupe of
seven dancers, three men, four women, with Cage still musical director, assisted by
David Tudor, and the painter and graphic artist Robert Rauschenberg in charge of
costume and lighting. Traveling cheerfully by Volkswagen bus in many parts of the
country they had given a large number of performances, particularly at universities,
leaving as they went, steadily adding to their repertory.

For the University of California at Los Angeles this last summer they scheduled two
programs with two first performances. As dance teacher for the university summer
session Merce Cunningham found himself swamped with students, as many as seventy-
five in a class, teaching three times a day. No longer a missionary to the unreconstructed,
his has become a central figure of contemporary dance.

Visiting them at the Malibu Beach home where they stayed, I found them as cheerful,
unpretentious, non-egotistic a group of artists as I have ever encountered. Cage as cook
turned out a splendid simple dinner. Rauschenberg, helped by the dancers, was building
a sand castle, reinforcing it with seaweed against the heavy tide. There were no cripples,
no complainers, no apologies, no explanations. Let me find out for myself what I might
think they were doing.

So we come to the two concerts.
The dances were shown on the program without date of composition. The opening
work was a first concert performance, Field Dances, the title symbolic of its new technique.
Cage had composed it to eliminate the one element that he had previously thought
indispensable to music: time. The composition was laid out as a field. At certain points
on the field the dancers choose, according to chance factors, from a repertory of dance
actions; other points are answered by sounds. The idea of the sound was something in
the neighborhood; that it would not be always heard, and that the loudness and softness
as through open windows. In the hallway outside the auditorium Cage wheeled a cart,
loaded with a portable speaker, producing a variety of noises, to the bafflement of some
persons in the audience who asked him to be quiet. There was no other music — what
might they lose? Outside a balcony door, several times angrily shut by members of the
audience, Tudor periodically stirred up a similar confusion. The field was therefore all-
pervasive. The order of events (time) was indeterminate. You would wonder how the
dancers were able, in the circumstances, to present a coordinate aspect, yet they did; and
watching them one began to appreciate the great variety of motion and gesture Cunningham
had been adding to the dance.

Modern dance was starved of variety; that was its chief impediment. You felt
sometimes as if, having seen one dance, you had seen all there was; the succeeding
dances became repetitious. In Cunningham's dance the variety of movement exceeds that
of traditional ballet.

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*Rich's dramatic ceilings... at lower cost!*
Both the building facing walls and the ornamental boundary walls are of face brick at San Diego’s new commercial complex, University Center, Governor’s Dr. and Regency Rd. Over 117,000 Lincoln Brick, glazed in golden yellow, were used in the shopping center. This rich color was on the new combed texture for heightened design effect. Thus architects Duan & Hoelck, of San Diego, suffused with casual charm, an atmosphere of efficiency and utility. General Contractor was R. E. Hazzard, Jr., also of San Diego. Masonry Contractor was Wallace Masonry Co., El Cajon.

In addition to beauty, Lincoln Brick pays dividends in low first cost and minimum maintenance. It never needs painting, and combines admirably with other building materials for total design effects. There are six different textures, in addition to the conventional smooth finish. And there is a broad spectrum of 16 rich designer colors from which to choose. In Lincoln Brick, architects now have both face brick’s many functional advantages and far greater design opportunity than ever before. For full scale samples of the new textures and colors, see your Gladding, McBean building products representative.
Structural engineering is at the edge of a great new advance. One can see traces of it in the literature. One can hear it being discussed at professional meetings. Hopefully, one will soon see it in practice. The advance is designing a structural member — or the entire structure itself — from a new point of view: the lowest possible cost.

Much work has already been done, especially in the aircraft industry, on providing lowest possible weight designs. Since weight is often a prime consideration in cost, much of this work is applicable to the bigger problem.

The implication that structural designing is not carried out in the most cost-conscious environment may come as a shock to many. It shouldn't, given the conventional approach to a designing problem. The designer uses cut-and-try techniques. He makes a drawing of a proposed structure in complete detail, then analyzes it to see if it equilibrates the given loading and satisfies the functional design. After a series of educated modifications, he finally arrives at a structure which will carry the required load, have the proper spans, accommodate the right size doorways, and so on. This design is then sent to an estimator who costs it out, and then awarded to a contractor who builds it. Because the entire operation — from original concept to finished structure — is parcelled into distinct segments, there is extremely slow feedback from cost accountants to designer. The designer, in fact, has no way of knowing if his design is costly or economical.

Minimum cost design, on the other hand, places major responsibility for the ultimate cost of a structure — whether it is a 20-story office building, a frame bungalow, or a specific span in a bridge — on the shoulders of the designer. The conventional design approach, there are innumerable solutions to almost every design problem, but no way to determine the most economical solution. In minimum cost design, on the other hand one expects a unique solution — one design which will carry the load and which is demonstrably more economical than any alternative.

The method of minimum cost design is based on the recognition that the design problem may be formulated as a classical problem in maxima and minima. Quite generally, the method involves the minimization of a criterion function subject to certain auxiliary constraints which may take the form of equalities and/or inequalities. In the present context, the total structural cost is the criterion function; this is usually represented by an equation involving such parameters as prices of materials and labor costs, as well as length, depth, arrangement, and configuration of members. The constraining conditions are generally relationships between component geometry and strength and often include certain code requirements in the form of inequalities — for example, minimum thickness specifications. We can see that the mathematical approach to the design problem integrates all the factors that pertain to building a structure, and as a consequence, the solutions reflect the influences of unit cost, design and functional requirements, safety factors, and other prerequisites.

By-passing mathematical explanation, one can perhaps best explain minimum cost design by clarifying what is accepted as given and what is not. In all structural problems, some of the structural parameters are considered closed — that is, given. Many of the others are ascertained by imposing strength criteria. The method by which the remaining parameters are determined will essentially differentiate between minimum cost and conventional design.

In conventional design, the parameters are arbitrarily decided by rules of thumb; these might include the depth to width ratio of a concrete girder, the span to rise ratio for an arch, or the inclination of the diagonals in a truss. The result, therefore, is one workable solution out of an infinity of workable solutions.

In minimum cost design, on the other hand, the remaining parameters are left open, i.e., they are treated as independent variables. It then becomes possible to find a unique design which satisfies all pertinent requirements in the most economical way.

One important advantage of the minimum cost design approach to structural design is that it leads to conservation of materials. It is not uncommon to find mill buildings with columns carrying only 300 or 400 psi when their capacity is closer to 16,000 psi. Engineers will often justify this sort of "over-designing" by appeals to corrosion resistance, longevity of the structure, and future predictions of plant specifications which would overload a structure designed only for present needs. But it is impossible to balance future prognostications with present desires for economy without a rational plan, such as minimum cost provides.

The immediate application of minimum cost design appears to lie in mass-produced, or mass-designed, structures. Design optimization according to the above procedures would usually be too costly for only one structure. Prefabricated homes, mill buildings constructed from the same basic design, and large mechanical elements which can be mass-produced seem logical candidates.

With its numerical methods, ordinary maxima and minima, theory, variational calculus, linear and non-linear programming, and steepest descent methods, minimum cost design

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CASE STUDY HOUSE No. 28

Alfred N. Beadle, Designer
With the initial presentation of this small apartment project — prototype for a large development — we are introducing a new dimension to the Case Study House Program. From its inception towards the end of World War II, the CSH Program has had as its primary purpose the attempt to foster a good living environment for Mr. and Mrs. X through intelligent and imaginative design, use of new and old materials and technology. Many ideas which otherwise might have died aborting have become realities within the Program. Others have gained popular acceptance and (sine qua non) the approval of lending institutions. The open floor plan, glass walls, no dining room, kitchen to the street, flat roof and slab floor are some that have become common nouns in the vocabulary of contemporary residential architecture.

Unfortunately, few of the advances in environmental design have carried over into tract housing and even less into multi-unit dwellings. Perhaps it is significant that the purposes motivating tract and apartment house developers are not those of the homeowner. The tract developer builds to sell; the apartment house owner builds not to live in but to live on. The multi-family dwelling is designed (too often by a contractor) to squeeze as many people on the land — and the last nickel out of it — as the law will allow. The owner's interest is not in good architecture but in the best return on his investment, and he believes the two to be mutually exclusive.

It is our firm conviction that not only is this morally and esthetically indefensible but it is also untrue. It is our purpose in incorporating multi-family dwellings into the CSH Program to try to lay to rest the misconception that good design is an unjustifiable and impractical luxury when applied to income property. The projects — which are to supplement not supplant the single-family CS Houses — will provide for the basic human needs for privacy and a link to nature. Our concern is still for Mr. and Mrs. X. The projects will not be individual "performances" but must be capable of repetition (in rows or groups) in meaningful but not mournful numbers.

In this project for Case Study House No. 28,
the designer has met the requirements. The three living units are designed around a central court to provide privacy from street traffic. In addition, each of the units, containing living room, kitchen, bedroom, study-bedroom and bath, opens onto a private garden patio. The triplex is adaptable to any level lot of suitable proportions and is the prototype for a development of 80 units, grouped in various multiples. In the larger scheme, however, the designer found that a 12'4" module would be more economical than the 10' x 14' post and beam module expressed in the present plan. The curtain walls are of masonry and wood studs sheathed with grooved plywood.

As in the case of previous CSH projects, additional coverage will be presented as progress is made through preliminary drawings to completion.
In a June article I pictured architecture in *Search of Theory* and identified certain dominant characteristics of today's world which render inadequate the established theory, the "conventional wisdom" of our profession. I suggested that ecology may be the basic science of architecture today; as the science of process it undertakes to deal with changing environment. The new time-scale which governs our living has altered the relationship between material and process and primacy must now be given to method in the solution of environmental problems. Prediction of change is one element of that method. A new order of values is required to relate present problems to each other and to potential solutions and its clarification must be the task of philosophy.

We may come now to ask the basic question: "What are the critical elements of theory and the fundamental disciplines through which we may unify them?" In discussing such a question I understand the term theory to mean a systematic statement of general or abstract principles or methods to be followed. Theory is speculative, it precedes and is distinguishable from practice, it is always "open to objection" and its rightness is only verified by time and events.

Our need is for architectural theory comprehensive enough to embrace all essential elements and relationships of the architectural problem and systematic enough to formulate a body of working principles and ideas that can be made coherent to architect and public alike. Such a comprehensive formulation cannot come from the specialist, though he must contribute to its constituent parts. We have brilliant examples of fragmented theory dealing with the components of architecture in structure, in climatology, in construction, in composition, in visual perception, and yet we lack equally brilliant examples of their total integration. This is understandable in view of the complexity and the limited intellectual pursuits of teachers and practitioners beyond their own special interests. Our skills of analysis have run well ahead of our skills of synthesis, and therefore the principal task of theory today is to establish new working relationships, to reconcile alternatives, and with philosophy to recognize values. Such a task is properly the first concern of education.

President Albert Bush-Brown of Rhode Island School of Design has recently stated what seems to be the imperative for educators in search of theory. "The best education in the arts is neither permissive nor authoritarian. It harnesses discipline and freedom, information and inspiration, skill and ideas; it searches for order in facts and principles, from which form, the circumstantial and personal act, arrives. To be able to discern significant problems, to yearn to solve them, to strive for the full range of satisfactions, and to present solutions persuasively, are the chief legacies of education."¹

And Paul Rudolph has written, "I participate in architectural education because I believe that action has indeed outstripped theory and that it is the unique task and responsibility of great universities such as Yale to study, not only that which is known, but far more important, to pierce the unknown. My passion is to participate in this unending search. Theory must again overtake action."²

Our inheritance of architectural theory in published form may be seen to begin with Vitruvius, whose affirmation of "firmness, commodity and delight" still typifies the level of theoretical involvement of most architects, who fail to distinguish the proper role or the potential force of theory apart from history and criticism. Criticism and history, however, are concerned with yesterday and today. Neither has the generative force — the thrust towards tomorrow — required of theory in the sense that I have defined it, though each is a constant contributor to the larger body of theory which accumulates from the past.

While both historical interpretation and criticism have as one goal the illumination of theory, their past tense and detachment from the creator architect renders their conclusions uncertain. Bruno Zevi in discussing *How to Look at Architecture* outlines a system of criticism based upon social, intellectual, technical and formal premises and a system of historical interpretation following parallel categories but adding political, philosophical-religious, scientific, economic-social, materialist, physio-psychological interpretations. In illustrating these approaches to historical analysis and justification, he demonstrates the unreliability of conclusions drawn too strongly from the particular historian's point of view. He then beautifully makes his own interpretation of architecture as space.³

Peter Blake writes persuasively of *Le Corbusier and the Mastery of Form*, Mies Van Der Rohe and the Mastery of Structure and Frank Lloyd Wright and the Mastery of Space. Though one can by his own selective emphasis make such a case for identification of each master with a particular element of the whole of architecture, we recognize the subjectivity of such interpretation. But, without full knowledge, the average reader or student may reach very wrong conclusions.

As change accelerates, as mobility of people increases, as density of living with all its interdependencies makes us increasingly an urban society, our need for a truly generative theory increases and the lack of it becomes more acutely apparent. The artist in any field is working to unify experience for those about him, those who perceive his painting, hear his music, experience his architecture in space and matter. In a rootless society of shifting values, outmoded symbols and traditions dimly seen, the unification of experience becomes a compelling task. For the architect it is specifically the unification through design from the scale of home and its products to the city and its regional extensions. Such work does not allow us to indulge the isolationism of an individual building kind of practice, which still largely exists, nor to continue our separation from other disciplines and professions which are needed to contribute to the conceptual process of design at the larger scale. It is my belief that the greatest failing of the practice of city planning today is the inability to conceptualize at the necessary scale after all the data are available and to undertake a collaborative "act of design".

Such an act of design should no longer be viewed as a grand plan to be realized at some future time but rather as the projection of alternative methods for predicting and controlling change based upon predetermined values and priorities. In the ultimate sense such choice is indeed an act of physical design, as well as of social, economic and political design. The Bauhaus Proclamation in 1919 called upon architects, sculptors and painters to unite and together "create the new building of the future which will embrace architecture and sculpture and painting in one unity."⁴ Today, forty-four years later, we are called upon to unite many more special talents as well as those of the artist to work for the unity of the city and the region. This is obviously more difficult and the burdens it places upon common vocabulary, method and principle are already well demonstrated.

To answer the question posed at the outset is to begin a systematic outline of theory clearly beyond the scope of this paper. It does, however, seem necessary to illustrate the terms employed and the direction such an outline might take by some discussion of the elements and the disciplines of theory. Further, it is

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ITALIAN VILLA BY LISINDO BALDASSINI, ENGINEER; GIANCARLO & LUIGI BICOCHCI
This is the second of two summer villas (see A&A, Sept. ’63) by the same design group, set in a pine forest on the coast of Castiglion della Pescaia, Maremma, Italy. Where in the first the nucleus of the house was dispersed and the wings widely separated, here the nucleus is compact, although it is characterized by the same free development of space and openness of architecture, each room opening to an outside area.

The bedrooms are divided into two centers: rooms for the children and those for parents and guests, all opening onto a patio protected by a wing of wall. The living area extends out onto a trellised patio protected from a neighboring house by another wing wall. A loggia paved in cement slab runs between the living and bedroom areas and serves as a breakfast terrace and a play area for the children.

Walls are of glazed opaque white tile or blue-green plaster; outside fixtures are aluminum, inside glazed spruce. Floors are of Impruneta baked clay tile and cement squares.
A perennial problem of the high inventory retail store is creation of an attractive sales atmosphere within what must essentially be a stock room or warehouse-like environment without loss of floor space efficiency. For the client of this store in Anaheim, Calif., the largest discount shoe retailer in the nation, the problem was more than ordinarily acute because of the huge inventories required by the high sales volume.

Through use of graphics, color, lighting and imaginative "point of purchase" merchandise display the architect here has avoided the dark, crowded, unattractive atmosphere of the usual shoe sales area surrounded by stock shelves. The graphic panels by Lloyd Chase are located over each aisle and across the rear wall, helping to relieve the verticality of the 14' high shelves.

The store is on a 94' x 277' corner lot with a 110' set back required for parking. The structural system is steel girders spanning 88' supported by 6" steel columns spaced approximately 11'0" o.c. at front and rear walls. The glass store front is set back 8' forming an exterior arcade. Rear and side walls are concrete block laid up in common bond with raked joints. Golden buff brick framed with steel angles form the spandrel panels of the facade and are set between the steel columns so as to create a reveal between the brick and the steel. The center bay of the building is accented by a panel of black structural glass set above the projecting steel canopy.
PROJECT ARCHITECT, BERNARD ZIMMERMAN

Italian polyhedron chandelier composed of hexagonal and diamond shaped handblown glass pendants which may be strung together in a variety of shapes and colors. One shown is 36" x 9". Gruen Lighting, Los Angeles.

Brass and aluminum wall lamp of Italian design extends to 24". Vogue Lighting, Inc., Los Angeles.

New glare-free incandescent lamp and fixture series by Tapio Wirkkala. Fixtures are clear glass lightly tinted in blue, mauve and smoke with a choice of white, black or copper sleeves in various lengths and shapes. Imported by Intercontinental Sales and Service, Detroit, Mich.

Plug-in fluorescent ceiling fixture with texture and patina of walnut and milk-white plastic diffuser, capable of arrangement in multiples and available in 2 and 4 lamp assemblies 46" x 13" (1/2") x 61/2". Globe Illumination Co., Gardena, Calif.
Brass, chrome or lacquer finished table lamp by Eugene Tarnawa. Height 34” with 14” rectangular shade. Lamp Associates, New York.

Unusual Swedish table or wall lamp, “Nest Egg”, with hand carved teak base and matte white opal glass. Height 12”, diameter 5”. Gruen Lighting, Los Angeles.


Italian “scissor” floor lamp has an overall height of 76”. Arms extend to a width of 76”. Shades are white metal, stem and arms are available in polished brass or chromium. The base is white marble with a four-way foot switch. Gruen Lighting, Los Angeles.
MISSIONARY CHURCH IN AFRICA BY JULIUS DAHINDEN, ARCHITECT

The problem in the design of this prototype Roman Catholic Church for Toussiana, Volta District, Central Africa, was to harmonize church tradition with the cultural and ritual heritage of the natives. Within the liturgy the solution has been to incorporate as much of the native custom and ritual as possible in order to bridge the gap between the familiar and the unknown and maintain the natives' pride in their own heritage. The architect's solution similarly attempts to create an organic link between the two cultures. In order to achieve a convincing and familiar symbolism, he has incorporated in the plan of the church the forms of native ornamentation, for example, the form of the ceremonial mask which is also used in the service.

The church stands on a massive base with up and down ramps at either side. Structurally there are three possibilities, depending on availability of materials and skilled labor in the neighborhood: 1. The simplest scheme consists of a framework of timber trusses on which is laid a series of purlins in vault shape. The purlins are covered with a sheathing of

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Floor Plan

1. Up ramp
2. Base
3. Processional altar
4. Drummer area
5. Interior court
6. Easter fire area
7. Baptistry
8. Weekday chapel (expandable)
9. Altar
10. Confessional chair
11. Congregation
12. Elders
13. Mask wearers
14. Dance area (ceremonial)
15. Lector
16. Griots (musicians)
17. Presbyteries
18. Celebrant
19. Tabernacle
The most significant and challenging difference between the creation of telling images in photography and in the plastic arts is the photographer's complete dependence on the visual world for objects from which to derive his images. The painter or sculptor may draw directly upon the physical world around him. The photographer must. The limitation thus placed on him is compounded by the concomitant difficulty of eliminating non-essentials from the scene, either at the time of taking the photograph or later by a mechanical process. Here again, the painter has the advantage for he can leave out of his picture whatever he pleases.

In these large scale photographs (4' x 5') the photographer selected essentially dark subjects against a white background. To eliminate non-essentials and simplify the images, he used high contrast film either in the original photo or in copying a normal print. The results are highly stylized, stark, black and white images.
STATEMENT BY BERTRAND GOLDBERG

The future Chicago environment, as prophesied by Hauser's recently released study at the University of Chicago, is based on facts of today; but projected on ideas which are more than a hundred years old. Today's social forecasts come from our Victorian Age, in which Darwin took the history of mankind away from the Bible — in which Freud took the soul of man away from the religious — and in which Marx took the government away from the individual.

And yet, if this is one face of our present surroundings, another face was shown to me when William L. McFetridge, who is president of the Janitors' Union and sponsor of our Marina City project, said: "Let us make it beautiful . . ." His remark, too, had an earlier source. It was Matthew who said "man does not live by bread alone."

We're all of us, today, somewhere in this span between fact and faith. I find myself and my work within this span; I shall describe my position to you because I think that wherever I am, you are. Vitruvius suggested that the architect should know more about painting than the painter, more about medicine than the doctor, more about law than the lawyer, more about ruling than the ruler — simply because these others depend upon the architect to say for them all that is known as well as it can be said by the art of building. So, know yourself by the buildings we build for you and the cities we plan for you.

Maritain today recommends our recourse to antiquity for its exchange of views between artists and philosophers. Especially now, he says, there is a need to escape from the vast intellectual confusion that we inherited from the 19th Century; and there is a need again to find spiritual conditions of work. We shall follow his advice. We shall look back at the 14th Century to see what architects and philosophers and cities were doing together at this time. Then, I'm going to drop the other shoe and see if there is anything that existed in the 14th Century which can be projected for our future environment. We shall see if this will clarify some of our 19th Century hangovers and bewilderments.

But before we start the trip back to the end of the Middle Ages, I should like for a moment to see what we are leaving. I believe we can find in recognizable form around us, a growing sense of aesthetic values; also, a creative attitude toward our urban life. Also, I think that we can find a renaissance in the mystery of faith, even Catholic
faith; and, finally, a coming of age of our cities economically to a point
where they are now operating as city-states.
Many 19th Century value judgments in our art contained words like
"functionalism, practicality, utility, mass production." These were words
that were shaped to the science by which the 19th Century knew our
world. In contrast, one of the first new words used in our new world
of art appraisal is "dada"; others are "surrealism, abstract". And, still
others are "decadent, dissolute and indeterminate."
Yet, as Kohler points out: "A society coming apart at top and bottom,
or passing into another form, contains just as many possibilities for
revelation as a society running along smoothly in its own rut.
Dr. Von Foerster suggested one of the revelations which had occurred
to us in our world of science in 1927. The magic years from 1927 to 1931,
when the finite world of 19th Century science was given four great body
blows, did not mean the end of aesthetic order. These were the years
when Heidegger published Being and Time, when Heisenberg pub-
lished his Principle of Indeterminacy and when two men, Skolem and
Godel, demonstrated that mathematics contains insoluble problems.

These years meant the end of Victorian concepts, finite and determinate;
but also, the beginning of order in the new forms of the infinite and
indeterminate.
The 19th Century gave us little information about creative man. We
inherited neither the inner order nor the integrity which means unity.
Neither in Europe nor America. In Europe, that scientific Marxist man of
make, the production man, was reflected by the Dewey technological
man here in America. Neither provided for the spirit of man, nor for his
integrity.
In 1925, when LeCorbusier said that the right angle is the essential
and sufficient implement of action — he was reflecting the hope of 19th
Century science that all natural forms would disappear. There are no
right angles in nature. And, when Frank Lloyd Wright wanted, in the
American Broadacre City, to separate human work from human life, he
mirrored the best 19th Century Marxist scientific concepts of splitting
man into the component which might no longer be a man, but which
could be the stuff for planning. Neither early LeCorbusier nor Wright
offered any large creative architectural planning for that inner unity of
(Continued on next page)
man which involves both work and spirit.

But the change is here: the words, "materialism, pragmatism, planned society, regimentation" begin to carry an apology, a little footnote. The words "spirit, soul, beauty, God, humanity" are very "in" words. M'cFetridge, the chief of the Janitors' Union says before his bankers, "We want to pay to make it beautiful". And the General Electric Corporation says, "It will cost you, but it's prettier." And suddenly we are through this sound barrier of Victorian commercialism and rationalism. We dare say to each other that we are people with dark and sometimes questionable values, with dreams and needs for aesthetic response, which we cannot analyze scientifically.

The revival of inner man during the past thirty years has been announced by the most active return to the mystery of faith in more than four centuries. Jew, Catholic and Protestant have all reached into the darkness of man's inner space for exploration of irrational truths. Whether Kierkegaard or Bergson, Buber or Jaspers, Heidegger or James, there is always a theme of awaited revelation in their writings.

If faith exists on all sides on some renewed level, Protestantism has been the most instrumental force in provoking this need. William Barrett argues: "By stripping away the wealth of images and symbols from medieval Christianity, Protestantism unveiled Nature as a realm of objects hostile to the spirit and to be conquered by Puritan zeal and industry. Thus Protestantism, like science, helped carry forward that immense project of modern man: the despiritualization of nature, the emptying of all the symbolic images projected upon it by the human psyche. With Protestantism begins that long modern struggle, which reaches its culmination in the twentieth century, to strip man naked: Protestantism achieved a heightening of religious consciousness, but at the same time severed this consciousness from the deep unconscious life of our total human nature."

Forty-one million Roman Catholics in the United States in 1959 gave testimony that the Protestant approach is being questioned. And, for Maritain as well as for many Western artists, writers, and intellectuals, the approach is much as Maritain puts it. He says, "I believe it to be impossible outside Catholicism to reconcile in man, without diminishing or forcing them, the rights of morality and the claims of intellectuality, art or science. Catholicism orders our whole life to Truth itself and subsisting Beauty". Faith, in our present society, increasingly means the mystery and the faith of the Roman Church.

I suppose it certainly seems natural to extend the Chicago School of Architecture from the Chicago School of Philosophy where, by Adler's recent example, the Jews were said to be making Catholics out of Protestants. Not only has inner man returned to life from the dissecting table of 19th Century scientific autopsy, but outer man as well in the place he works and the way he lives.

Our pace of revolution is unprecedented in history; a single lifetime today brings more radical change than centuries created in Egypt or Greece or Rome. Whitehead described the new world when he said, "Adventure is the stuff of civilization". And Gottman reported in Mega­lopolis, which is a recent book, that in his travels in North America, Western Europe and the Mediterranean countries, everywhere he found cities expanding. Here in America, the physical proof of our own interest in regenerating our urban society is that today in this country there are more than 600 special urban renewal projects for what until recently were our "dead" cities.

Suddenly the city — the Victorian "enemy of the people," facing Wright's prophecy of extinction through decentralization of industry and overcrowding — now becomes synonymous with civilization. Suddenly, the city becomes the place where Aristotle said, "One could lead the good life"; where specialization of labor provides the leisure which men may use for creativity and ideas and the refinement of the act of living.

Suddenly a magazine appears to define the townie, the modern American city dweller, and with his sports car he gets Hemingway and with his Bunny he gets Joyce. Another magazine said in its prepublication announcement: "The New Yorker will be the magazine which is not edited for the old lady in Dubuque. It will not be concerned with what she is thinking about . . . the New Yorker is a magazine avowedly published for a metropolitan audience and thereby will escape an influence which hampers most national publications . . ." We have a townie.

Herbert Muller was bucking Frank Lloyd Wright when Muller said: "The (Continued on page 34)
The client-developer requested a covered ski-run. The designers solution is an elliptical arena, 480' x 360' with curvilinear flowing slopes spiraling downward from 130' at descents varying from 8 to 22 degrees. The reinforced concrete shell contains 100,000 square feet of straight run, almost 900' of slalom and a 400' "bunny" run with a rope tow at the entrance end. Total capacity is 500 skiers.

The main run is served by a chair lift spiraling around the 190' central pylon of reinforced concrete which supports the catenary, multi-cable roof system. The interior temperature of 26 degrees (F.) protects the snow pack of pulverized ice sprayed on the slopes through pressurized hoses.

Additional facilities include an elliptical restaurant and cocktail lounge accommodating 450, shops and observation seating and platforms on the upper levels; locker rooms, ski repairs and rental, club room, administrative offices, storage and janitor on the intermediate level; rope tow, nurse, kindergarten, women's lockers and clubrooms, snack bar, first aid and doctor on the lower level.

The designers recommend a site size of 14 to 15 acres and parking for 500 cars. Estimated cost of the project is $3.5 million.
MISSIONARY CHURCH IN AFRICA — JULIUS DAHINDEN

(Continued from page 26)

narrow planks and finished with cement-asbestos shingles. This type of construction permits prefabrication of the church and subsequent erection on poured-in-place foundations. The base is laid up in brick and a seamless metallic membrane inserted between foundation and trusses as termite protection. 2. The second scheme consists of a vaulted brick structure in which the two main half vaults support each other by means of diagonal ribs at the ridge. The half shells are tied back to the diagonal ribs with tension rods inserted at the joints of the masonry work. 3. The third structural scheme is a concrete shell poured according to standard practice and would only be possible in regions where advanced engineering and technical skills are available.

The prototype shown is planned in two sizes with capacities of 500 and 1,000. In planning the interior it had to be taken into account that natives attending the service stand and pews are customarily not used.

BERTRAND GOLDBERG

(Continued from page 32)

city is the first clear sign of civilization. In the city the economic surplus is collected and managed or squandered and energy is further stimulated by close association, division of labor, and the pursuit of more wealth. These distinctive achievements of civilization are real gains, real goods. Only in a civilized society can man contemplate his inability to live on bread alone, and dream of better ways of living. The material surplus provides the leisure of cultivating spiritual interests; the city is the main center of creative activity, the spiritual as well as the commercial and political capital; the self-conscious individual at his best is the glory of civilization..."

Central city populations have remained fixed, however, while our suburbs have grown. Yet, the central city continues to provide the services which the small suburban community cannot afford — the generation and control of utilities, law and government, higher and specialized education, social welfare, recreation and cultural development. These services, now provided for the many suburban areas, require the city to increase its taxes while it necessarily administers an increasing government for the larger peripheral population; and so, the city becomes a great centralized power. Many cities have annual budgets which today exceed our recent national budgets. Our cities have become city-states.

This is not the first time in history that there has been an eruption of the city-state. I looked back to see where the most recent previous era existed, where the city-state came into such full power and I found that it occurred in the 14th Century when Toynbee said the whole future of society emerging from feudalism for a moment hung in balance between the city-state and nationalism: I looked back to see where the most recent previous era existed, where the city-state came into such full power and I found that it occurred in the 14th Century when Toynbee said the whole future of society emerging from feudalism for a moment hung in balance between the city-state and nationalism: the city-state almost became the dominant force in Western society.

The 14th Century capital was the monetary capital, which was the profit of the land and was managed in the town and put to work where there were people who could consume it and multiply it through consumption.

The Lombard league, the Tuscan cities, 62 cities in the Rhineländ, 67 Flemish cities, 32 cities of Leon and Galicia, and the maritime cities of Cantabria, the Hanseatic league, in the 14th Century gave form to Western society.

Now if 19th Century financial prosperity gave our cities enough security to look to the beautiful life, the new life, the same held true in the 14th Century. They had just finished a prosperous economy, which led to a development of market places and halls, ports, bridges, quays, fountains, town halls, belfries, cathedrals and churches. The entire town of Avignon was built in the 14th Century as an entirely new city for the beauty and delight and glorification of the Babylonian captivity.

This burgeoning art and architecture was not localized, but rather a vast international movement, as Suger said of his artisans, "by many masters from different nations."

The medieval creative attitude toward urban life was reflected in building contracts which demanded that a building be built as good or better than work at some competing location. And the chapter of Seville in the year 1401 recorded a resolution to "Build so great a church to the glory of God that those who come after us will think we mad even to have attempted it."

Our growth of faith in present day thinking similarly was matched article by article in the 14th Century. And, if our present philosophy is preoccupied with the mystery of man through our existentialist philosophers — our Heidegger, our Jaspers — the 14th Century did the same through its Nominalists with Roger Bacon and William of Occam.

Medieval Catholicism is falsely and frequently characterized by orthodoxy and an official theology. We have a picture of a 14th Century Christian world united by a doctrinaire Catholic religion. But according to a medieval writer, "Sacerdotium, Imperium, Studium" (the Church, secular government and the university) were the three powers which guided the health of Christendom. It was this third ingredient, the university, created by the Church, which promoted the inquiry, doubt and the heresy that ultimately produced a revival of inner faith.

It was Roger Bacon, a product of the 14th Century university, who wrote that if he should have his way, he would burn all the books of Aristotle, for the study of them can only lead to a loss of time, produce error, and increase ignorance.

Beginning with Abelard’s Sic et Non and up through Bacon and Occam, the rigidity and formalism of the Church, and the science which was produced by the Church, was attacked and weakened. Out of this, faith emerged.

I believe that this gigantic mirror image of our own environment in the 14th Century projects another dimension to our own self-portrait. This dimension will give further depth to some of the vague forms which are not now easily definable. We can readily make out certain common qualities between our own times and the 14th Century. There was the emergence in both times of aesthetic values. There was a creative drive toward urban life. There was a renaissance of faith against a previous system of rigid and formal doctrine. And there was a growth of the city-state with its power to tax and its need to provide. But were there other 14th Century ideas which we can find in our own society? The fear of death which followed the Black Plague is painfully comparable to our own persisting fear of death from the atom bomb. And the economic results of this fear, the inflation of wages which tripled in the short years after the Plague is similar to our present world experience since Hiroshima.

If we have had a millionaire boom, the 14th Century had its bourgeois boom. The artisan became the entrepreneur, and the entrepreneur became the intellectual. As Panofsky has described this: "The entire social system was rapidly changing toward an urban professionalism... it provided a meeting ground where the priest and the layman, the poet and the lawyer, the scholar and the artisan could get together on terms of near equality."

Money and fear of death in both their century and ours have furnished the great force to form a democracy both in fact and in thought. Democracy, which grew so rapidly in the 14th Century, Panofsky states, threw the individual back upon the resources of private sensory and psychological experience. The preceding orthodoxy of the Catholic school men was repudiated. The works of St. Thomas were condemned officially three years after his death. The rigid order of Dante’s verse was replaced by the lyricism of Petrarch; and "Intuitus" became a favorite word of Master...
Eckhart as well as of Occam.

We find comparable today the intuitive and private sensory experience which our scientists have talked about and which has been extensively probed by Gestalt men such as Kohler. Kohler says that we tend to establish order in our sensory experience; the medieval Summa states that beauty requires integrity. Kohler says that we tend to resolve stimuli into a functional whole; Summa states that the mind likes unity. Kohler states that insight pertains to intellectual situations; the Summa states that the mind likes light and intelligibility.

The 14th Century rediscovery of the value of intuitive experience boldly examined the field of physical science which had previously resisted any challenge of a fixed system. It was not coincidence that Roger Bacon in this new 14th Century freedom of inquiry said: “Machines for navigating are possible without rowers . . . Likewise, cars may be made so that without a draught animal they may be moved . . . and, flying machines are possible . . .” The Nominalists — the 14th Century Nominalists — anticipated the heliocentric system of Copernicus, the geometrical analysis of Descartes, the mechanics of Galileo and Newton. Is this intuitive approach to our physical world to be matched in modern times, for the same reason, by the poetry of Einstein, the quantum mechanics of Bohr and the indeterminacy theory of Heisenberg?

The theory and mechanics of three-dimensional perspective drawing were developed in the 14th Century. Can we compare this to our own explorations of spatiality in art and architecture?

In the construction of their cities, the medieval architects created buildings which were a reflection of their dominant philosophy. It is doubtful if their thinking was any more orderly than the thinking of the Greeks, but they felt more compelled to demonstrate the order of their thinking. Panofsky calls this the “Postulate of clarification for clarification’s sake.” We are going to see more of this in our present 20th Century. And Aquinas said that the “Sacred doctrine makes use of human reason, not to prove faith but to make clear whatever else is set forth.”

This need for clarity prompted Occam to establish his maxim which we call Occam’s Razor in the 14th Century. In effect he says, “It is vain to do with more what can be done with fewer.” Yet a barnlike shell of the 14th Century Gothic hall church encloses an “often wildly pictorial and always apparently boundless interior and thus creates a space determinate and impenetrable from without; but indeterminate and penetrable from within.” The spirit of free inquiry and indeterminism in the clergy flowed deeply into the mind of the 14th Century artisan. The men who made the building and their structural experiments of spanning roofs, were matched by their experiments in substituting glass for masonry. This was a technical revolution.

Can we find the 14th Century parallels in our modern attitudes toward architecture? Does Mies van der Rohe find his path in Aquinas, when Aquinas says, “To turn away from wisdom and contemplation in a Christian civilization is the first cause of all disorder.” Mies says, “Reason is the first principle of all human work.” Is Mies quoting or restating Occam’s Razor of the 14th Century when he says, “Less is more.” The 14th Century “Postulate of clarification for clarification’s sake,” is nowhere more clearly expressed than in a Skidmore, Owings and Merrill building of a curtainwall . . . beautiful precision of clarity, into this forced clarity, into this perversion of the meaning of order, if you please, comes now a creeping mystery of indeterminism — a TWA terminal by Saarinen, comes a cathedral and a monastery of deep mysterious forms by that former champion of right angles — LeCorbusier. We heard yesterday from Drexler a theory of fluid architecture — an architecture of process — a kinetic concept of architecture.

Is there today indetermination in our art and architectural methods which parallel our contemporary philosophy? Does Jack-
Thin lines of steel enhance the entry to this house designed by Craig Ellwood. The all-welded steel stairway is made up of small stock sections of structural shapes. Treads are of 14-gage sheet.

Steel stairways like these add to the beauty of any home.

This attractive floating stairway is made up of two 12-inch steel channels boxed in with 12-inch wide cover plates, 3/8-in. thick. Douglas Fir treads are supported by steel angles welded to the box core. Steel bars welded to the angles support handrails. The stairway spans 27 feet and is tied to a 14-inch wide-flange header beam across the upstairs opening. The structure was designed by architect Hewitt C. Wells.

In this mountain retreat, a spiral steel staircase composed of plates and bars leads to a portion of the roof, which is used as a sun deck in the summer. The house was designed by Architect Thorne.

Small steel angles, channels, and tubing can be utilized in the construction of stairways as in this home designed by Richard Jay Smith. Welded rectangular steel tubing provides rigidity for open stair treads. Treads are composed of heavy-gage steel sheet, covered with wood and foam rubber pads. The stairway floats free of the wall and of a 6-inch steel column, part of the rigid frame of the house.
This spiral steel staircase connects three levels in a hillside home. It is composed of two strips of 3/4-inch plate, 8 inches wide. Steps are 11-gage plate with edges bent upward to form a low box to hold a layer of concrete. Each step is supported by lengths of No. 4 reinforcing bar and welded to the two 8-inch strips. Handrails are 1-inch steel pipe. Architect-builder, Allyn E. Morris.

MEXICO STEEL COMPANY, BETHLEHEM, PA.

Stair treads hanging from steel rods are covered with wear-resistant vinyl, making them easy to clean. Railings are made from steel channels. Each individual stairway tread is supported on 4 rods by flanged washers welded under the tread. Architects were Cooper and Sawers.

Carpeted stair treads float in space over a reflecting pool in this home designed by architect Bernard Zimmerman. A 6-in. diameter steel pipe anchored at top and bottom is the only support for the structure. The pipe is anchored to a concrete footing at the base of the stair, and welded to a steel beam at the second floor landing. Treads are 3/4-in. steel plates projecting from 2-in. diameter pipe supports. The plates are covered with wood, bolted in place, and carpeted. Walnut hand railings are supported by 3/4 x 11/4-in. steel bars.
Golf Course by Robert Trent Jones

Full advantage was taken of the natural topographical assets in the design of the Incline Village Golf Course overlooking Lake Tahoe, Nev. Fairways are corridors through Ponderosa pines and over a series of steppes or plateaux crossed by running creeks. Tees are placed on long sweeping mounds of gradual slope, some running to lengths of 70 yards or more to permit stretching the course out to 7400 yards for championship play, 1050 yards over middle tee distance.

Fairway traps, while still placed to catch the errant shot, are scooped or molded permitting the use of a golf club rather than requiring a shovel, the accusation directed at old style “pot” traps of trench-like design. Diagonal traps around the large greens (average size is 10,000 square feet), and the greens themselves, are designed so that a hole can be eased or tightened by placement of the pin in relation to the traps.

“In the old type of penal architecture,” said Jones, “the greens are flat and surrounded by a maze of clamshell traps leaving a bottleneck entrance. The golfer had no choice but to make a perfect shot to the green. With diagonal trapping, tongue greens and alternate routing to the green, the golfer can play a shot he feels is within his range. And by framing the greens with long, well-formed mounds, the badly missed shot faces a more severe penalty than one missed slightly.

“The orientation of sand and sod, when effectively done, makes an extremely attractive appearance. It is the modern theory that certain traps should have a real penal value and others only a psychological effect so that a hole often plays more easily than it would seem at first glance.”

Jones has designed dune-shaped greens. The form gives an undulating character to the putting surface which harmonizes with the green's peripheral contour and also provides a three-way runoff of surface water. The base for the green construction is a sub-surface rockbed of about one inch covered with 1/4 inch level of pea gravel and a ten-inch layer of sand. The top four inches of sand are prepared with a mixture of redwood shavings and sawdust. The overall composition consists of about 90% sand, enabling the water to drain rapidly and the seed root to grow quickly. Jones estimates the grass root will reach a depth of eight inches in less than a year.

The rough grading, trenching, reclaiming of topsoil, and finish grading required the developers, the Crystal Bay Development Company, to move more than 240,000 yards of earth. Irrigation is by rotary pop-up heads attached to galvanized risers. Mains are of Transite and laterals are plastic.

Associated with Jones in the course design were Robert T. Jones, Jr., and professional golfer Harvey Raynor.
agreement, planning, trading, and communicating become the focal points for work.

We are creating groups of people who have a special participation in urban life, who have a special way of thinking and expressing themselves within their community. The AMA, the AIA, the Bulletin for Atomic Scientists, have more in common with the 14th Century Parisian artisans, the physicians and the metaphysicians than they have with 19th Century Marxism. We are, by today’s specialization, creating the “zoning by occupation” that existed in medieval Venice.

We have learned, in our new drive, to create urban centers. We create these urban centers for our specialists, much as the city-within-a-city concept of the 14th Century. This collection of city islands, will act more like the city-state than ever. Our cities have every domestic state power except that of coining money. And this growth of economic power is simply a reflection of the change of character of the city function. With this power comes taxation.

An increase of taxation will force new solutions in our planning problems. We cannot burden either business buildings that we now use 35 hours a week, or apartment buildings which in our civilization we use at night and on weekends primarily, with our total tax loads. And, we cannot any longer subsidize the kind of planning which enjoys only the single-shift use of our expensive city utilities. In our cities within cities, we shall turn streets up into the air, and stack the daytime and the night time use of our land.

We shall plan for two-shift cities within cities, where the fixed cost of operating a city can be shared by commerce, recreation and education at the lower levels and housing above. As we spread taxes and other fixed expenses over a wider use, we shall diminish the traffic problems which are caused by the journey to work. Our specialists, living and working within the same building complex, need only vertical transportation. I once described all of this to my mother-in-law, who said that back in New Orleans they called this “living above the store.”

In our balcony cantilever at Marina City, we emphasize the clarity of our lines and loading, but in using a fluid material like concrete, we can mold the material to reflect more accurately our load patterns. We can abandon the right angle concept which is not applicable to our structure.

The difference in the geometry of the 13th and the 14th Century French rose windows impresses me because of the similarity to the geometry of my own work at the Marina City Towers, and more recently to designs still on our boards for new projects. The 13th Century window has a hard core, with petals attached to the center as a focal point. One might call this window design “centripetal.” The 14th Century window is coreless to the extent that the core is formed by the intersection of flowing curves from the petals. It’s the geometry of these curves intersecting which form that core and this window I might call centrifugal, with the petals developing outward into space. Here again, we find this mystery, this indetermination — no longer a constraining force in the architecture of this period.

At the foundations of the Marina City project, you can see the hard 13th Century core with the radial lines. This is the way which Marina City was put into the earth. This 13th Century foundation at Marina City develops into the 13th Century rose window pattern with the petals coming into the center of the core. The core is with the petals coming into the center of the core. The core is formed by the flowing line of the developed curves of the petals; soon no longer have a core, as such. The dynamics of these petals are rather outward and centrifugal, away from the center into space.

I have arranged three new towers on a site, and interpenetrated the space with a building which is simply a gigantic development of a horizontal tube. The towers, which will be sixty stories high, contrast with the tube, which will be elevated 20 feet above the ground, and which will spin around four times at the center, turbine-like, to create 200,000 square feet of commercial area. Both of these shell forms, vertical and horizontal. While they each have a totality, a Summa, a beginning and an end, they interpenetrate space separately and together in a manner which possibly could be understood more quickly by an 14th Century builder than by a 20th Century critic.

Our horizontal shell automobile building will be developed into two continuous strips. One is for auto traffic in two directions with parking on one side. The other strip is roughly fifty feet deep, without any columns — just a shell form — an air conditioned continuous space, uncluttered. This is for use as commercial space, offices or shops. This tubular structure is supported 20 feet in the air, in order that the automobile traffic will not disturb the development of the 15 acre site which we are processing below — bicycle paths, roller skating paths, sculpture gardens, a golf course, fishing areas. These buildings mark for me our emergence from a rigid and rather horrible Victorian Age of science. For the future, I believe, we should no longer build the separate building in the center city.

We should rather think of building environment, total environment, for the total man our century has put back together. Our future environment could repeat for us a renaissance; and should give us the building of cities within cities, for men of faith.

IN SEARCH OF THEORY — SAM T. HURST

(Continued from page 19)

useful to ask some of the questions growing out of practice today which call for answers in theory adequate for tomorrow. It is hoped thereby to begin a more intensive dialogue which might attract those of every persuasion who share the interest to join in the search for theory.

With no attempt to be definitive or original I suggest that the elements or subjects of theory might be these, each capable of extension into progressively more precise and limited sub-elements:

- CLIMATE . . . micro and macro-climatology, regionalism
- LAND . . . site, landscape, naturalism, made land
- MAN . . . individual, community, “humanism”
- MATERIAL . . . construction, industrialization, structure, decoration
- WEALTH . . . resources, capital, cost, efficiency
- COMPOSITION . . . unity, scale, clarity, completeness . . .
- SPACE and FORM
- TIME . . . motion, perception, obsolescence, permanence, change
- PROCESS . . . method, program, control
- MOBILITY . . . change, motion, tradition
- FUNCTION . . . physiological, psychological, immediate, ultimate

It is clear that in any construction there are many ambiguities and redundancies, many sub-elements belonging to more than one element.

The fundamental disciplines by which the elements of theory may be ordered can be seen as:

- SOCIAL
- POLITICAL
- ECONOMIC
- AESTHETIC
- TECHNOLOGICAL
- PHILOSOPHICAL
- PSYCHOLOGICAL
- PHYSIOLOGICAL

The dynamic process of interaction between elements and disciplines may be seen as the process of reconciliation as values influence choices and reason modifies intuition. As the architect works for an increasingly impersonal client and at an even larger scale, he is called upon to be more rational and indeed must struggle to preserve the place of intuition.

(Continued on next page)
Let us take for example the reconciliation of the problems of form and the problems of sun control in a highrise office or apartment building. Given the desire for unity of form between four sides of the building and the certain knowledge of the position and movement of the sun, we may see at least four clear alternatives:

1. No exterior sun control, interior controls with recognized limitations, uniform treatment of all sides.
2. Exterior sun controls of form repeated on all sides, though not needed.
3. Exterior sun control of form sufficiently neutral to be varied on east, south and west and omitted on north.
4. Articulated exterior sun control within a stronger articulated structural system providing formal unity.

Our choice of windows in the given situation may be conditioned by sun control, temperature control, exterior and interior form, outlook, privacy, sound. Obviously we will give priority to some of these considerations and usually at the expense of the others. If this has to be done it should be done knowingly and with clear view of the consequences of that choice, in which case we may call the decision rational and be prepared to defend it. The better we are to deal with the maximum number of elements the more completely we may solve the problem.

As we observe the current scene, the diversity of practice, the discrepancy in standard between the best and the worst and the overwhelming volume of the mediocre, these are some of the questions which loom large on the architectural horizon.

1. Does the society in which we live seek an architecture of the typical or the unique, an architecture of individual personal expression or of anonymous community expression? At what point should the architect yield a degree of the “sovereignty” of his building to the larger unity of the street, the campus, the city?

2. What is meant by “humanizing” architecture, that process so widely sought or at least referred to in today’s critical circles? Does this mean replacing clarity with clutter, or greater physical and psychological comfort? Is architecture more “human” when it provides a neutral frame or when it provides a decorated stage in which the players are extended to aluminum, steel and concrete?

3. Is regionalism dead, victim of rapid transportation, mass articulation of materials and processes? What viable traditions exist in support of regionalism?

4. If precision and controlled quality are available through industrialization, what is the place of crudeness, primitiveness and studied imperfection in material and construction?

5. Can the empathy we normally reserve for natural wood and stone be extended to aluminum, steel and concrete? What architectural symbols have evocative power in our society?

6. Is increasing socialization of the resources and the means of building in the world’s architecture predictable and what will be its influence on the nature of practice?

Reyner Banham has done a substantial work toward the compilation of a bibliography of theory under the title, “Theory and Design in the First Machine Age,” though his view is distinctly European and fails to deal adequately with American influences, notably those of Sullivan, Wright, Fuller and Kahn. Further, it seems not to engage town planning and urban design to the extent that is warranted by the contribution of architects in this century. When he concludes that “the human chain of Pioneers of the Modern Movement that extends back from Gropius to William Morris, and beyond him to Ruskin, Pugin, and William Blake, does not extend forward from Gropius”, I believe him to be supporting the need for an ongoing search for theory. Banham concludes that “while we yet lack a body of theory proper to our own Machine Age, we are still free-wheeling along with the ideas and aesthetics left over from the first.”

As engaging as “free-wheeling” might be, it does not suggest the direction, the force or the discipline necessary to turn the enormous capability of modern society towards great architecture.

(Continued from page 13)

MUSIC

Each dancer is to a degree characterized by talent, as for Viola Farber the grotesque, and out of that the tragic; but, whereas in Modern Dance a tragic action was expressed by contrasting tension-relaxation throughout the entire body, here distortion of one limb, one quarter of the torso, a single type of exaggerated motion, is set against a larger relaxation. Instead of posturing, there is a continual flowing of the physical emphasis, so that one follows it to the slightest gesture.

But what is there to be tragic, in a dance which has, apart from visible movement, no intended content? Here we are at the heart of the problem. Instead of conceptualizing the intent you begin to experience in sympathy with the movement, as if following a melody, adapting it, without conscious realization, your own content of emotion. Thus there was often ambiguity, raising prose to poetry. What was for me tragic might be for another comic—and Farber excelled in both—but resolution between any two onlookers would not be necessary. That drab face under the shabby hat above the raincoat, the empty face of “mass-man” which haunts the outside-looking-in philosopher: is it the face of a lost soul or a saint? So we watch our companions of the theater, the street, the subway, formulating interpretations, decisions, conclusions. Why should not this living in the constant indeterminate moment be given back to us, enlightened, irradiated by dance?

And there was Sharen Blair, figure of play, child, adolescent, trim coquette, who, in Story, where the costumes are “by chance”, selected the most playful. There was, above all, Carolyn Brown, wife of the composer Earle Brown, a figure of technique, as impersonal as beautiful, who would be outstanding as the premier danseuse of any ballet company, capable by movement and gesture of every species of emotion, yet never failing of that exquisite linear control, to the least flutter of emphasis accompanying a larger movement, which is the ultimate gift of the traditional ballet soloist. You can describe mannerism or the virtuoso but not the fully conceived melody, the authority of mind through body in the completely revealed sequence of movements in a dance.

The two men, Steve Paxton and William Davis, and Barbara Lloyd, newest member of the troupe, performed their roles with flair and a complete competence.

Merce Cunningham has retained what appears to be the natural basis of his dancing, the figure of the Pierrot, the clown, but with an infinitely increased subtlety and variety of invention since I last saw him. True, also, that my own capacity of responding may have improved, or that in the setting of his own self-trained company, he has increased the responses to his art by extending it through these others. He moves through the troupe, playing lead and respondent, while the two other men, apart from occasional solos, derive their more conventional responses in relation to him.

The oddest fact is the disparity between Cunningham’s natural manner of dance and the style he has developed among the group, especially the very distinct art of Carolyn Brown; these two furnishing the extremes around which all rotate in an unceasing diversity, as if each were thinking up something a little different, all of which happens to balance and agree. This makes the action by chance only a seeming accidental extension of the freedom by diversity.

How is the dance choreographed? There is still the closed, sequential type of dance, like the second work of the fictional ballet, Septet, in seven parts, to Erik Satie’s grateful and not so elementary as they may seem Trois Morceaux en Forme de Poire (Pear-shaped Pieces) for piano four-hands. In this every combination and conjunction has been planned.

After this and continuing for fifty minutes, though the length can vary radically with the occasion, as in all the indeterminate
works, depending on the place, the space, the number of dancers, the equipment, and other factors, there was *Aeon*. It began with miniature atomic bombs exploding up the back transparency; thus it contained and in some scenes gave evidence of message, motif, memory of war, and agony so intense that the interludes of less relevant dance several times seemed overwhelming. Here I might have preferred a more decisive order, as in *Septet* or the *Suite for Five* that began the second program. I think that when such concentration is in question as—in this version by Viola Farber, there can be too much running about, however variedly affecting.

Cunningham’s art has the improvisation of concomia dell’arte or the Sicilian impromptu drama. Such conventionalized art stops short of ultimate tragedy; even death is a little playful, because one knows well the actor will rise again. But the sections of great power in *Aeon* do not suppose resurrection of so immediate simplicity, nor can these sections be described as in any way conventional. The order of the sections is indeterminate but each scene a separately composed event. Given the hint of subject and the force of its severest scenes, I would prefer more formality and concentration.

Yet there is the challenge, as I remarked to a friend immediately after the performance, in allowing the extreme length of a work to convey the sense of timelessness or time long extended. Composed in its essentials, *Aeon* would carry a placard against war, freely ordered in extension it conduces to renewal, to meditation, to a feeling of the very reality of a resurrection—the continuity of release, release, terror, joy, agony, revival, the human man.

The accompaniment, played by Cage and Tudor on two pianos, both amplified by contact microphones, was Cage’s *Winter Music*, in the electronic version. During the intermissions between dances a small crowd regularly gathered to watch David Tudor expertly assemble and disassemble the equipment.

The second program was all lighter, on the side of comedy. It was danced with an even more complete assurance than the first, a triumphant technical finesse, which deserved the balletomane ovation received at the end.

The opening *Suite for Five*, to Cage’s *Music for Piano* (single tones on keyboard and harp of the piano plus noises on the frame construction), was a series of delicate, lovely, witty miniatures for solo, duet, trio, and quintet, featuring particularly Cunningham and Carolyn Brown. But now in what way can I describe the free elegance of movement? I think of the walking, but then my memory goes back to *Field Dances*, where the dancers sometimes walked to their points of action; and of the running, but *Aeon* was full of it. Cunningham’s running especially, the quick, light varieties of footwork, alternating with walk, with limp, all types more casual and less precious than formal ballet, yet each a gift of imagination in its pattern. And there are the innumerable positions, in which one dancer comes to rest, stays slowly moving or turning, the inimitable individuality of technique slightly differing for each dancer. And the group movements, drawing to focus in intaglios of two or three combined, poised, slowly moving bodies, each precisely and intricately shaped.

Considering the points of rest, one marvels at their exactitude, and with this at the continuing play of individualities in motion, so many solos, so many combinations, at the control and contriving which hold them together contrapuntally and in unison, without reference to any musical accompaniment. I asked, and it was explained to me that this is done by very exact counting in the pattern, the same order and time-sequence, the same beaten steps.

The second dance, *Story*, first a performance to a score for amplified piano by the young Japanese composer Toshi Ichiyanagi, punctuated by manually produced sounds, among them Cage smashing with a sledgehammer such objects as a five-gallon water bottle, enjoyed the added nuance of costuming by chance. But I weary and cannot tell you of this wonderful dance, all comedy, play, and lightness of spirit. Given your opportunity, you must see it.

The final work was *Antic Meet*, to Cage’s *Solo for Piano* (from Concert for Piano and Orchestra) plus taped segments from the Town Hall album of his compositions. Even more than *Story* it invites the audience to a game of imagining. One heard of it beforehand as the dance in which Cunningham carries a chair strapped to his back. He does, and Carolyn Brown, wearing an antique bridal nightgown, steps through a curtained frame to dance a duo with him, at one point sitting in the chair. One dancer and then another appears in black sunglasses, until there is a scene in which all the dancers, wrapping darkness about them with gestures, do not quite grope but rather feel their blindness. I do not know whether it is a blindness of sight, or of spirit, or of not seeing within darkness; each of these is conveyed.

I believe that the chief distinction of forsdame is the sensation of release, the prevailing relaxation however elaborate or difficult the movement. Nothing is made to appear difficult. Watching these dancers one never strains, though one marvels at the technical dexterity, the floating turns on one foot, the high gliding which avoids the mere athleticism of a leap, the complete flexibility of each aspect of the body. Traditional ballet is no more difficult. Here the sense of ease robs difficulty of pretentiousness.

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HONORS & AWARDS

IEOH MING PEI has been named recipient of the New York Chapter AIA's Medal of Honor given in recognition of distinguished work.

WILLIAM STEPHEN ALLEN, FAIA, has been awarded the California Council AIA's Distinguished Service Citation for "diplomacy and leadership which has brought a new recognition of the architectural profession by government agencies of the State of California."

MANUEL A. FERNANDEZ, Univ. of New Mexico, is winner of the Third Annual $5,000 Reynolds Aluminum student competition. Winning design was an "Aluminum Curvilinear Truss System".

Honor Awards in the 1963-64 Western Home Awards Program sponsored by the AIA and Sunset Magazine go to WURSTER, BERNARDI & EMMONS, San Francisco; MORSE & TATOM, Honolulu; CHARLES W. MOORE, Berkeley; and KIRK, WALLACE & MCKINLEY, Seattle.

APPOINTMENTS

IRA S. ROBBINS, vice chairman of the N.Y. City Housing Authority; newly elected president of the National Association of Housing and Redevelopment Officials. He predicts that "1964 is going to be a controversial year, made noisy by charges and countercharges; made cold by statistics and hot with emotional arguments; sensationalized by myths and fictions; sobered with statements of policy and sedate hearings."

Architect WILLIAM F. R. BALLARD: chairman of the N.Y. City Planning Commission; by Mayor Wagner.

PAUL PATE and HERBERT OHL: assistant chairman of the Texas A&M School of Architecture, and assistant chairman of the Research and Graduate Center, respectively; by the school's new chairman, Edward J. Romieniec.

DON EMMONS, FAIA: architectural consultant to the (San Francisco) Bay Area Rapid Transit District; to advise in the development of a comprehensive architectural concept.

JAMES M. BROWN: Director of the new Oakland, Calif., museum. Brown is currently vice-president of the American Association of Museums and president of the U.S. Committee of the International Council of Museums.

ARCHITECTURAL EXHIBITS

Four Santa Barbara, Calif., Houses by Greene & Greene, Bernard Maybeck, Francis T. Underhill and Frank Lloyd Wright, through Nov. 12 at the art gallery of the Univ. of California at Santa Barbara.

A new 15-acre financial and business center for the city of Ventura, Calif., will surround this projected savings and loan building designed by William L. Pereira & Associates. The bank will have a structural system of reinforced concrete to permit clearspan construction.

"Office building of the future", a torsion tower designed by Toledo firm of Samborn, Steketee, Otis & Evans for the Libby-Owens-Ford Glass Co., would contain apartments, moving sidewalks, shops, theater, restaurant in addition to offices.

COMPETITIONS

Nominations are being accepted by the AIA through Dec. 31, 1963, for the $25,000 1964 R. S. Reynolds Memorial Award, largest in architecture. The award is conferred on the architect judged to have designed the most significant work of architecture in which aluminum is an important contributing factor. For information write the AIA, Reynolds Award, 1735 New York Avenue, N.W., Washington, D.C.

CONFERENCES

International Conference on Permafrost will be held Nov. 11-15 at Purdue University. Scientists and engineers from 10 countries will discuss problems of building on the earth's frozen land masses.

GRANTS & SCHOLARSHIPS

Applications for the N.Y. Chapter AIA's $5,000 Arnold Brunner grant for advanced study in a special field of architectural investigation are now being accepted. Architects and those in related fields are eligible. For application blanks and further information write the N.Y. Chapter, 115 East 40th Street, N.Y. 16.

The Ford Foundation has approved a 3-year grant of $172,000 to The American Federation of Arts to establish one-month residencies for American painters, sculptors and printmakers in small and medium size museums throughout the U.S.
NEW Arts & Architecture READER SERVICE

For Manufacturers' Product Literature and Information

1. Circle number on coupon corresponding to the number preceding the listing.

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3. Remove and mail prepaid, addressed card.

(1) A complete package of information literature on new Armstrong Ventilating Acoustical Ceiling systems has been compiled for architects and engineers by the Building Products Division of the Armstrong Cork Company. Fully illustrated brochure gives complete details on basic operation of the new ceiling system, shows how it reduces air conditioning costs through elimination of air diffusers, and a large amount of supply duct work; case histories of actual installations; available at no extra cost. Armstrong Cork Company.

(2) An attractive, 32-page booklet describing a number of steel-framed homes is available from Bethlehem Steel Company. Write for Booklet 1802. Color and black and white photographs describe outstanding steel-framed houses in many areas in the United States. Floor plans, construction information, and costs are described. Examples of mountain cabins, apartments, and steep hillside site solutions are shown. Bethlehem Steel Company.

(3) New informative brochure available from Cervitor Kitchens, gives all important specifications, details and features of their space-saving kitchen units; under-counter, built-in, free-standing units manufactured in limitless sizes, with or without range, oven, sink; carefully crafted in walnut, maple, birch, oak, ideal for offices, homes, apartments, patios. Cervitor Kitchens Incorporated.

(4) Fireplaces: Write for free information on the popular "Firehood" conical metal fireplace. Four distinctive models available in 9 porcelainized decorator colors. Condon-King Company.

(5) Handsome illustrated folder describes, gives complete details on the Container Corporation of America Color Harmony Manual based on the Oswald system, and designed to improve the planning and selection of color by artists, designers, manufacturers and consumers. Folder includes sample color chip. Container Corporation of America.

(6) Interior Design: Crossroads have all the components necessary for the elegant contemporary interior. Available are the finest designed products of contemporary styling in furniture, carpeting, draperies, upholstery, wall coverings, lights, accessories, oil paintings, china, crystal and flatware. Booklet available. Crossroads Mfg. Inc.


(8) Plywood For Today's Construction, a new catalog with basic information for plywood properties, grades, types and uses has been published by Douglas Fir Plywood Association. The 20-page booklet, indexed for A.I.A. filing systems, also contains information about special products and about plywood floor, wall and roof construction systems. A special new section discusses plywood component construction. Single copies of the booklet S62 are free. Douglas Fir Plywood Assn.

(9) Two new pamphlets on folded plate roofs and stressed skin panels are available from the Douglas Fir Plywood Association. Each brochure contains structural details, illustrations and descriptive text; valuable addition to any collection of data on components; other booklets in the comprehensive Douglas Fir Plywood Association. The 20-page booklet, indexed for A.I.A. filing systems, also contains information about special products and about plywood floor, wall and roof construction systems. A special new section discusses plywood component construction. Single copies of the booklet S62 are free. Douglas Fir Plywood Assn.

(10) Furniture: A complete line of imported upholstered furniture and related tables, warehoused in Burlingame and New York for immediate delivery; handcrafted quality furniture moderately priced; ideally suited for residential or commercial use. Dux Inc.

(11) Contemporary Fixtures: Catalog data good line contemporary fixtures, including complete selection recessed surface mounted selection, down lights incorporating Corning wide angle Pyrex lenses, semi-recessed surface mounted units utilizing reflector lamps; modern chandeliers for widely diffused, even illumination. Luxo Lamp suited to any lighting task. Select from a booklet specifying. CSHouse 1955. Harry Gitlin.

(12) A new, 12-page executive furniture catalog has just been completed by Hibbert, Inc., manufacturers of a complete line of executive office furniture. New catalog contains detailed illustrations of the line, including executive desks, secretarial desks, side storage units, corner tables, conference table, executive chairs, and side chairs. The center spread features selected units merit specified for CSHouse 1955. Harry Gitlin.

(13) The 36-page Hotpoint Profit Builders catalog for architects and builders contains specifics on Hotpoint's full line of products, including built-in ovens, dishwashers, disposers, heating devices, refrigerators, ranges, air conditioners, laundry equipment. Also included are diagrams of twelve model Hotpoint kitchens with complete specifications for each. Hotpoint.

(14) Interpace has published a 6-page brochure on the new Contours CV, a lightweight ceramic architectural facing for exterior and interior use. The brochure features photographs of 12 standard designs in a wide pattern variety ranging from those achieving medallion effect to ones which vary the play of light. The brochure also details dimensions for individual custom designs which can be designed to suit 11¼" x 1½". International Pipe and Ceramics Corp.

(15) Catalogs and brochures available on Multalum and X-Alum series of contemporary furniture designed by George Kasparian. Experienced contract dept worked with leading architectural and interior design firms. Kasparian, Inc.

(16) Complete line of furniture designed by Florence Knoll, Harry Bertoia, Eero Saarinen, Richard Shultz, Mies van der Rohe and Lew Butler as well as a wide range of upholstery and drapery fabrics of infinite variety with color, weave and design utilizing both natural and man-made materials. Available to the architect is the Knoll planning unit to function as a design consultant. Knoll Associates, Inc.

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(Continued on next page)
(17) Lietzke Porcelains announces the addition of two new shapes to their line of porcelain cabinet pulls bringing the total to 16. These new shapes, designed for the use of architects and interior designers, are to a total of eight designs. All pulls available in four colors: bone, black, clear, and amber. On custom order pulls can be produced in a wide range of additional colors. Literature, free upon request, contains samples on full color line. Sample board with the eight shapes in the four stock colors can be had for $5.00 f.o.b. Mogadore, Ohio. Lietzke Porcelains.

(18) Lighting: A completely new 14-page, three-color brochure of popular items in their line of recessed and wall mounted residential lighting fixtures is now available from Marvel Electric Manufacturing Company.

(19) The J-21 Convertible Housing by Marco converts an incandescent recessed housing fixture from a separate fixture to a complete assortment of 21 trims. This new 2-in-1 housing is available from Marvel Electric Manufacturing Company.

(20) Contemporary Clocks and Accessories. Attractive folder-Chrome, brushed aluminum, or white finishes, pipe and tubing, crisp, simple, unusual models: not lights and bubble lamps; George Nelson, designer. Brochure available. One of the finest sources of information, worth study and file space.—Howard Miller Clock Co.

(21) Lanterns, a major innovation in lighting designed by George Nelson, are manufactured by the Howard Miller Clock Company. The lanterns, shown in a two-color, four-page brochure, the illustrations show all 21 styles in four models—ceiling, wall, table, and floor—and include the large fluorescent wall or ceiling unit designed primarily for contract installation. Each is accompanied by dimensions and prices. Distributed by Richards, Morgenthau, Inc. Howard Miller Clock Company.

(22) Selections from the diversified decorative accessory collection designed by George Nelson for the Howard Miller Clock Company are presented in a new illustrated, four-page brochure. The brochure, available to architects and interior designers without charge, upon request. The brochure contains specifications (both built-in and surface mounted); bubbling light fixtures; net lights; plantsers; room dividers; and the versatile space divider, Ribbonwall. All information necessary is included. A $5.00 catalog is available. Howard Miller Clock Company.

(23) Write for complete new catalog on Woe-Mac accent, recessed, and surface mounted fixtures that are adjustable, blended and hidden light with choice of finishes. Also Allura-Lite complete 12-volt garden lighting system that yields a soft glow rather than usual harsh light, featuring simplicity of installation and flexibility. Montrose Lighting.

(24) "The pleasure of planning your home with Mosaic Tile," a new 24-page brochure, depicts usual uses of tile and presents a variety of home planning ideas; large selection of beautiful tile photographs. Tiled steps, hallways, tiled fireplaces, kitchens, bathrooms, patios and sunrooms. Show the versatility and wide color choices as well as low maintenance costs and lifetime advantages of ceramic tile. Mosaic Tile Company.

(25) Completely new full-color 26-page catalog of Montecito ceramic tile manufactured in California and distributed throughout the area west of the Rockies. First presentation in booklet form of tile in the Harmonite color family. Includes decorated glazed wall tile, new Staccato palette in one inch single tile, and Byzanite. Catalog available upon request. The Mosaic Tile Company.

(26) Norwalk Architectural Systems: Norwalk Architectural Systems includes Arcadia sliding windows, available in a wide range of stock sizes, and Arcadia aluminum sliding glass doors in stock and custom designs, including the Arcadia 500 glass door for light construction. The details of the single glazing and insulating glass and all other well known features of Arcadia doors and windows are presented in three catalogs—a 12-page catalog on doors, an 8-page catalog on windows, and a 20-page catalog dealing with the Arcadia 500. Norwalk Architectural Systems.


(29) Sun Control: New 8-page catalog describes the Arcadia 800 Series Sun control systems, which combine engineered sun control with broad flexibility in design and finish. Can be engineered to provide up to 100% shading, while retaining twice the horizontal visibility of ordinary louvers or sun screening. Norwalk Architectural Systems.

(30) Recessed and Accent Lighting Fixtures: Complete range of contemporary recessed and surface designs for residential, commercial applications. Holiday pendants, gay, colorful combinations of handblown colored or satin opal glass as well as metal shades. Light form fixtures—satin thermal glass in glowing geometric shapes for unusual decorative effects. Consolidated Manufacturing Corporation.

(31) Reiner Industries' Sweep system of remote control can provide instantaneous control of all electrical devices from master control points. The Sweep units may range from the light control of a single room to the master control of the whole building or home. Each unit consists of illuminated, name-plated buttons mounted in a continuous strip, which can always be extended. Available also is a portable remote control unit. Reiner Industries, Inc.


(33) Appliances: Thermador presents two new brochures. The 14.2 cubic foot Refrigerator-Freezer, with two icemakers, is explained in full; choice of colors and specifications are given. The second brochure colorfully illustrates Bite- In Electric Ranges. The special features of the Bite-In Electric Ranges, as the Air-Cooled door, 2-speed rotisserie, scientifically designed aluminum Brolite, tray, are shown. The Thermador Masterpiece Bite-In Electric Cooking Top is offered by Thermador Electric Manufacturing Co.

(34) Full color illustrated brochure describes new Thermador Bite-In Dishwasher; stainless steel is used for actual tank and inside door for washing compartment eliminating chipping, staining, rusting, odor problems, specialty and development, sound-deadening material makes operation nearly noiseless; new stainless steel food residue separator, drying system, completely automatic controls; and style and color co-ordinated with other Thermador Bite-In kitchen equipment brochures detailed specifications. Thermador.

(35) Wall Furniture: Broad and versatile line of wall-hung furniture, manufactured and warehoused in Los Angeles; the Peter Wessel wall furniture line is of the highest quality and workmanship constructed of genuine walnut, oak, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, walnut, wal...
Literature concerning products of the manufacturers listed below may be obtained by circling the appropriate number on the Reader Service Card. Product samples are on display at the Building Center, 7933 West Third Street, Los Angeles.

Most may also be seen at the San Francisco Building Center, 40 Gold Street, San Francisco.

(201) Visualite louvered windows, full frame and strip hardware, illustrated sectional and horizontal installations, with blades of wood, aluminum, acrylic or glass. H. Steel & Sons, Inc., San Francisco.

(202) Industrial building products in aluminum, including sheeting, rib roofing, industrial siding, etc. Also have available information on hand rails, planks, aluminum products, curtain walls, store fronts, windows and doors. American Aluminum Company of America.

(203) Amtico Permalife vinyl flooring, solid vinyls that are available in 20 patterns and unlimited custom colors as well as in conductive tile. Amtico Carefree vinyl, a budget priced flooring with no paper backing, in 5 modern patterns and a wide choice of decorator colors. Ami-tile vinyl flooring for above-grade, on-grade and below-grade installations, available in 12 colors, and Amtech rubber and plastic rubber flooring in marbledized patterns featuring 22 colors. American Bilt-Rite Rubber Co.

(204) Illuminated sign and display cabinets, UL approved for exterior and interior use, available in a variety of baked enamel on aluminum finishes. American Display Cabinet Company, Inc.

(205) American Maid shower doors and frame enclosures featuring decorative laminated glass and acrylic panels with gold, satin and polished frames. Also available in other plastics and wire glass and in special bodied finishes. American Shower Door Company.

(206) Manufacturing a complete line of quality paint products and exhibiting at the Color Key library, an original method of color selection. Divided into Color Key #1 and Color Key #2, the method separates the entire spectrum into only two palettes with the colors in each mechanically related for total harmony to facilitate the pre-selection at a glance of the entire range of colors for all decorating. Ameritone Paints by Vi-Cly Industries.

(207) Manufacturers of Anti-Hydro, Aridial and Amurseal waterproofing. Amortop hardener and the new Dicemlon Curehard, the single application material to cure, seal, protect and prevent dust proof concrete. A written guarantee is available on Anti-Hydro Products when materials are supervised by a factory representative. Anti-Hydro Waterproofing Company.

(208) Supplier of Cabox C2C (Chlorinated Zinc Chloride) for pressure treatment of lumber to guard against termites and dry rot in foundations, sub-floor framing and sheathing, and of Boxco Pyre-Brite and other fire retardants. Woodite pressure treated lumber to resist fire and flame spread, termite attacks, insects and decay. Both materials are approved under U.C.B.O. research recommendations and each piece of Pyre­ sote pressure treated lumber bears an Underwriters’ Laboratories, Inc. label. J. H. Baxter and Company.

(209) Architectural letters and plaques in bronze, brass, aluminum and nickel. Also, custom fabricators of all types of architectural metal work including stairs and handrails, storefronts and entrances, window sills, solar screens, patio doors, et al. A. J. Bayer Company.

(210) Manufacturers of aluminum buildings and grilles including a deluxe-line recommended for schools, Grill-O-Metrics grilles in 3 dimensional geometric patterns, Bar-O-Metrics panels constructed with inlaid facets, Illuminated wall brackets and pipe rail adjustable fittings. New developments in color coordinated rod couplings to permit decorative treatment to floating stairs, and plastic and handrail grip for a complete wrap around covering. Blumcraft of Pittsburgh.

(211) Producers and exhibitors of Desertone, a natural colored crushed rock for roofs, landscape gardening, terrazzo, concrete aggregate, aggregate transplant and seal cost on black top road mix. The natural colors include green, brown, red, pink, gold, turquoise, lilac, black and white and sizes run from 7/16 inch screen to the social 4 and 6 inch rock. Brubaker-Mann Company.

(212) Rubber and vinyl tile flooring in 51 marbledized and plain colors with rubber cove base to match. Also display rubber stair treads with matching tile and base. Special color matches are available at no extra charge on orders of 2000 square feet or more. Burke Rubber Company, Inc.

(213) Manufacturers of Cabots stains, oils, waxes and colloidal paints for preserving, protecting and coloring all types of exterior and interior woodwork, as well as waxes, wax emulsion paints, clear and clear waterproofing materials for brick and concrete. Samuel Cabot, Inc.

(214) Colored vinyl link mats and runners in weave widths of ½”, 5/16” and %”, fashioned to specifications. Also manufacture tire fabric link mats and runners, and rubber and vinyl matting. Cactus Mat and Patch Manufacturing Company.

(215) Colored, decorative glass panels by Jim Weaver executed from the architect’s own pictorial or abstract design, including one that carry from solid to transparent areas. Cal-Western Manufacturers.

(216) Exclusive distributors of Monkey Pod hardwood plywood panels and suppliers of all types of hard and soft plywood, masonite, and Foam Board. California Panel and Veneer Co.

(217) An association of members whose Redwood lumber is properly seasoned, graded and milled under close supervision and given the CRA Trademark of quality Redwood. Both finish and construction grade Redwood are available for siding, paneling, facia, finish and millwork. California Redwood Association.

(218) Roof deck systems and insulation, Bermuda roofs, fireproofing, fiber forms, acoustical treatments, insulating materials and loose fills based on the light-weight, fireproof qualities of Zonolite. California Zonolite Company.


(220) An extensive line of decorative panels for siding, folding or partitions. Unlimited designs are available including carved wood grille patterns, the parallel panel for use as an opaque partition, and panels with inserts of perforated metals. All feature the exclusive overhead hardware and bottom reveal, requiring no extra charge.

(221) Dex-O-Tex latex base troweled-on flooring and roof deck covering which include special decorative terrazzos, static conductive finishes, industrial flooring and acid proofing, underlayments, adhesives and marine products. Crossfield Products Corporation.

(222) A complete line of washroom dispensers for commercial and industrial buildings including chrome roll dispensers, recessed towel dispensers and waste receptacles in satin buffed stainless steel and prime coated steel and towel and tissue dispensers in chrome, white, stainless steel, copper plate, and Kromotex finish in green, bronze and gray. Crown Zellerbach Corp.

(223) Structural clay products including Steelfyl brick, Imperial brick with cellular openings to create static air space for insulation and less weight, and Bel Air flats for walkways, decorative veneer, wall capping patios, pool decks and window ledges. Davidson Brick Company.

(224) Ply-Sawn, the Douglas fir siding for a new dimension in exterior siding and paneling. Slabs and blanks Philippine mahogany plywood paneling from Mindanao and Luzon, either unfinished or pre-finished, for use as an interior wall finish. Davidson Western Plywood Co.

(225) Maintains a continuing policy of programs and informational services for the architects, including the Gold Medallion Seal for residential construction and the exclu­sive Merit Award for commercial

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and industrial buildings that conform to required standards of excellence in electrical installation. Information on these is available from the department's residential or commercial utility consultants, Department of Water and Power.

(226) Styrofoam, a feather-light board of expanded polystyrene for concrete forms, floor, wall and roof insulation, insulating plaster base and pipe and vessel covering. Also manufacture Saralo 200 and ply-film waterproof membranes Saraloy 400 elastic Flashing Scorboard insulating board, Roofmate FR roof insulation and the Miller dry wall system. The Dow Chemical Company.

(227) Plastiflutre, a resilient floor covering of vegetal felt backed by jute burlap canvas, coated with plastic, for use indoors and out, over wood, concrete and tile, where a carpeting effect is impractical but desired. Available in four patterns and a variety of colors, and suitable also as a covering for interior walls, European Chemical Corporation of America.

(228) Execute scale models of all types of buildings and site developments stressing details in design and materials. Glenn Evans Miniatures.

(229) Manufacturers of intercommunication and sound systems for schools, hospitals, medical buildings, commercial structures and residences, with consultation service for layouts available for any type application. Executone Systems of Southern California.

(230) Laminaflor high pressure decorative laminated plastic, manufactured in Los Angeles. The new line, sample available at the display, includes solid colors, wood grains, decorator, and special patterns. Fabricon Products, Division of Eagle Picher Company.

(231) Natural, cellular, lightweight lava stone for garden display and masonry veneer in a color range from light grey to charcoal, as well as sierra tan, and available in varied sizes, shapes and custom cutting. Featherock, Inc.


(233) A high pressure plastic laminate in solid colors decorator designs and wood grains with up-to-date samples available at the display. A Formica exclusive is the custom design service of sealing murals, designs and art treatments to Formica. The newest development is the brushed finish laminate for kitchen cabinetry. Also available are Formica flush doors. Formica Corporation.

(234) An extensive line of overhead doors including wood, both panelled and carved, and the new Fiberglass door of Fiberglas and aluminum for garages, and a variety of doors for commercial and industrial use. Featured in the display is a working model of the new telematic door. Removable component for unimpaired clearance in multiple door installations with the safety factor of non-closing unless the post is in place. Also manufacturer hardware for all types of sectional and rigid doors, operators, weatherstripping, pass doors and rosettes. Frantz Manufacturing Company.

(235) An extensive line of concrete block, both structural and veneer, including Flapperete, Laddestone, Stumpstone, Terracette and Viking Stone, as well as sculptured and flat concrete screen block. General Concrete Products, Inc.

(236) Textolite, the high pressure decorative laminate in both conventional and textured surfaces with samples available in the solid colors, decorator designs and wood grains. The latest development is the Candy Stripe pattern for commercial installations featuring a 1 inch stripe running the width of the sheet. General Electric Laminated Products.

(237) Koroseal, a vinyl wall covering of precision calibrated vinyl sheet welded to flame-retardant fabrics. In a wide variety of high styled and functional patterns, it is resistant and approved for flame retardance by the California State Fire Marshall. B. F. Goodrich Co.

(238) Illustrations of a complete line of acoustical tile, including wood fiber, mineral and fire rated, and samples of special sizes and colors which the firm features. Also available suspension systems, integrated lighting, luminous panels. Buildings and other systems for acoustical work. O. P. Grani, Inc.

(239) Handcraft Tile, a hand-bayed, slip coated, hand-made ceramic tile available in many standard units or, on request, in practically any design required. Colors include over 25 warm, desert tones, subtle pastels and striking modern hues, with hand buffed, textured and mottled surfaces adding character to the overall effect. Handcraft, Tile Inc.

(240) A complete line of common brick for reinforced grouted brick masonry construction, including standard, oversize and modular units in a variety of textures. Higgins Brick and Tile Company.

(241) Marvel interior finish in color or as a base for paint, exterior stucco in a wide choice of weather-resistant colors, Marbelcrete finish in color and imbedded with exposed marble chips, acrylic type textured plaster for use where acoustical properties are not required. Hi-Sorb acoustical plaster in many colors, and a swimming pool finish resistant to acids and alcohols. Highland Stucco and Lime Products Co.

(242) A complete line of jamb type garage door hardware and accessorie for all doors, both residential and commercial, also, structural devices such as joint hangers, anchor "T" and "L" straps, concrete form ties and related items. Also available, when appearance is the predominant factor, folding gates of cold rolled steel, aluminum or bronze constructed of cold formed end and track sections to receive ball bearing rollers, machined bearings and brass washer construction, built-in cylinder locks for standard and flush wall cabinet to receive gates. Hoertig Iron Works.

(243) Manufacturers of Hoertigon steel folding gates for all types of commercial installations. Also available, when appearance is the predominant factor, folding gates of cold rolled steel, aluminum or bronze constructed of cold formed end and track sections to receive ball bearing rollers, machined bearings and brass washer construction, built-in cylinder locks for standard and flush wall cabinet to receive gates. Hoertig Iron Works.

(244) Manufacturers of putty and caulking compounds for all glazing and caulking problems, including Hunco architectural caulking compound for use where a permanent elastic expansion joint is required and Hunco commercial caulking compound used as a sealant for cracks, joints and around door and window frames. Hunco Manufacturing Company.

(245) Aluma-Roof, the fire resistant, all aluminum, interlocking heavy duty shingles in custom colors for application over two-ply 30# felt base and recommended for use on roofs with a minimum pitch. Hunter Aluma-Shake, Inc.

(246) Hydro T-Metcal, a homogenous, non-ferrous alloy of zinc, copper, and tin, used for roofing, siding and flashing, it is available in a variety of natural colors and comes in sheets approximately 3' x 4' in size and one inch thick. It can be used as an exterior or interior finish. Loma Stone Sales Company, Inc.

(247) A masonry veneer of fabricated stone with the realistic appearance of quarried stone. Made of concrete, crushed rock or sand, it is available in a variety of natural colors and comes in sheets approximately 3' x 4' in size and one inch thick. It can be used as an exterior or interior finish. Loma Stone Sales Company, Inc.

(248) A variety of colors and textures in facebrick including Normandy Narrow, Colonial, American, Economy Narrow, Hillcrest Splits and Alberhill Pavers. Also manufacturer Kord Modular and oversize common brick, fire brick and flue lining. Los Angeles Brick & Clay Products Company.

(249) Vetrum venetian glass mosaic, Lake Como Italian pre-cast marble mosaic tile with smooth or rough glazed surface, Cremona and Appiani Italian quarry tile. Also available is Venetian vitreous porcelain glaze or unglazed tile, and decorative tile from Spain and Holland, for use on exterior and interior walls and floors. All are available in standard window frames. H. R. Huntley and Co., Los Angeles Tile Jobbers, Inc.

(250) Dual Window Wall, a system consisting of a metal louver exterior with glass louver interior, both movable. Also manufacture aluminum louver windows, frame
or strip hardware, Roller King aluminum rolling windows and doors. King shower and tub enclosures. Louvre King, Inc.

(251) Cam operated, stainless steel, louvre window strip hardware and overhead suspended aluminum rolling windows. The Fiberglas screen. Also manufacture an aluminum nailed steel rolling window with steel or aluminum hardware and a bottom rolling aluminum and glass doors. Louvre Leader, Inc.

(252) The Series 300 aluminum sliding window for commercial use and the Capri Cadet aluminum sliding door with outside slide design. Also available is the residential line including the Cadet, an aluminum sliding window with both sections removable, and the Capri Cadet aluminum sliding glass door. Lujon Corporation.

(253) Marlite plastic finished wall panels for residential, commercial and industrial use, featuring wood grain reproductions, decorator patterns, pastel colors available in sheets and panels. Developed by Raymond Loewy Associates. Also exhibit Koralite, a hollow core panel which requires only a backing of stud or solid nailing or furring strips. Marsh Wall Products, Inc.

(254) Manufacturers of roof scut­tles of heavy steel construction with spring lever and lock. Padlock and steel hatches. Both products are available in special materials and sizes. Metal-Tite Products.

(255) Ornamental garden art in cast stone, including statuary and bowls for fountains and a variety of designs and shapes in garden benches and planters. Available in natural or white as well as custom work in colors to match almost any decorative scheme, for indoor and outdoor use. Monterey Garden Art.

(256) A complete custom kitchen, designed by Jeanette Copps, N.I.E., and included in the contemporary Paul McCobb line suited to open plan kitchens, also used for built in dining units. The house and assembly for office furniture, and versatile 600 Series adaptable to any period from Cape Cod to oriental modern. Cabinets are offered in maple finished in natural grains of maple, autumn tone, fruitwood, driftwood and walnut, and in 16 decorator colors, with choice of hardware. Muterscher of California, Inc.

(257) The Viking Spacemaker, a complete sliding door pocket including door, frame and hardware, the Power-Touch Bi-fold ward­robe wall with Novoloy core, the Cinderella mirrored sliding wardrobe and the Feather Glide by-pass wardrobe wall, all pre-fab­ricated, stocked, and ready for installation. Nordahl Manufacturing Company.

(258) Pictorially a full line of industrial, commercial and residen­tial steel rolling ware in both pressed and vitreous china. The most recent addition to the porcelain-on-steel line are the new round pullman lavatory and the corner bath built-in units. Noma-Thermador Corp.

(259) A complete line of electrical built-ins including exhaust fans, wall and fan combinations for range and oven, bathroom heaters, exhaust ventilators, door chime, stereo, inter-com and radio combinations, and barbecues, both electric and charcoal. Nu-Tons, Inc.

(260) Wood stools made of pure maple ground in limited quantities including semi-transparent penetrating stains in brown and gray tones (the color of the grain). Also heavy and bodyed stains that give the wood an opaque finish. Other products are the redwood, roof and special purpose stains and pre-stained wood siding. Olympic Stained Products Co.

(261) Manufacturers of built-up roofing, Square Butt and Ambassador asphalt shingles. Storm-Lap asphalt shingles, roof coverings including Coolite, Colored Coolite, Aluminized, and Nu-White, Grip Deck roof deck, and asbestos cement siding. Also make Grippath and Ty-V-X plywood, sheets, steel systems, cast and roll insulation and Mastic-tape bituminous roof and pave. Fibo Division, Fibervar Products.


(263) Provide a courtesy service to the architects on all industrial, institutional and commercial projects to help plan for raceway apparatus closets, PEX equipment cable rise systems, central room and service from the street. Pacific Telephone Company.

(264) A high-pressure decorative laminate in a wide variety of types incorporating Genwood utilizing one-line wood veneer, wood reproductions, one-colors and two-colors, and designed in custom fabric-surfaced laminates. Parkwood Laminites received the American Institute of Interior Design International Award for excellence in design. Parkwood Laminites, Inc.

(265) Manufacturers of a complete line of A.G.A. approved heating and air conditioning equipment including the Pace Setter, Imperial and Shaver forced air units, Min­cool air gas air conditioner, electric air conditioner for outdoor use, and Econoair, combination heater and air conditioner utilizing gas and electricity. Also make Paramount forced air wall heater, Safari wall heater and unit heaters with Astros­ward steel heat exchanger. The Payne Company.

(266) Pearlrite, a fabricated marble with a hard, smooth, lustrous surface, non-warping and spotting, and impervious to stains including alcohol, cosmetics and medical preparations. Used for walls, partition and furniture tops, stall show­ers, etc. Pearlrite, Inc.

(267) Sculptured, three dimension­al hardwood panels with limitless combination of area dividers, doors, interior sun control and decorative sound control when used on walls or ceilings. For exterior use sculpted wood is also available for fencing, patio enclosures and various types of commercial installa­tions. Also display Sculpturelite, a combination of solid carved wood and translucent plastic for subtle commercial lighting. By utilizing a sound absorbent pad instead of rock wool plastic, acoustical qualities are obtained. Penbeyter Lumber Company.

(268) Quality medicine cabinets, including the new Dubarry and Cavalier with gold and white wood frame and polished plate glass mirrors to harmonize with gold bath­room brass goods and accessories. Also display residential and apart­ment house mail boxes, built-in ironing board, range hoods, directors, fire extinguisher cabinets, bathroom appointments, and a complete line of building sheet metal specialties. Perma-Bliff Steel Prod­ucts Company.

(269) Manufacturers of a quality line of devices for crowd control�, attendance records and fare and admission collection for stadiums, racetracks, fairs, auditoriums, amusement parks, pavilions, baseball parks, industrial plants, markets, libraries, Perey Turnstile Company.

(270) A resilient polyurethane deck, flooring and roofing plastic that is metered, dispensed and applied by factory approved Franchised Applicators. A pure plastic rubber, Ural 653A, is available in many of decorator colors and unusual textured finishes. It is an aesthetic and practical coating for concrete, wood, lightweight cellu­lotes, metal and as well as a remedial coating for all existing surfaces. Poly Resins.

(271) A complete line of tile includ­ing Space-Rite and Perma-Glaze and Signature Series decorative tile designed by outstanding artists in the field. Also available in Summitville quarry tile. Pomona Tile Company.

(272) A complete line of surf­ficial sprinklers, various pop-up sprays, grass sprinkler and shrub sprayer combinations, irrigation and bub­blers, featuring rise openings of standard steel or iron pipe thread dimensions, and all bodies and lids of sand-molded heavy red brass. The sprinklers are designed to sim­ply parts, make the design of com­plete sprinkler systems easier and facilitate possible future changes in a system with the changing piping and valving system. Rain-O-Mat Sprinklers, Inc.

(273) Revo built-in refrigerator and ice maker designed for the quality custom kitchen. Originators of the built-in freezers and refrigerators for wall or under counter installation, and floor standing combination refrigerator-frezer built-in. Revo, Inc.

(274) Rez quality wood finishes for interior and exterior use. These are alkyd resin derived penetrating sealers and include the clear sealer and primer, low luster Satinwood Rez, Color-Tones in 13 coordinated fashion shades, Hi-Glos Rez, White Rez for bleached or frosted effects and Rezite, a clear exterior finish Wood-Tones, Inc.

(275) Kremilite Koutersunk lug and flexible strip wood block flooring manufactured by the Jenkinson-Wright Corp., and Ironbound con­crete floors and Luran Shingle Asphalt. Also make Perma Cushion free­estating resilient floor covering and Naugawall manufactured by Robbins Flooring Co. A. B. Rice Company.

(276) Kemiko reaction type stain for all interior or smooth exterior concrete floors; Kemiko wax finishes; Col-R-Tone coloring for con­crete swimming pool floors, tennis courts, public sidewalks and rough exterior concrete areas; and Col­R-Tone A for all types of asphalt paving. Also manufacturers of Kemiko concrete waterproofing, hardeners and sealers; Robhoff & Company.

(277) Clay roofing tile including the new 680 line of weight high weight high strength clay shingle tile in a variety of firing in colors, mission and shingle tile and the rambling, rustic American Method shingle tile, all available in a number of textures and colors and offering insulating qualities and complete fire safety. San Valle Kilns.

(278) Luran, the vinyl in sheet form, 6' wide, patterned by roto­graphing and a variety of colors and designs. This includes Luran standard, with resin saturated backing, for use over wood or suspended con­crete floors and Luran Regency and Imperial, asbestos backed for use

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tossed to avoid marks by sharp
heels. All three meet FHA mini-
mum requirements. Schae
dura Company.

(270) A wide selection of hand
crafted, quality hardware featuring
locks, latches and ornamental back-
grooves in polished and satin
brass, satin and oxidized
bronze, black, gold and solid
aluminum, polished chrome and
stainless steel. Also manufacture a
complete line of locks for residence
schools, hospitals and commercial
buildings, a choice of metals. Schla
gle Lock Company.

(280) Manufacturers of concrete
hardeners including Lithochrome,
Emerchrome, and Permalith plus
Lithochrome color hardener and
colorowax, Chromix for coloring
ready mixed concrete, and Emer-
chrome in this country. A wide range
of decorative colors and abras
vapor hardener. L. M. Sco
cdfield Company.

(281) Towel, napkin, facial and
toilet tissue dispensers featuring the
selective color and color combination
types of folded towels, requiring no
additional parts to convert from
one type to another, and the dis-
penser which will dispense all
towel types. Many colors and
textiles are available in each
model. Scott Paper Company.

(282) Shell-Craft Kapaipanel created
from natural ocean pearl shells, hand selected,
processed and laminated to produce a
pearl shell surface, hand selected,
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over any type sub-floor and embo
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schools, hospitals and commercial
buildings, a choice of metals. Schla
gle Lock Company.

(280) Manufacturers of concrete
hardeners including Lithochrome,
Emerchrome, and Permalith plus
Lithochrome color hardener and
colorowax, Chromix for coloring
ready mixed concrete, and Emer-
chrome in this country. A wide range
of decorative colors and abras
vapor hardener. L. M. Sco
cdfield Company.

(281) Towel, napkin, facial and
toilet tissue dispensers featuring the
selective color and color combination
types of folded towels, requiring no
additional parts to convert from
one type to another, and the dis-
penser which will dispense all
towel types. Many colors and
textiles are available in each
model. Scott Paper Company.

(282) Shell-Craft Kapaipanel created
from natural ocean pearl shells, hand selected,
processed and laminated to produce a
pearl shell surface, hand selected,
proc

(283) Manufacturers of Permaglas
gas or electric residential water
heaters, water conditioners, copper
boilers and large volume storage
water tanks, and Burkay gas or
electric commercial water heaters
and swimming pool heaters. A. C.
Smith Corporation.

(284) Service to the architects for
projects in their areas to establish
trends and material. Tends to be
fabrication and interior lighting for
lighting and fire. Standard, ade-
quate electric space heating and
air conditioning, and electric cooking
and water heating. Southern Cali-
fornia Edison Company.

(285) Exhibiting samples of 80 out
of 220 known varieties of marble
in the world, including imported marble,
seeds for all types and colors of
toilet tissue dispensers featuring the
selective color and color combination
types of folded towels, requiring no
additional parts to convert from
one type to another, and the dis-
penser which will dispense all
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model. Scott Paper Company.

(282) Shell-Craft Kapaipanel created
from natural ocean pearl shells, hand selected,
processed and laminated to produce a
pearl shell surface, hand selected,
proc
over any type sub-floor and embo
tossed to avoid marks by sharp
heels. All three meet FHA mini-
mum requirements. Schae
dura Company.

(270) A wide selection of hand
crafted, quality hardware featuring
locks, latches and ornamental back-
grooves in polished and satin
brass, satin and oxidized
bronze, black, gold and solid
aluminum, polished chrome and
stainless steel. Also manufacture a
complete line of locks for residence
schools, hospitals and commercial
buildings, a choice of metals. Schla
gle Lock Company.

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Emerchrome, and Permalith plus
Lithochrome color hardener and
colorowax, Chromix for coloring
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custom design and top quality at a low price. Lift-off oven door
with choice of solid door, glass window, or pattern glass windowed
door. Both oven and surface unit are available in 7 decorator colors
and brushed chrome.

both easy to use: Eye-Level Oven Control Panel features
12-hour automatic timing clocks and Sixty Minute Timer. Surface
unit rotary switches provide measured heat on 4 Calrod® units
including a "Super 2600" unit.

both easy to clean: Lift-off oven door, "Tilt-Down" broil and
"Tilt-Up" bake units with a smooth one piece porcelain lining
make oven cleaning quick and easy. "Stay-Up" hinges swing Cal­
rod® units up out of the way for easy cleaning of cooking surface.
Look inside a HOTPOINT surface unit. It is all porcelain too.

both easy to install: Surface unit features squared corners,
flush fit with the countertop, and a 4 foot armoured cable to make
installation easier. Extra-thick insulation and natural draft venting
keep oven door at low temperatures.

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