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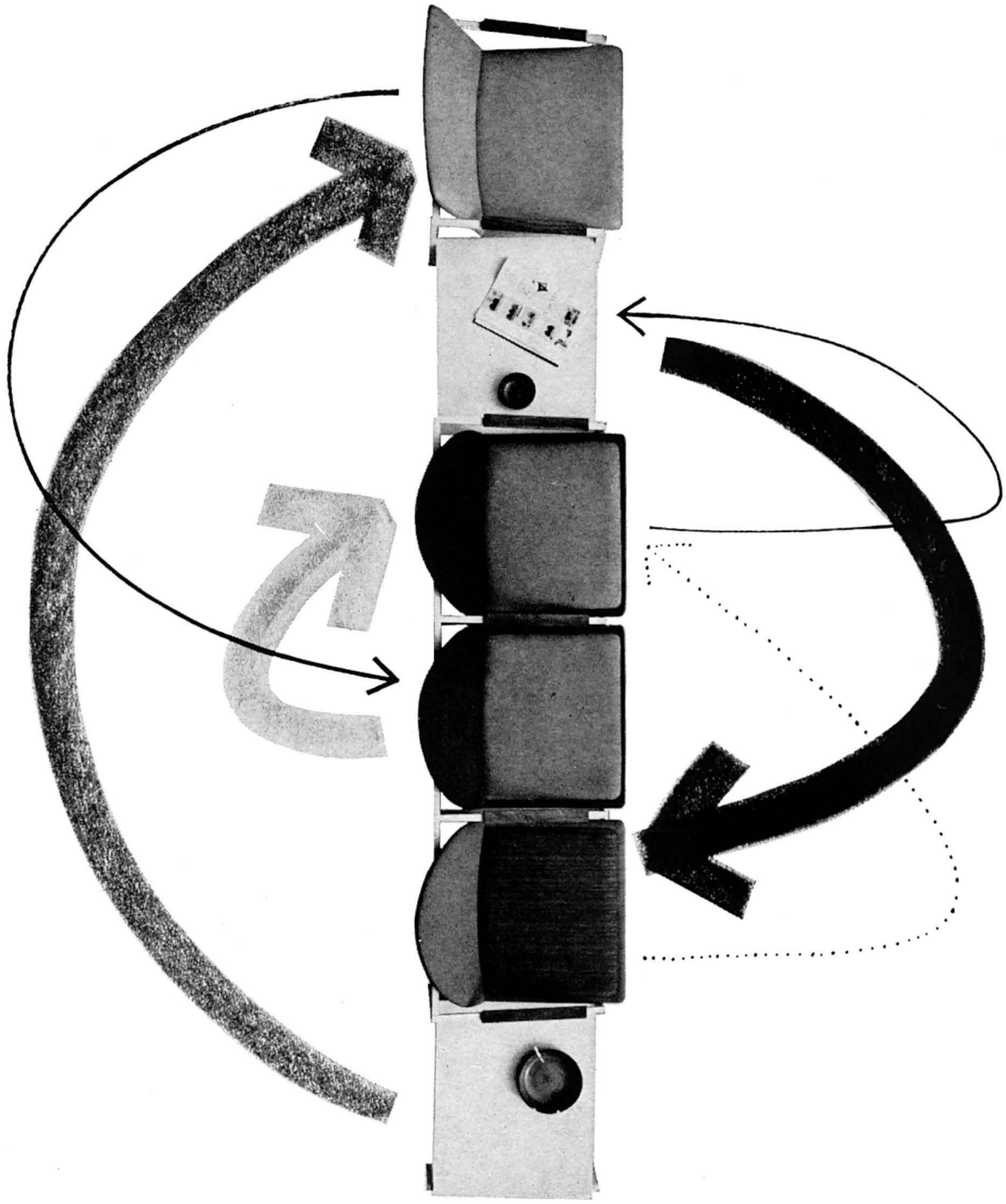
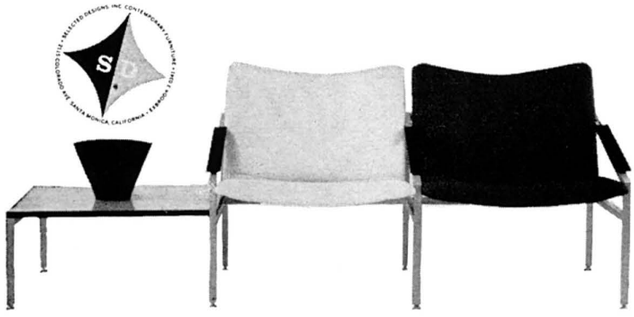
arts & architecture

JULY 1962

KAELIN





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MUSIC

PETER YATES

STRUCTURE AND TEXTURE

The familiar stylistic distinction between Classic and Baroque is better stated as a distinction between structure and texture. The distinction does away with dates. It applies as well to Byrd, who is a structural composer, and to Gibbons, who is a textural composer; to Schoenberg, who in spite of his predilection for retaining the structural sectioning by formally designated worked-out movements, is from the first a textural composer, while Stravinsky, who delights in all mannerisms of texture, remains throughout firmly structural.

The search for larger form during the harmonic period of European music proceeds out of three types of themes: one type which may be called textural and two which may with differentiation be called structural.

A textural theme consists of a melody, not irreversible and capable of furnishing its own accompaniment. The theme is often in two sections, the whole or either section being potentially capable of statement in reverse order, or in inversion, or of being mirrored in some instances by an equal but contrary statement. While these possibilities of the textural theme are never realized in the works by Gibbons and by no means always in the works of Bach, they underlie all textural composition as well as all applications of textural method by structural composers, and continue as lively as ever in the works by Schoenberg and Webern.

All extensions, positions, and partialities of the musical working are derived ultimately from the full melodic organization of the theme. Harmonic relationship is subordinated to the positioning of voices; its working out is conditioned by the harmonic possibilities set up by the intervallic relationships of the melodic theme, taken in melodic order. When the intervallic relationships deny any key, the resulting composition must be without key, not polytonal, as Webern and Schoenberg recognized with misgiving. The melodic themes of Bach contain more possibilities of interrelationship in varying degrees of harmony than those of any other composer. The design is unfolded rather than explored, the length being a condition of the elaboration. The marvel of Bach's workmanship is seen best where he seems to have enjoyed most displaying it for his own pleasure, in compositions for two or three voices, where the beauty is by extension rather than accumulation.

Beethoven has left one such theme, unexploited, a subject with which one might attempt another *Art of Fugue,* the subject of the first *Bagatelle,* opus 126.

The more potent of the two types of structural theme, that one which may be called the truly classical, begins most often in a tune or figurative fragment and can evolve around so little as a single interval. As the textural theme is not the original statement but its potential, so the classic theme by structure is not the tune, the fragment, or the interval, but the unit, which is exposed, analyzed and recombined, and which may often bring forth new themes—as with Ives. The logic of a structural theme is displayed against the background of its reconstruction in unfamiliar positions and in relation to the progress of the harmony. The moving voice or voices are conditioned harmonically by the successive positions of the bass, in short figures or long plateaus. The progress from one position to another by modulation, transition, or variation sets up a journey of events, dramatized by their successive relationships with one another and to the original key harmony.

With Ives, the polyphonic independence of the voices often redistributes a simple harmonic and contrapuntal relationship, so that the sense of implied bass is done away with, yet the musical result is not atonal, and any listener who expects a bass to be either evident or absent is quite lost.

Any rise or fall by a chromatic interval in the bass can severely affect the harmony. Whether such a change is to be a storm or a breeze over the waters depends on the context. In textural music, by contrast, the chromatic rise or fall of the bass obeys instead of determining the context.

Any structural composer, as he enlarges the scope of his method, finds more use for texture, to expand the incidental developments of chromaticism, as counterpoint or modified fugue, the structure supplying a framework for the texture. Textural composition can continue only so long as the theme permits; the addition of themes allows added sections and in some cases a final combining of themes. Thus a fugal movement, in structural composition, is likely to contain the opposing theme group of a tight sonata movement, so that the fugal theme, however prominent, is seldom the sole determinant. The alternatives are perhaps most evident in Beethoven's last sonata, *opus 111,* the first movement essentially structural, the second essentially textural. Fugue, however, does enter into the first movement, and a continuous progress of modulation into the second movement.

The utmost effect of structural music is brought about when the harmonic control, after having been most thoroughly threatened by an eruption of independence in the moving parts, is firmly and finally reasserted by the composer by means which make clear that, however far afield he may have wandered, he has never lost direction. This drama and reassurance, combined, explain the emotional authority of Beethoven: no matter how "tragic" the events his music figuratively suffers, he is never defeated at the end. Mahler, accepting the authority of this method, wilfully allows the harmonic control or direction to fall away or slacken without emphatic reassertion, so that the denouement occurs brokenly, as "pathos." That these moral conclusions do actively express a genuine state of mind there can be little doubt, but we are unwise to judge the worth of a composer by the moral effect or appearance of his method. Mahler's Ninth Symphony explores the breakdown of all that Beethoven's Ninth Symphony affirms and reaffirms, yet the very insistence of Beethoven's *Credo* in the *Solemn Mass* raises grave doubts concerning his belief.

The second or romantic type of structural theme consists of an irreversible melody or melody and accompaniment. Such a theme cannot be manipulated texturally or with analytic economy by structural concentration, having to assert its full length in sequences of juxtaposition, no matter how inworked or overworked

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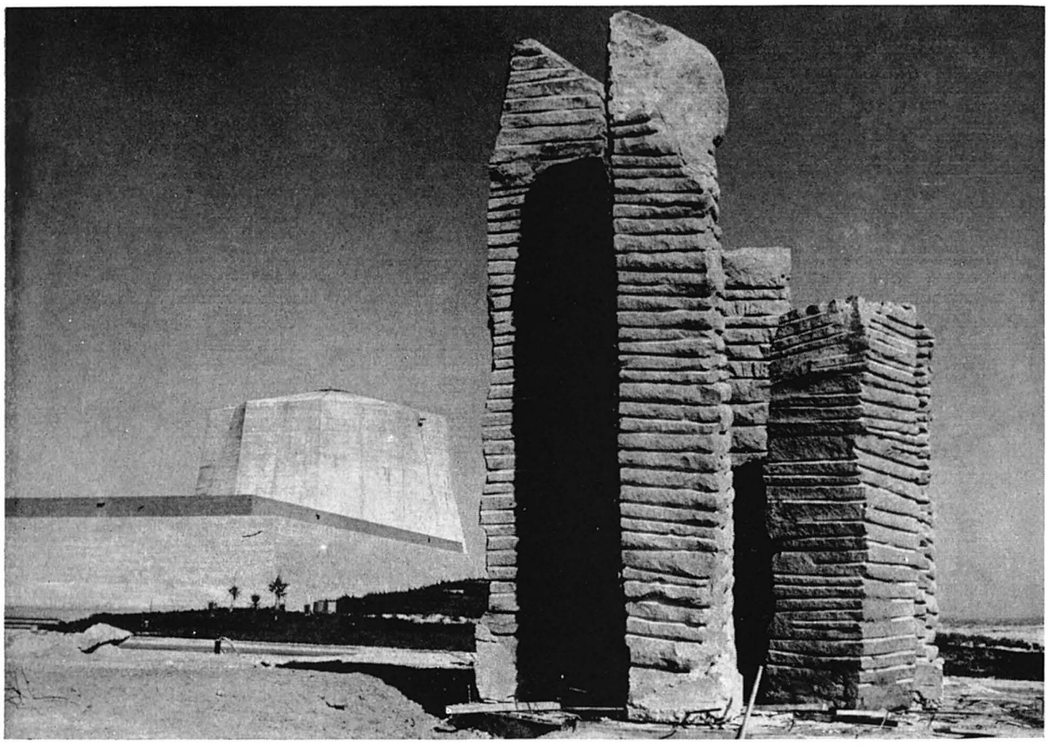
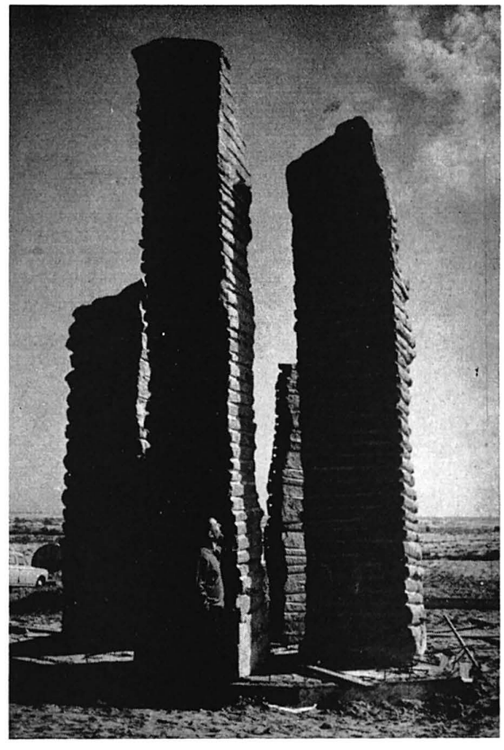
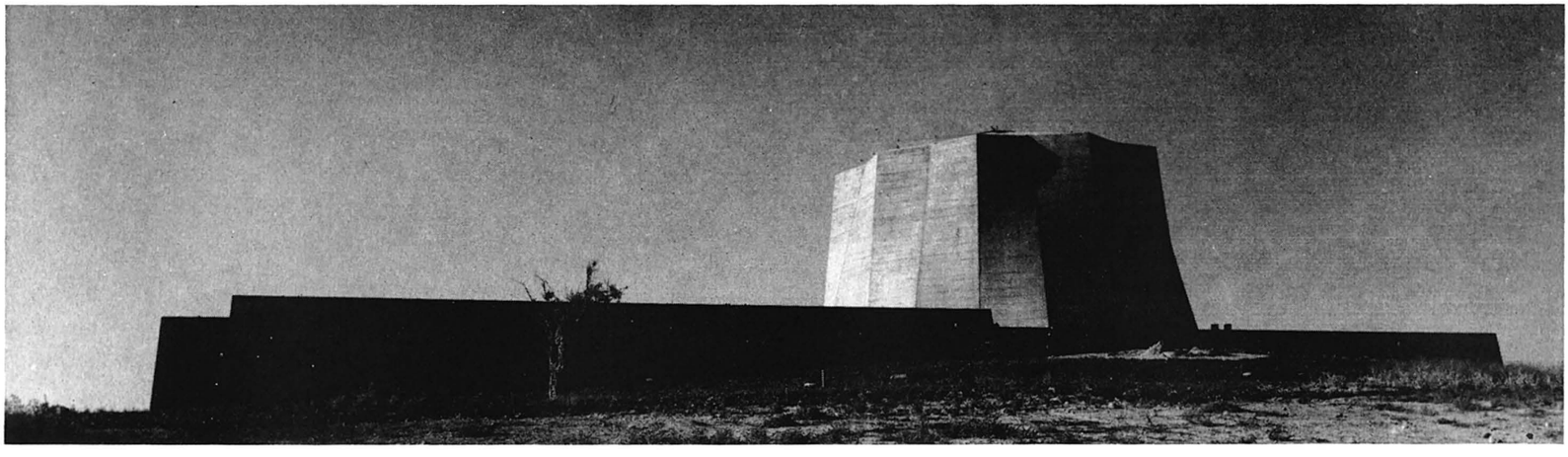
ART

DORE ASHTON







The pages of architecture magazines are hosts to endless discussions of the roles of architects and sculptors in collaboration. Advice is solicited nearly every year in the form of symposia on the subject. And every year the sculptors tell the architects that they should be privy to the plans from the ground up, and every year the architects tell the sculptors they don't understand the architect's problems. So the argument trails on from year to year with tiresome polemics and few results.

Not one of the usual prescriptions was followed in the exceptional collaboration involving Philip Johnson, the state of Israel, and the sculptor Shamai Haber. Philip Johnson was approached by Israel's minister of defense, Shimon Peres, to design a building to house a nuclear reactor. He had never been to Israel, and even after he won the commission, he didn't go to Israel. He *still* hasn't been to Israel. This in itself is somewhat unusual.

Johnson was not supplied with a budget or any other strictures. The defense minister, described enthusiastically by both architect and sculptor as a remarkable man, gave him the free hand every architect dreams of. He supplied Johnson with photographs of the terrain—a powerful, bleak coastal plain of sand and scrub set on a height—and confidently awaited the results. Johnson knew only that the site was elevated and that one could see the long line of the sea in the distance.

Naturally, Johnson cannot praise his patron enough. "It could only happen in a state like Israel," he says. "Not only did they leave everything up to me, but they built it *exactly* as I drew it, without supervision." Even the unusual stairs he designed for the interior were executed precisely, to his astonishment.

In creating his taut, sculptured building, Johnson bore in mind that the interior would have to house a large crane turning within it. "I could have made it a bubble, a cube, or a plain parabola," he explains, "but I chose what I thought would make a better shape—hyperbolic parabolas." As it turns out, these hyperbolic parabolas with their wide curves are tremendously dynamic in the sharp sun, deflecting the light and giving an illusion of movement exactly corresponding to the function of the elaborate machine within.

With the stern terrain in mind, Johnson chose raw concrete, gray and nude (and also cheap) for his building. Its long walls, unpierced, lie

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arts & architecture

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ARCHITECTURE

ARTICLES

SPECIAL FEATURES

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ART

(Continued from page 4)

along the land with the awe-inspiring presence of ancient monuments. Their powerful horizontal silhouettes remind me of a moon temple in Peru, crowning the bluffs toward the sea. The parapet, by the way, forms a lonely walk overlooking the sea. Below, an inner courtyard, colonnated and glassed, provides a more secret ambulatory.

Now we come to the second unorthodox element in the collaboration. He is Shamai Haber, an energetic sculptor, citizen of Israel and resident of Paris. He had never met Philip Johnson and indeed, had never seen the nuclear reactor building. In his Paris atelier, he had been dreaming of a monumental sculpture for Israel. Already in his mind he had formed an image of what it would be: five great monoliths on the desert plain. When first conceived, they were to have a superstructure of glass and an elaborate scheme of fountains which would trickle water over the stony flanks of the sculpture, but Haber later relinquished these complicated details.

Having heard of the remarkable Minister Peres, Haber paid him a visit and announced that he wished to make a great sculpture for Israel. The minister was pleased. Go have a look at Philip Johnson's nuclear reactor and come back, then we'll talk, he told Haber.

Haber went. Conditions couldn't have suited him better. He found Johnson's building superb, and the terrain exactly what he wanted. As a stone sculptor who has always favored rude materials and elemental designs, its dry and barren face was an inspiration. He determined to make his five monoliths there, a monument "that would be a response to the architecture."

Back he went to Peres telling him roughly what he had in mind. Again Peres concurred without question. Whatever Haber wished to do he could do. In addition, he could count on all the assistance he needed. This was particularly important since Haber intended to comb Israel in search of the right granite. When he found it, he quarried the pink stone with a team of workers and transported it with great difficulty to Rehovot, the site of the reactor.

Johnson recalls that he first heard of Haber when the sculptor wrote him a letter describing his enthusiasm for the building and asking permission to proceed with his sculpture. From photographs of Haber's previous work, Johnson felt Haber was his man. "It was collaboration by instinct," he says. Incidentally, the collaboration was so successful that the two are discussing future plans.

From Haber's point of view, this successful collaboration is a great augury for the future. A short, powerfully built man given to ebullient declarations, he is convinced that he will realize his grandiose schemes to enrich the "noblesse" of sculpture in our century.

"I have always worked in stone," he explains, "and it is natural for me to want to do public sculpture. When you do a sculpture on a particular site you are able to give a supplementary dimension to everything around. The distance between the buildings and the sculpture, for instance, or between the sculpture and the horizon, becomes my material. My sculpture will give meaning to everything around it." Furthermore, Haber says, a monumental sculpture like his Israeli monoliths is sociologically significant. It re-transforms the artist into a member of society, he thinks. "Society needs my sculpture as much as it needs the cinema." Noblesse, noblesse, he repeats, such as Bernini and Rodin—that is what he is after.

The story of Haber's Israeli accomplishment goes back to an exhibition two years ago at the Stedelijk Museum in Amsterdam. "I saw all those sculptures of mine done in the studio and I was very unhappy." Then he spotted a fountain outside the museum and it struck him that he would project water on glass, combine it with granite, and produce a fusion of elements—the antithesis of mechanical, man-made structures, and of the gratuitous static qualities in his own past work.

Haber clung to this dream until he had hauled the huge chunks of granite down to his Rehovot site. His vision of five monoliths, the first six meters high, the second five, and so on, was conceived in relation to the rhythms of the reactor building. In the arid plain he needed water. When he got his stones there, he saw that what he wanted was not a cascade which would blur the massive strength of his stone forms, but a rectangular lake which would serve as their base. This lake would be a response for the rectangle of Johnson's long walls. Its waters would reflect the monoliths, and the rectilinearity of its basin would provide a tension for the natural irregularity of the monoliths' summits. (Haber left them rough-cut on purpose.) The dynamic and static elements would then correspond to Johnson's design in which the severity of the walls contrasts with the curving parabolas.

What Haber finally wrested from his gigantic masses of pink granite was an ensemble of roughly hewn shapes clustered together like mysterious ruins. There surfaces are chiseled with irregular striations leading the eye upward to the deliberately chipped, asymmetrical terminals. In profile, each monolith gives the appearance of having been gnawed by the elements. Their wavering outlines are subtle allusions to the curvilinear dome of Johnson's building. The warm pink of their surface will diffuse light softly, in contrast to the sharper way the cold concrete will bounce it off.

Instinctively, Haber was able to complement Johnson's building. The moral of this story is so obvious I will not even bother to conclude with it.

MUSIC

(Continued from page 3)

by manners or methods from the other systems. Critical theorists, having in mind the economy of classical structure, find the resulting composition unwieldy, as it may be when it reaches the extremes of Bruckner. Problems of length displace the priority of modulation and transition. Schubert's lyrically inlaid subjects seem to have solved the problem merely by their presentation, but the irreversibility becomes the more evident as the composition grows, though the unequalled inventiveness of Schubert in his later compositions turns even this condition to psychological and emotional advantage. Berlioz, Liszt, the Chopin of the sonatas and concertos, still more their lesser contemporaries and inheritors, show the defect of the dilemma without Schubert's compensations; at their best they cannot make so much virtue of the defect as Schubert does.

The temptation to apply classically structural and textural devices to irreversible themes causes the unwieldiness of contrapuntal compositions by composers who try, as Liszt did, to apply to such a theme the textural transpositions of Bach; it thickens the technical rationalizations of Brahms, implying conflicts which Brahms resolved conservatively but which, carried to their conclusions, eventuate in the unresolved dissonances of the early 20th century.

The application of textural principles is the subject of nearly all Bach's exemplary music, so that ideally the student will learn how to spread out a figured bass by mastering the elaboration of thematic possibilities in independent composition. The theme of Bach's *Goldberg Variations* is the bass, around which, from the first presentation, melodies are woven. We have reason to believe that Bach and Handel were able to elaborate a figured bass to a degree unequalled by their contemporaries, though the influence of Italian operatic style on Handel may have caused him to prefer an accompanying figure simpler than that of Bach.

Schubert and Liszt often raised their accompaniments to greater prominence than the sustaining melody but without altering the irreversibility of the subject or the method of structure by juxtaposition. The elevation of the accompaniment plus the resulting interest in coloration eventually destroyed the governance of the bass, so that the composition wanders freely upon its harmony but not within it.

Bach uses structural devices in all extended compositions, which could not otherwise have been successfully extended: by key relationship; by plateaus of modulation, though these are exceptional; by introduction of additional themes, each extended separately, and by combining themes after such initial presentation; by contrasts of rhythm and style; and by return or ritornello of a section.

Handel mediates between textural and structural composition, the movements of his larger compositions as well as the whole body of any set of variations being organized around a single distinct idea, whereas Bach thinks almost unfailingly by the related meaningful textures of an entire work. The tendency to think by separate movements breaks up the continuity of Handel's keyboard suites, whereas the whole of any Bach suite or partita and indeed the whole of each book of keyboard music as Bach planned it flows together as a completely interrelated organization, no matter how many diverse ideas may enter into it.

The shape of a textural composition is its span, though the tendency to increased embellishment and to stretto may produce a more complex elaboration in the second half than in the first. Very large compositions tend to be organized sectionally, each part being separately worked, the accumulative elaboration being sometimes directed to the center rather than to the end: thus, therefore, and thereafter, like a play by Shakespeare.

A structural composition is put together by contrast of independently organized movements, the structural development working inevitably towards climax. The shape of a large structured composition is obtained by contrast of forms, each movement being itself separately blocked out, usually in relation to the controlling harmony, on successive plateaus of recession and return in relation to the home key. A structural master expresses himself decisively by the climatic procession of events, where a lyrical composer such as Boccherini merely progresses. In Beethoven the extremes of recession between the moving voices and the bass introduce ideas and sensations of conceptual space, which the 19th century composer preferred to fill in harmonically, while the 20th century composer of anti-traditional intention separates the space from its harmonic determinant and uses it for its own sake. Silence, a rhythmic breathing in Couperin, becomes in Beethoven a dramatic moment, and in more advanced 20th century composition a determining factor of the design.

Structural music, being episodic in succession, becomes phenomenal; it therefore admits overt description of events, as in battle music or nature music or tone poem or Strauss's contrapuntal bathwater going down the drain. Byrd's suite *The Battle* is probably the first large composition surviving in this kind—one of the best and very much worth knowing.

The notion that episodic and descriptive composition must be somehow less than abstract composition is justified only as one has a higher regard for the integrity of textural music. Beethoven's greatest works employ means at each level, as in the *Dankgesang* of the Quartet, opus 132, which describes an illness and the state of mind of the sick person in episodes applied to a texture of the utmost purity. Schoenberg's String Trio is a no less moving example of strongly textural composition on the same subject. Textural compositions can embody the abstractions of theological or moral argument, as Bach constantly demonstrates.

The inclination to violate this higher possibility of meaning by inserting episodes for fun or excitement goes far back in European music, becoming a nuisance when the episode detracts from the composition, not less so when the episode is abstract, and pretentious when the composer uses elaborate contrapuntal means to combine structure and texture about a trivial subject. Musical jokes are worth making, in the right place, by suitable means. Strauss's *Don Quixote* is full of well-made jests that improve with acquaintance. Incongruity of substance soon wears the texture thin.

The design of a classically structured movement is determined by its bass, upon which the harmonic blocks move from position to position. The texture of a structural music, however elaborately counterpointed in all parts, will require an increasing assertion of the leading voices, as these move into independence of the harmonies asserted by the bass. Structural music is therefore less stable than textural music, because the increase of harmonic independence in the voices threatens at all times to disrupt the

harmonic control, unless this control exerts itself by imposing limits on the independence of the voices. The former is more characteristic of Beethoven, the latter of Brahms. When the harmonic control reinstated by Brahms was eventually shattered by the continuing influence of Schubert and Liszt through the two extremes of Wagner and Debussy, the harmonic governance of music was destroyed.

The keyboard art of Beethoven will be more easily enjoyed in public performance than that of Bach by so much as it deviates from a whole integrity of texture into a moment by moment immediacy of structure; and the keyboard art of Bach is more satisfying for the reader than that of Beethoven precisely because of its unceasing integrity of texture.

I have to put these thoughts in order because I have encountered recently many persons who justify a narrow adherence to one type of listening by saying that they prefer structural to textural music, meaning usually that they prefer climax to context. The excuse is invalid, since an adequate appreciation of harmonic music requires in the listener an equal ability to appreciate both textural and structural methods. For the experienced listener the close attention required for the enjoyment of all types of texture, apart from the larger evidence of structural devices, will be I believe eventually the more rewarding.

I might append here a further observation concerning Mahler. Though he found constant inspiration in the work of Bruckner and none in that of Brahms, Mahler was in fact quite independent of both. He borrowed devices, not method. Mahler's structural intentions as a symphonic composer were continously confounded by his natural gift of melody and the skill in counterpoint he had learned by ceaseless study of Bach. He understood thoroughly and put to use the textural theme in its four positions, but the lyrical gift prevented him from tightening the melody to the uses of counterpoint and the counterpoint to the full advantage of the theme. Beethoven would have been in the same pickle, if he had conceived whole melodies as naturally as Schubert. Therefore Mahler's work is often diffuse, and the diffuseness, which he must have been the first to recognize emphasized his natural discouragement and pathos. He was only 14 years older than Schoenberg, a contemporary, not a predecessor. Schoenberg, beginning with the same problem, came to his solution by way of the "tiny-work" of Brahms. That is to say, he went to the root of the trouble and learned there that the means were no longer suitable to the intention: as a post-Wagnerian composer one could write the *Gurrelieder*, as a Mahlerite (or more exactly a contemporary of Mahler and the tone-poets) one could write *Pelleas and Melisande*. To go farther one had to get rid of the objective and reexamine the means. In so doing he came down, like Webern, to the means itself as a composition and thence, beyond Webern, to a positive solution which, while retaining all the devices and means accumulated by Mahler, put them to use in compositions that were the natural outcome of their complex interrelationships. He thus restored an elaborate texture as his primary means of working and did not let this texture deceive him by trying to force it to do structural work it would necessarily reject and dissipate. Though his organizational forms were in several large instances derived from classic movements, for example the Third Quartet, this neo-classicism is quite audibly subordinate to the richness of texture, so that only a fairly skilled listener can detect, for instance, the trio of the scherzo of this quartet or give primary attention to the structural unfolding of the theme.

Too much has been written analytically about the externals of these matters and scarcely anything about what occurred internally during the elaborately contradictory evolution of musical concepts during the 19th century, all of these affairs being easily taken for granted by persons who have not really understood the difficulties and conflicts they create in real composing. That is why the consequences of these events as they emerge in 20th century music are not perceived as a natural evolution. That is why the great majority of composers today apply at second-hand outdated solutions that can be learned at school and never come near the greater musical interest that results from discovering real problems.

The genuine post-Schoenberg composer, if he has learned the active relationship of his work to that of Schoenberg, should be free of Mahler's troubles, though he may have other troubles of his own. The alternative solution is to put aside the 19th century entirely and begin fresh, as Harry Partch has done.

notes

in passing

Architectural thought can be seen as a variation on an important theme in contemporary social thought. In our time functional analyses of society are common. In this view society and culture are seen as systems composed of inter-dependent sub-systems. The keynote here is the view of the whole as an integrated entity—analogous to a living body, each part being vitally related to the other parts and incapable of a separate existence.

When applied to architecture this doctrine yields the proposition that building is vitally related to the rest of the culture. Religion, the economy, and political ideals, for example, are related to and vitally affect architecture. Louis Sullivan insisted that every building expressed "the social conditions producing it," and added that "the study of architecture becomes naturally and logically a branch of social science"

That architecture reflects the culture and the society became axiomatic. But "social conditions" in a competitive, speculative, commercial, metropolitan society were regarded as unfavorable to the development of a great architecture which was thought to be unified and harmonious. As a matter of fact, architects extended the axiom even further: functional analysis was both descriptive and prescriptive. Not only does architecture express "social conditions," but it ought to do so, and architects commonly judged buildings on the basis of how well this obligation was met. Not only is a culture functionally integrated, but it ought to be—and the culture of twentieth-century America comes in for a great deal of scolding because it is inadequately integrated. As a result they were in some difficulty. On the one hand, if architecture is "but the inevitable consequential product of the intellectual, social, and technical conditions of the age," there might seem to be little reason to grieve about the nature of that architecture; it could be nothing but what it was. But complain they did; their growling about the state of their art in our time forms a large part of their writings. However, they commonly go on to complain about the culture itself, and more particularly, they deplore the fact that the culture is fragmented. The architect attempting to express his society and his times (which is both a necessity and a duty) finds only a chaos; and the result can only be a chaotic architecture. We must, therefore, solve our social problems if we are to have a great architecture. If great architecture is to flourish, then social harmony must be restored. Clearly the nature of society poses a problem. Our society, according to the indictment, is rent by conflict, schizoid, sick, and as such, further changes are required in order that healing might take place. Given the view that their society was torn by conflict, it is not surprising that the innovators should have offered a program capable of justification by an appeal to harmony and "integration." Two variations of this appeal can be discerned: the integration of the individual and his community, and the integration of man with nature. A third alternative which overlaps each of these is an appeal to "science."

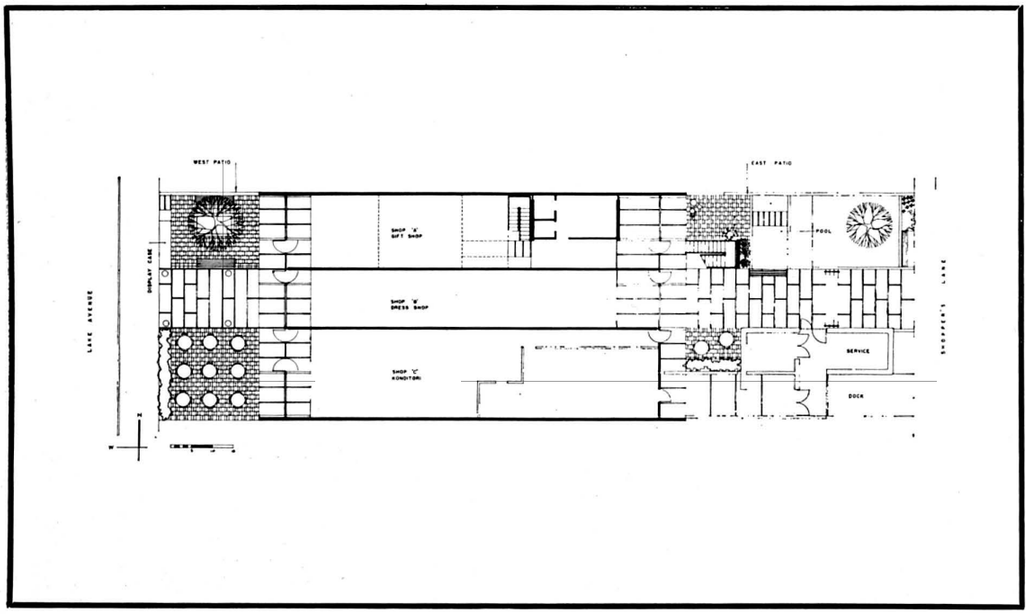
But all this was not conceived to be merely passive; it was not merely to reflect social conditions. It must also transform them. This is possible because architecture emerges from the imagination, desires, and dreams of man as well as out of the more mundane social and economic world. The architect, then, not only receives directives from his society, he gives directives also. Thus, architecture becomes a way of shaping the future. As we have seen, that future was to be lived in a neighborly, harmonious world in which man was at one with his fellows.

—ELDON L. MODISETTE

SMALL STORE BUILDING BY JAMES G. PULLIAM, ARCHITECT

BERNARD ZIMMERMAN, M. J. MATTHEWS, ASSOCIATES

HAHN AND HOFFMAN, LANDSCAPE ARCHITECTS



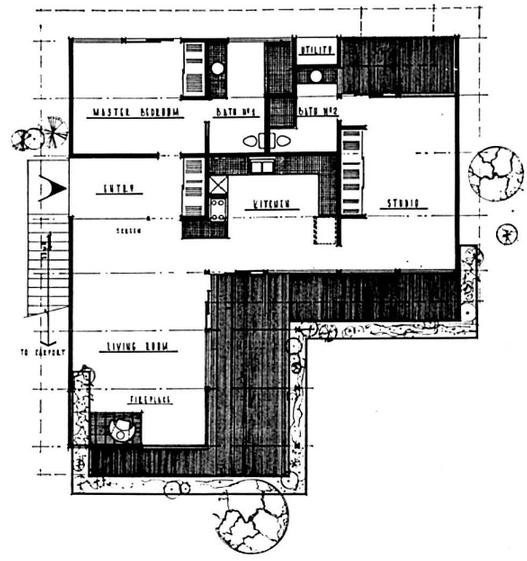
The building, situated on a 55′ x 190′ property in the shopping district of Pasadena, California, contains three ground floor stores: an art object and gift shop, a dress shop, and a pastry shop and restaurant. A mezzanine shop, reached by an exterior staircase, is located at the east end of the building. In defiance of conventional merchandising practice the owner requested that the building be set back from the sidewalk some 30′ to create a landscaped forecourt. Similarly, the east building line is set back to provide open space for a reflecting pool and landscaped area as well as enclosed service facilities.

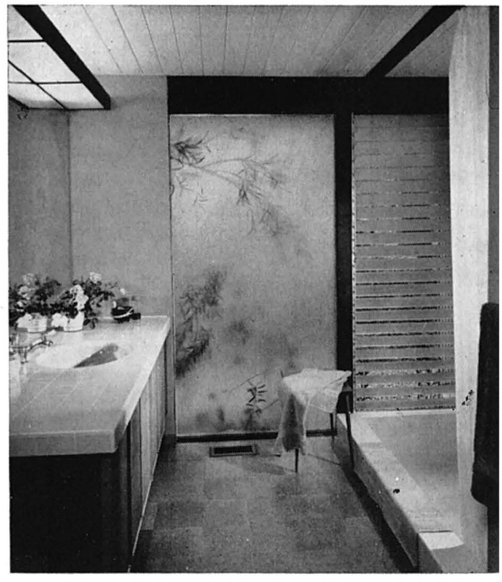
The construction is sandblasted red brick. East and west walls are glass set in a steel frame designed to resist lateral seismic stresses. The glass walls are protected from the sun by a 6-foot overhang and bronze anodized aluminum screens. The building was designed for great flexibility of interior space. The interior wood stud and plaster walls can be easily relocated to meet changing tenant requirements. Interior and exterior stairs are steel tube stringers with steel pans, filled outside with aggregate concrete, and carpeted inside. Teakwood is used for both handrails and exterior and interior panels.

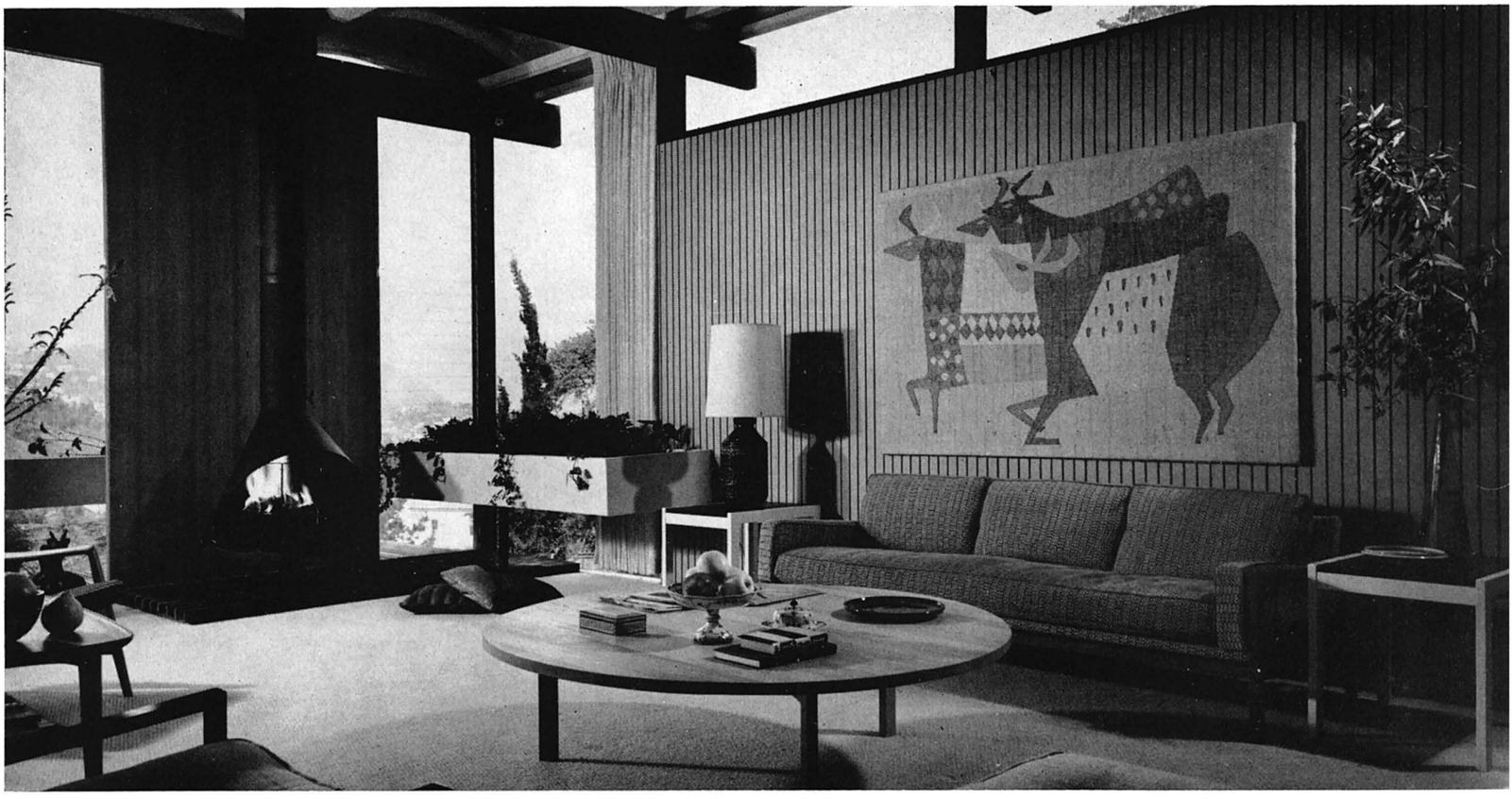
PHOTOGRAPHS BY MARVIN RAND

HILLSIDE HOUSE BY RAUL F. GARDUNO

EUGENE D. BIRNBAUM, STRUCTURAL ENGINEER







The rear portion of the pie-shaped site, on a steep hillside, commands a panoramic view of Los Angeles. Access is from the street below only. The house, which contains 1,300 square feet of living area supplemented by 600 square feet of usable sundecks, was designed for a bachelor whose only requirement was "a great feeling of open space." Thus, a completely open plan was developed. The living room, with an 11-foot high ceiling, the kitchen and guest bedroom are oriented to the view and prevailing breezes from the northeast.

The structure is a rigid steel frame, supported on 5 concrete piers, a concrete block shear wall and two steel columns, supporting 4 x 12 select structural wood girders at 6'4" on center. The floor is exposed 2 x 6 T and G with a ½" plywood diaphragm over; the ceiling is exposed 4 x 10 beams at 6'4" on center and 2 x 6 T and G at the low roof. The high roof is pre-fabricated plywood vaults with sprayed acoustic plaster. Finished walls are Texture 1-11 wood siding ⅝" drywall and ¼" polished plate glass. All cabinets are stained birch set in a continuous aluminum frame with ceramic tile counter tops. Heating is by forced air unit; insulation is 1" rigid at roofs and rock wool at all walls.

The underside of the house, 75% of which is visible, was given a great deal of design consideration. All plumbing and ductwork was concealed behind a concrete block shear wall and the steel frame which cantilevers 15' in front and 6' at the rear was left in its vibrant orange prime coat. The wood girders were stained a contrasting burnt ochre and the exposed T and G given several protective coats of Rez. The rest of the house is left in natural earthtones except for a continuous raised wood planter, painted white, which acts as a railing.

PHOTOGRAPHS BY LELAND Y. LEE

EAST FRONT WITH PULPIT BALCONY SLIDING DOORS OPENED.

COMMUNITY CHURCH BY RICHARD J. NEUTRA, ARCHITECT

COLLABORATORS: BENNO FISCHER
SERGE KOSCHIN
JOHN BLANTON

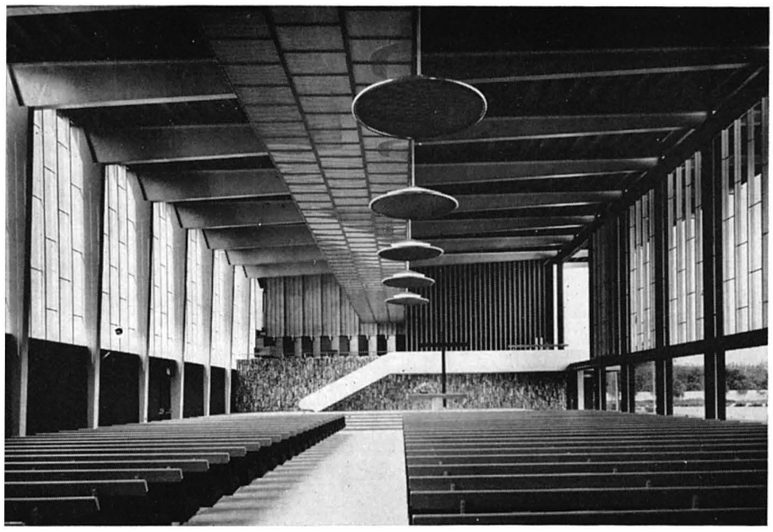
EUGENE BIRNBAUM, STRUCTURAL ENGINEER

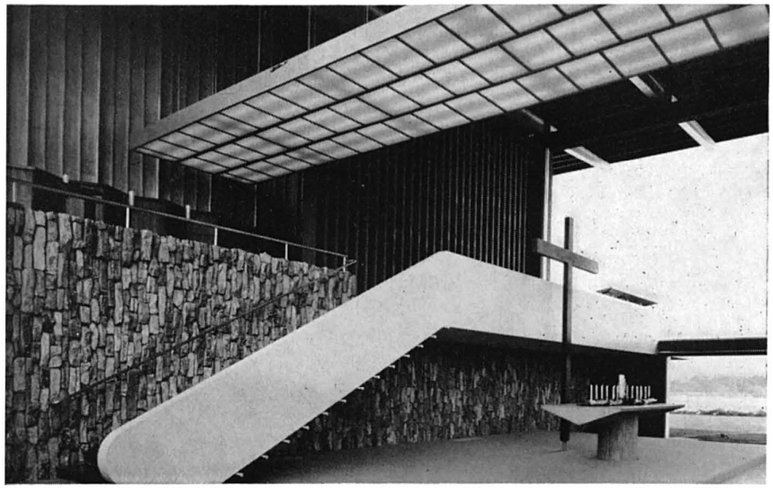
A few years ago, the congregation of this community church in Garden Grove, California, had built a modern school and sanctuary building group around a paved and landscaped patio. The congregation increased and outgrew its church building in a year. Originally, before any building had been erected, services had been held temporarily in a drive-in theater where families with small children could sit together without disturbing other worshippers, and where disabled persons could attend services in their cars.

When the first chapel was completed, it was felt that the drive-in ministry should not yet be discontinued. A permanent solution for the future had to be found and a broad and imaginative program was conceived for an open air place of worship. Ten acres of land were purchased in a citrus grove, with a view towards the northern mountain chain. The present church replaces the old sanctuary with both a new building wide open to nature, and a vast open air assembly over undulating lawns, studded and bordered with groups of rare and flowering trees.

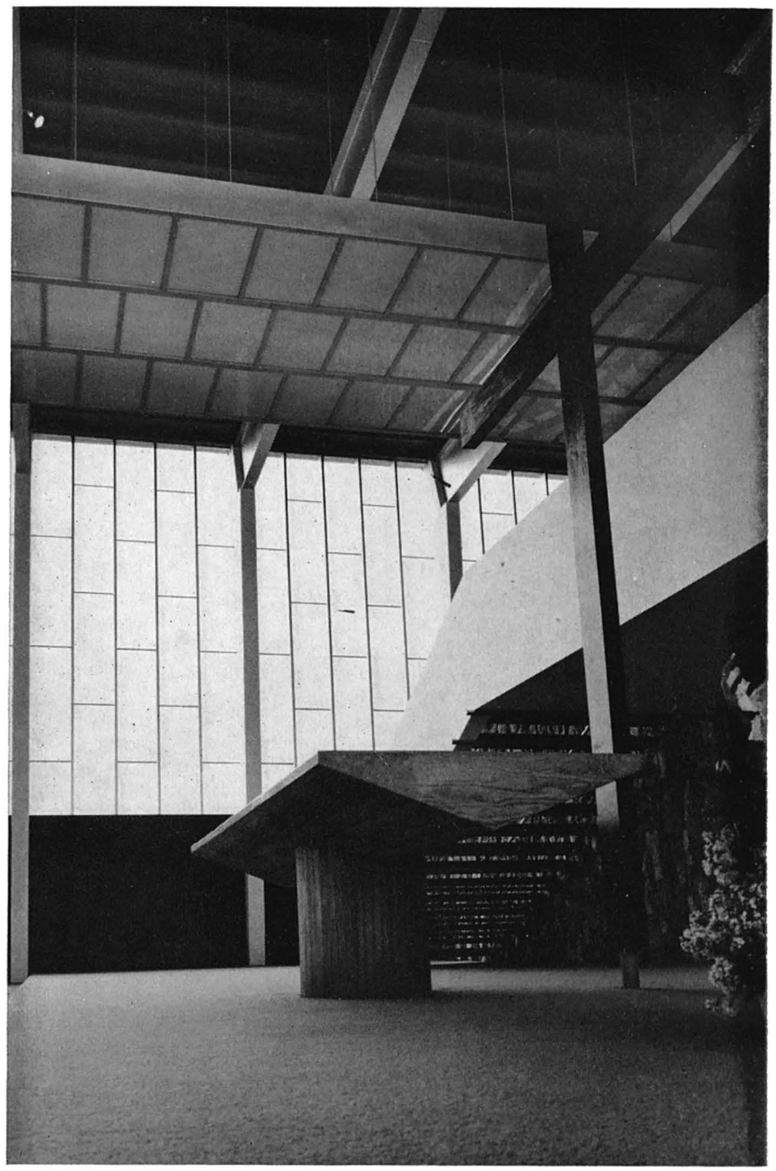
The problem was to make the preacher's figure and motions visible and his voice audible to every one, to the family groups in cars who tune in the services through individual listening devices and to the thousands under the projected roof of the sanctuary and in the adjacent garden space. Six hundred cars, ampitheatrically parked, are tilted to bring into view the wide platform of the choir and the figure of the preacher. His wide speaking balcony is mirrored in a reflecting pool where twelve fountains symbolize the twelve apostles. Sixteen steel bents form a "visual fugue", and the bell tower rises as a marker in the landscape. The simple, direct and slender structure, imaginatively engineered, has been awarded the 1962 Architectural Award of Excellence by the American Institute of Steel Construction.

ENTRANCE TO NARTHEX OF THE SANCTUARY.





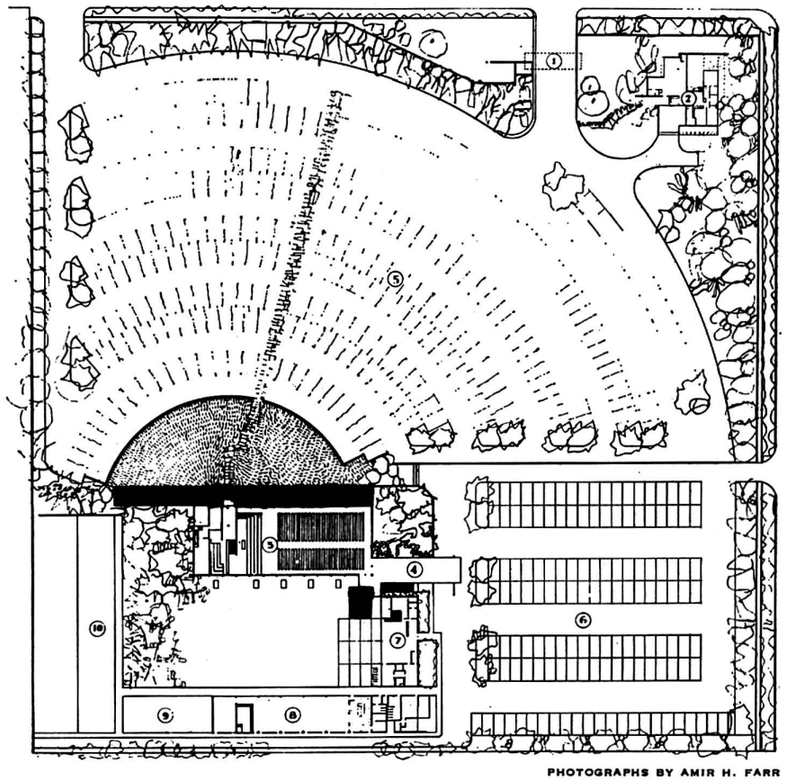
STAIR TO THE PULPIT BALCONY WHICH OVERLOOKS THE OUTDOOR ASSEMBLY.



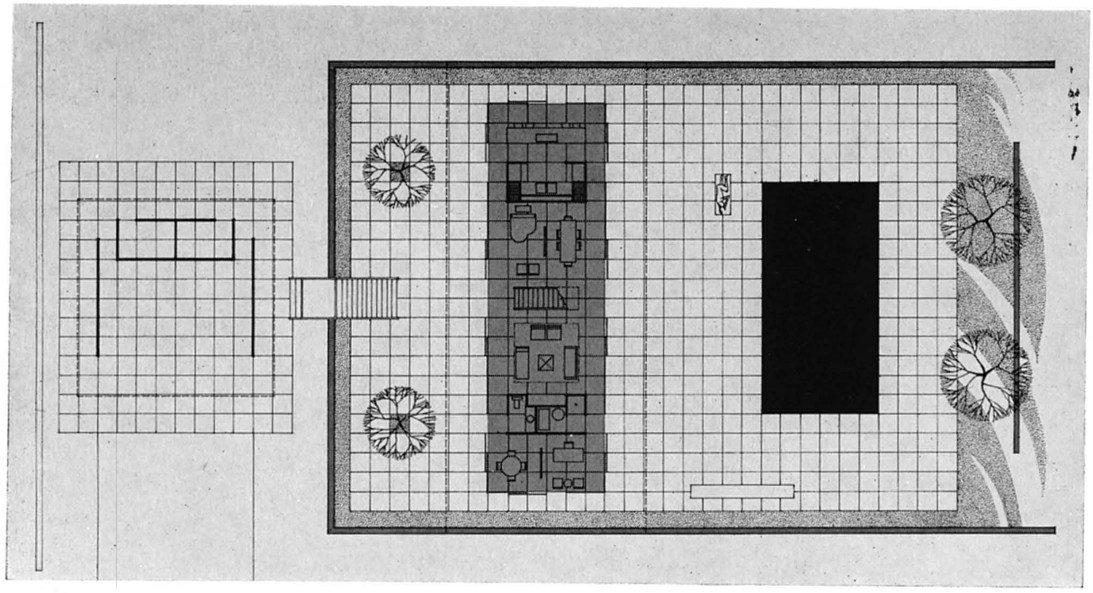
ALTAR TABLE IN FRONT OF CHOIR BALCONY.

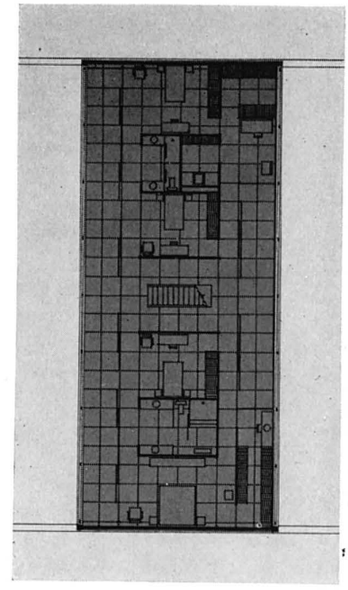
1. ENTRY GATE
2. PASTOR'S HOUSE
3. SANCTUARY
4. COVERED WALK
5. PARKING FOR WORSHIPPERS
6. SANCTUARY, SCHOOL, SOCIAL HALL PARKING
7. LOUNGE AND OFFICES
8. SOCIAL HALL WITH KITCHEN
9. NURSERY
10. SUNDAY SCHOOL

SIDE ENTRANCE FROM SOCIAL AND SUNDAY SCHOOL PATIO.



PHOTOGRAPHS BY AMIR H. FARR





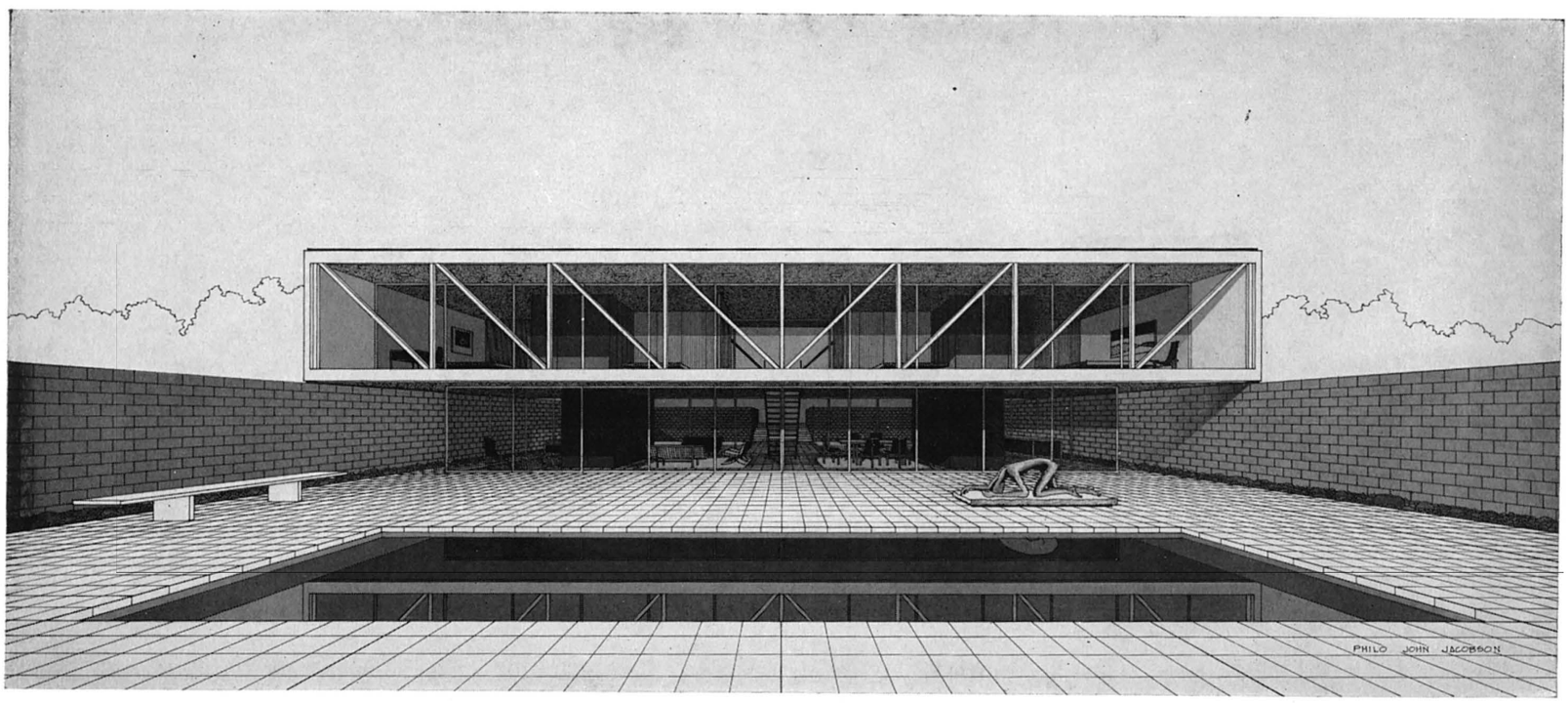
The site is a gentle slope, the swimming pool is placed on existing grade and the area beyond the pool is excavated for the sunken terrace and lower floor. Outside the wall the natural grade is near the top of the wall at the entry and carport and slopes downward to meet courtyard grade at the pool location.

The site is an "inside lot:" except for the driveway approach it is completely surrounded by other building sites. The sunken garden therefore provides privacy in the living-recreation interior and exterior spaces.

The upper level clear-spans the lower level with two steel trusses in the outer walls. The module is 3′-3′ and the wall-to-wall span is 78 feet. Each truss chord consists of a pair of 12″ channels back-to-back bent from ¼″ plate. Web members weld between channels and are 3½″ square tubing. Vertical web members are on 9′-9″ centers and additional stiffening is provided with 10″ vertical lengths of 3½″ square tubing welded between channels at 3′-3″ centers. Essentially the structure is a roofed bridge with top and bottom truss chords serving as finish fascias for roof and floor.

The house is for a family of five. Bedrooms and baths are on the upper level, living-dining-kitchen and study on the lower level.

STEEL BRIDGE HOUSE
BY CRAIG ELLWOOD



LEROY B. MILLER, ASSOCIATE ARCHITECT

PAUL GREENFIELD, STRUCTURAL ENGINEER

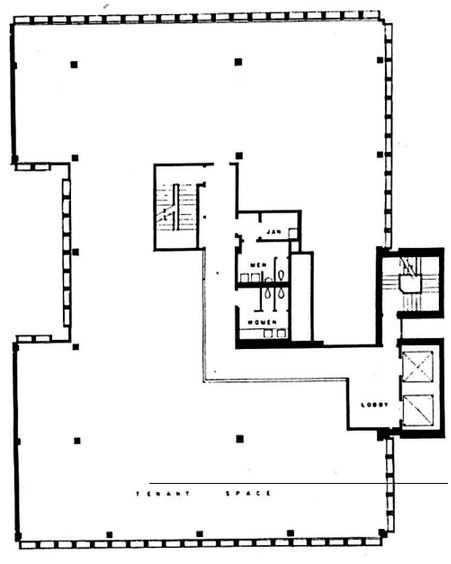
PHOTOGRAPH BY HERBERT BRUCE CROSS

The building consists of seven stories of offices above three levels of underground parking. The site, in the foothills of the Santa Monica Mountains, in Los Angeles, permits direct automobile access from the street to each parking level.

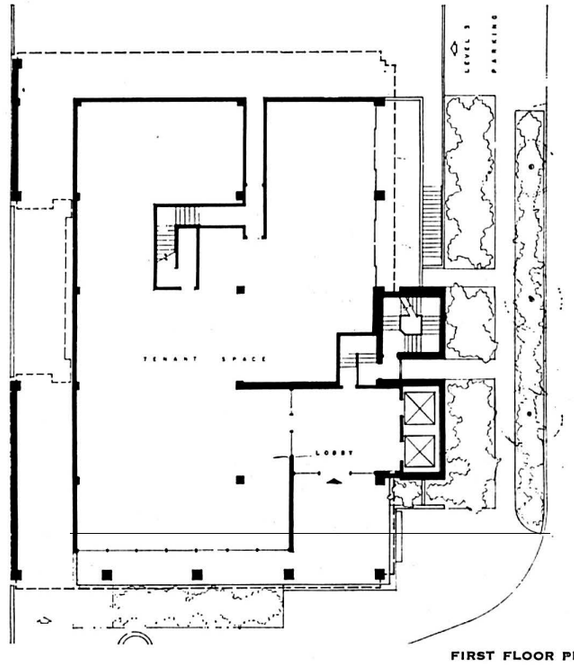
The window wall is made up of precast lightweight concrete units, each one-story high and one-window wide, supported on the edges of the concrete floor slabs. Each unit will be 18" deep providing a shadowed pattern along with sun protection. The width of the vertical mullions, created by the combination of two units, offers a greater flexibility with respect to the location of interior partitions when framing into the exterior wall. Recessed within each unit will be a floor-to-ceiling gray fixed glass window with a flat dark gray porcelain enameled steel spandrel panel above. The concrete units will be a natural off-white in color with a pitted surface texture.

The structural framework will be steel at the office levels and concrete in the garages. Solid portions of the exterior walls will be brick masonry. Exterior columns, parapet covers, etc., will be covered by precast concrete units with an exposed white marble aggregate finish. Black granite, teak wood paneling, and terrazzo floors accent the main entry and lobbies. The interior partitions will be incombustible drywall; the ceilings, acoustic tile. Floors will be resilient tile and carpeting over concrete.

OFFICE BUILDING BY DANIEL L. DWORSKY, ARCHITECT



TYPICAL FLOOR PLAN.



FIRST FLOOR PLAN.

THE ARTIST AND THE SCIENTIST

BY JULES LANGSNER

Within the span of a few years—since the release of nuclear energy during the second World War—the scientist, in the eyes of the multitude has changed from an oddity in a white smock puttering in an obscure laboratory to an awesome being with the combined powers of sorcerer, witch doctor and oracle, whose access to the secrets of the universe makes him capable of the destruction of life on Earth.

While the vital role of the scientist in the affairs of civilization has become increasingly apparent, even to persons who do not understand what he does, the significance of the artist's contribution to the scheme of things in the modern world has become less evident. By and large, the multitude views the artist as a pleasant chap to have around for the diversions he provides (so long as we can afford to maintain him), but in the final analysis, largely superfluous to the most pressing concerns of our society in the second half of the twentieth century.

Ironically, the stature of the artist and the scientist in earlier civilizations was reversed. Then the artist, maker of sacred images, was indispensable to society. The pictures and sculptures he created envisaged the invisible powers that determined man's fate. Then the forerunner of the modern scientist—in ancient Greece, Egypt, Babylon, China—might have been admired for intellectual achievement, but he was not thought to possess a consequential influence on the affairs of mankind.

The twentieth century artist, divested of the vital importance he once enjoyed, does not always look with favor on the scientist. He sees in the latter a threat to those life-enhancing experiences which are the primary concern of the painter and sculptor. No more than a moment's reflection is needed to perceive that the artist (like everyone else) inhabits a world undergoing drastic changes as a result of the thought and activities of the scientist. The images the artist creates are being influenced in one way or another by the scientist for the simple reason that thought and experience cannot be confined to separate compartments. It is not surprising that the impact of twentieth century science on twentieth century art can be seen in such past developments as Cubism, Futurism, Surrealism, and Abstraction. The revolutionary age of science we now are entering has portentous implications for the artist. It might be worth our while to scan some of these.

At the outset, let us consider the phenomenon of change. Things are changing so fast in our time that it seldom occurs to us to assess the phenomenon of change itself. Our responses to experience, indeed our capacity to survive, depend upon the flexibility we bring to the momentous changes now upon us.

The constantly accelerating *rate of change*, from one year to the next, in science, technology, politics, and the arts is something new in the life of man. What has happened is that the momentum of change has been intensified to an unprecedented degree. New and unpredictable factors relentlessly intrude themselves into our existence, scarcely allowing us time to accommodate ourselves to one event before we face another, though, to be sure, certain biological and emotional drives remain the same. Nevertheless, the ways in which man creates an environment to express these drives take many forms, undergo extraordinary modifications, as we can testify having lived through the middle decades of the twentieth century.

There have been so many revolutionary concepts in science, such sweeping developments in technology that patterns of change in the modern world tend to follow an erratic course and (in many instances) could not have been predicted in advance. Until recent times, traditions persisted from generation to generation, stabilizing and regulating society. Continuity was more common than discontinuity, and provided coherence, direction, and purpose. A culture might resist a novel idea or way of doing things (and history is replete with such resistances), but there was time (until now) to accommodate the new to the old and the old to the new.

Now time is against us. The new often engulfs us faster than we can adjust. Nor is there any reason to assume this intensification and discontinuity in our affairs is going to abate. On the contrary, we must anticipate many violent disruptions and the sudden collapse of one settled arrangement after another. The time may be approaching when, instead of being supported by traditions, we will have lost touch altogether with much of the heritage we now believe essential to a satisfactory way of life.

Needless to say, neither change nor tradition is a good-in-itself.

ONE OF FIVE PARTS OF A BOOK, "THE ARTIST IN THE MODERN WORLD" BY JULES LANGSNER, COMPLETED UNDER A GRANT FROM THE GRAHAM FOUNDATION FOR ADVANCED STUDIES IN THE FINE ARTS. MR. LANGSNER WAS A 1961 FELLOW OF THE GRAHAM FOUNDATION.

Certainly there are many changes we could do without. The automobile, for example, is a marvelous machine for getting us from one place to another and for its influence on courtship practices. But is also has turned many of our cities into a hodge-podge of parking lots and snarled arteries of traffic and is perhaps the greatest single obstacle to intelligent planning for a rewarding urban life.

Nor does it follow that traditions must be preserved at all costs. Many serious problems facing our vast urban complexes are the result of obsolete political jurisdictions that have outlived their reason for being. The Eastern seaboard from Boston to Washington now constitutes a single urban region bedeviled by overlapping and conflicting political bodies maintained out of loyalty to obsolete traditions.

The matter of change and tradition is crucial to the visual arts. The remarkable events taking place in our world have transformed the milieu of the artist, his way of looking at the world and of reacting to experience. Even though he adapts himself as best he can to these changed circumstances, the artist tends to view his extraordinarily rich heritage as something to be conserved, whether or not he draws upon it in his own work. His efforts are additions to that heritage and do not make it any less valuable. At the same time, he is keenly aware that the legacy of art can be a monkey on his back, a burden he may have to throw off if he is to create a mode of vision appropriate to his time and place. The unrelenting sweep of the scientific revolution is thrusting him into an astonishing future that tests to the limit his capacity to adapt as an artist and a human being. A brief look at some of these immense changes might be helpful at this stage of our inquiry into the situation of the artist *vis-a-vis* the scientist.

All of us are familiar with the earth satellites and moon probes that mark the beginning of the Space Age. These spectacular vehicles are preliminary exercises for what scientists call MIS—Man in Space. MIS means much more than the propulsion of astronauts into the cosmic void, exhilarating and provocative as such adventures undoubtedly are. As a result of our new intimacy with the Moon, the Sun, the planets, and the galaxies, we no longer regard the Earth as a secure platform covered with a canopy of stars. Now we have little difficulty thinking of our terrestial base whirling in the vastness of space along with thousands of millions of other astral spheres.

This represents an incredible enlargement of our imaginative resources. But most of us, cocooned in habits of thought, have not yet translated the implications of a cosmos measured in millions of light years into the realm of imaginative expression. If we turn to artists of our generation, however, we find certain pictorial extensions of this space-time universe in paintings that create space with neither beginning nor end and without resemblance to the platform on which we move in everyday life. Thus in the works of a Jackson Pollock or a Clyfford Still the viewer (for the duration of the experience) is inside a spatial field rather than looking at a projection of space from a vantage point on the outside. As viewers we have learned to respond to this kind of pictorial metaphor of a space-time domain, and, like the painters responsible for these pictures, we often are unaware of the parallels between their work and that of contemporary scientists. No matter. Art (as well as science) reflects the fundamental change in man's relation to space.

Informed speculation about conditions on other planets—atmosphere, temperature, radiation, distribution of the elements, and so forth—suggests the possibility of primal vegetation on Mars and almost certainly a complete absence of life in the remainder of our solar system. On the other hand, the existence of intelligent beings elsewhere in the universe no longer can be brushed aside as poetic fancy or science fiction.

According to present calculations, there is a probability factor in favor of intelligent life on other astral bodies. There is now convincing evidence that the planets were formed by the aggregation of particles once (thousands of millions of years ago) surrounding the sun in clouds of gasses and cosmic dust. If this theory is correct, it follows that the formation of planets comparable to Earth is not at all a singular event. The presence of gasses and cosmic dust in space surrounding stars is part of the usual life cycle of these incredibly immense thermonuclear reactors. Therefore, aggregation of material into bodies comparable to Earth must have happened many times.

Even if life did not evolve (for whatever reasons) on tens of thousands of planetary bodies, the probable duplication of favorable conditions for life are overwhelming, some estimates running as high as 100,000 instances. This probability factor must cause us to change our view of ourselves as the marvels of creation.

Most literate persons today are like their counterparts in the sixteenth century when Copernicus knocked the geocentric notion of the world into a cocked hat by demonstrating that the sun was the orbital pivot of our planetary constellation. Few persons at the time could foresee how drastically this reading of the known cosmos would change man's view of himself. The concept was too new, too contrary to the prevailing structure of thought, too shattering in its implications to grasp in its fullness.

Until a short while ago, we held to a geocentric belief in the uniqueness of our species. We enjoyed the flattering assurance of being singular creatures—the only intelligent life in the universe. This ego-enhancing belief was supported by the accepted findings of physicists and astronomers. Available data suggested that our planetary system was formed eons ago following the chance passage at close proximity of two stars, one of them our Sun. Their near collision caused huge tidal waves to eject quantities of matter from the Sun into orbit around that star. In due course, these substances coalesced into planets and moons. The concatenation of such stars is infinitesimal. Ergo: the chance of other intelligent forms of life was equally infinitesimal.

In view of the much greater age of other stars than our Sun, there is also the probability factor of civilizations on other astral bodies having endured far longer than the 7000 years since man first organized his affairs into advanced culture complexes. This being so, there is some chance that other civilizations have weathered the kind of crisis our scientific culture is facing. To survive they must have managed to circumvent the impulse to self-annihilation now threatening us. As things stand now, Earth people are in a primitive stage of development for a scientific society. It makes one's head spin to realize that serious efforts are being made by responsible scientists and governments to make radio contact with civilizations presumed to exist on astral bodies outside our own planetary system. Recent advances in the control of light waves by means of optical masers have suggested additional possibilities for interplanetary systems of communication. In mv view, it matters little whether we make actual contact with such beings. What counts is the influence of the concept on our view of ourselves and our world. It was not until our own generation that the Copernican view of our planetary system was transformed from a theory to actual flights of interplanetary vehicles to the Moon, around the Sun, and shortly to Mars, something Einstein was unable to forecast when he said (in 1938), "All our experiments must be performed on the earth on which we are compelled to live."

It appears that man's view of himself faces a challenge from another quarter—the revolutionary discoveries unmasking the origins of life on Earth. If we know more about the origins of life(and inferentially of alternate possibilities for life) we can be counted on to change what we think of life itself. Signs point to an imminent breakthrough in genetics comparable in magnitude to Darwin's *Origin of the Species* a little over a century ago.

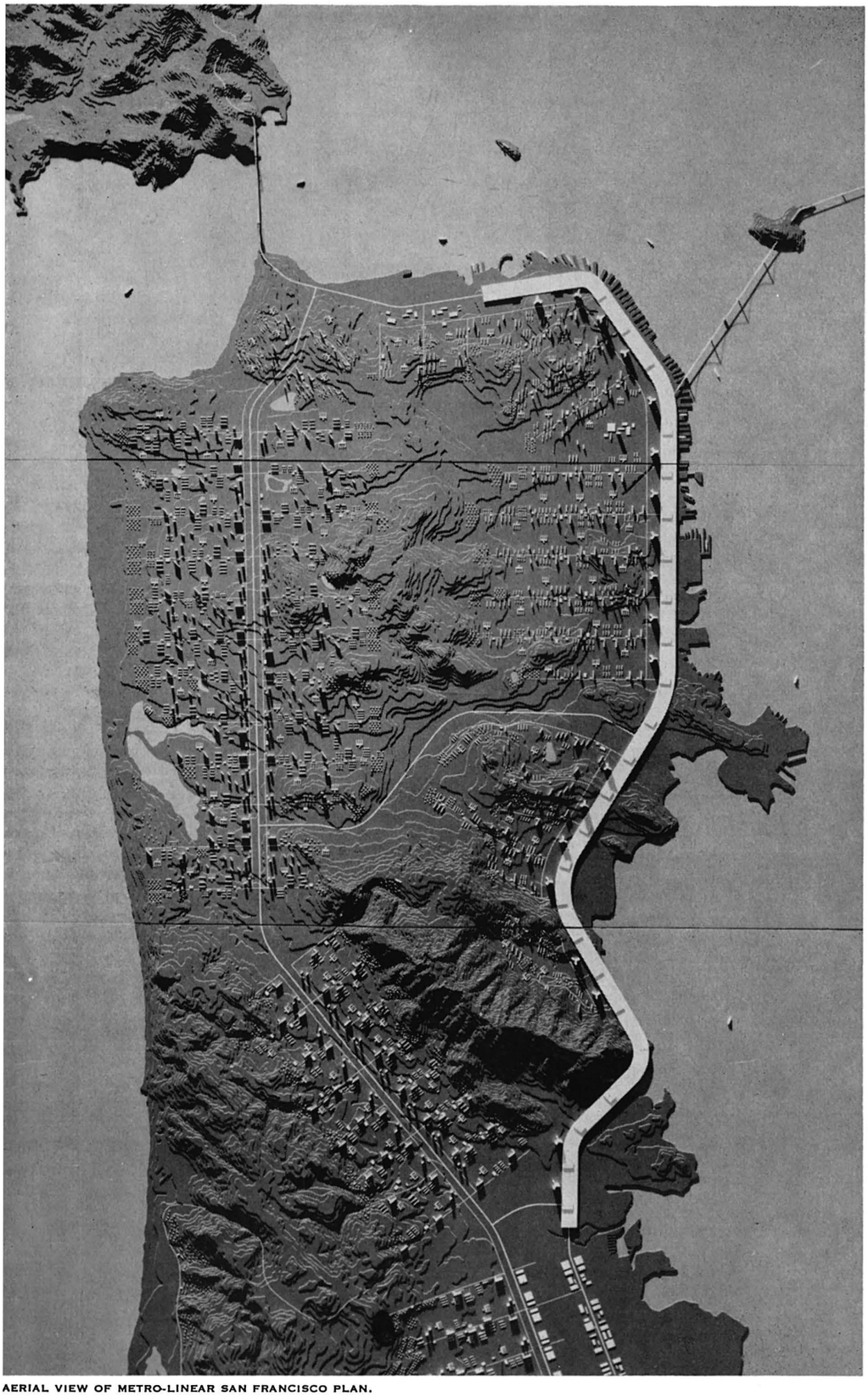
The conception of man as lineal descendant of single-celled creatures had certain indirect influence on the visual arts. Thus, in the works of the impressionists, man is presented in a way that suggests he is made of the same particles as his environment, as compared with previous pictures of him as lord and master of all he beholds. As more is known of how the nucleotides in the chromosomes act as a coding system for regulating the transformation of molecular structures into living organisms, the image of man may well change in an equally significant way. For one thing, we are beginning to perceive the critical significance of information systems throughout that part of the phenomenal world reaching from the nucleotides in the chromosomes to the complexities of the human nervous system. What bearing will this concept of life as a kind of coded information system have on our consciousness of ourselves?

Investigation of the molecular origin of life has far-reaching implications for medicine. Human cell tissues now can be removed and kept alive artificially in a controlled environment, providing cancer research with a fertile field of inquiry in aberrant cellular behavior. Intensive work in biophysics has given new impetus to studies in the processes

(Continued on page 28)

METRO-LINEAR SAN FRANCISCO

BY REGINALD F. MALCOLMSON



AERIAL VIEW OF METRO-LINEAR SAN FRANCISCO PLAN.

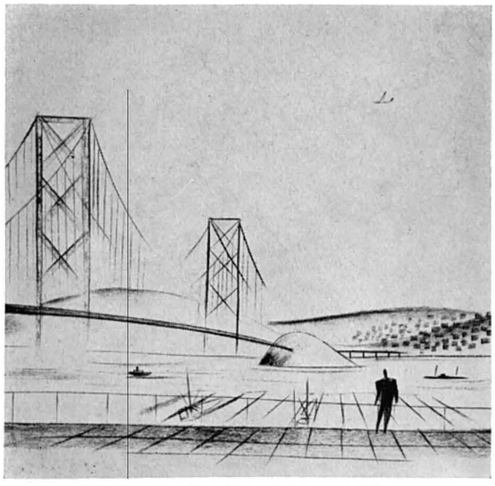
San Francisco was chosen for this project from a preliminary investigation of three urban areas in the United States. The natural features of the site of San Francisco present an interesting and unique topographical problem. In developing a plan for San Francisco based on the Metro-Linear system, the intention was to test the flexibility of the system, and its adaptability to such a hilly and mountainous terrain. The basis for the plan for San Francisco, as presented here in model and graphic form, is the development of a linear complex of commercial, administrative, light industrial (port and dock facilities for shipping), civic, cultural and recreational activities, extending along the Bay shoreline, and connected by a network of roads with residential areas throughout the peninsula.

A spinal building 14 miles long and 990 feet wide, 2 stories high, winds along the waterfront, conforming to local topography. (See Typical Section.) This building provides parking on two levels with highways for cars and trucks below, with access for trucks to the ports and docks at regular intervals. Ground level is solely for the use of pedestrians who have access to, and views of the waterfront.

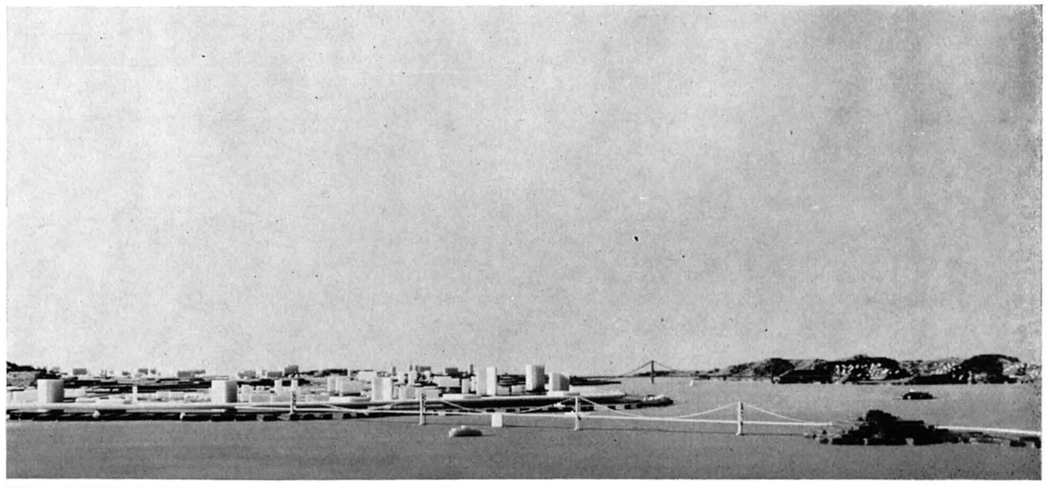
The roof area of the parking structure is a continuous promenade deck, also reserved for pedestrians, and affording spectacular views of San Francisco Bay as from an ocean liner. At this level large commercial blocks containing department stores and shopping occur at half mile intervals, as well as civic and cultural buildings, museums, libraries, restaurants, etc. Designated areas on this roof deck may be used as heliports, and in the south at the San Bruno Mountain Range, the roof deck is used for sport and recreation, tennis, basketball, sun-bathing, etc.

San Francisco's predominantly residential function has been retained, and industry, other than ports and docks, has been limited to a linear extension southward along the major axis of transportation from the spinal parking structure. A loop highway system connects all the residential areas of the peninsula with the linear complex extending along the Bay. In residential areas people are within one quarter of a mile walking distance from public transportation, or they may drive to work from nearby parking structures. All residents are within a half-hour maximum driving time from their place of work. Housing has been oriented for sunlight and views of the bay, ocean or mountains. Existing parks have been incorporated into the extensive park landscape of the new city, thereby discarding the obsolete concept of the park as an isolated event in the urban scene.

This project conclusively demonstrates the flexibility of the Metro-Linear system and the general aim of the plan is to show how man's inventive and technical powers can be employed in the art and science of building cities in harmony with the grandeur of nature—ocean, sky and mountains.

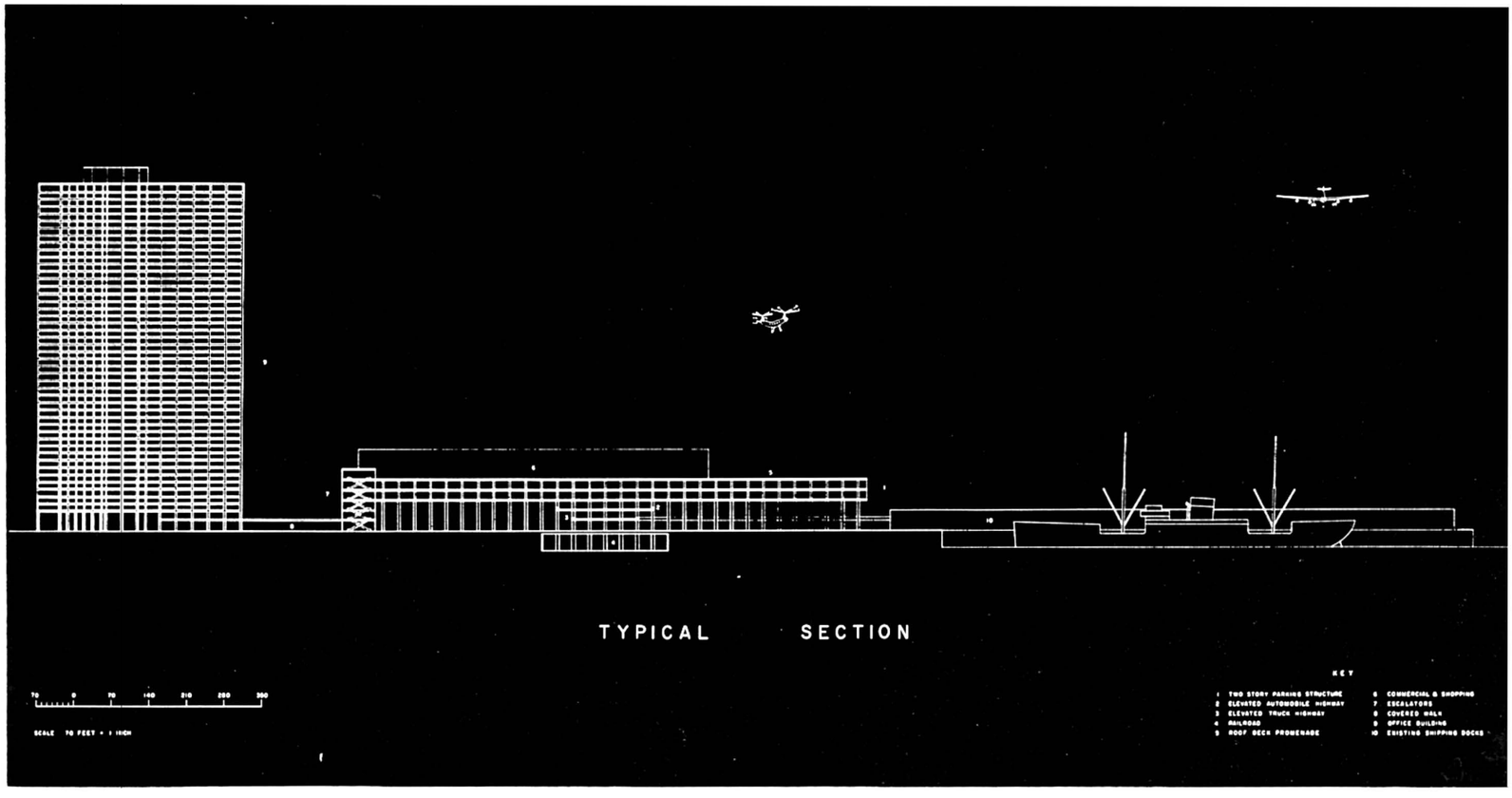


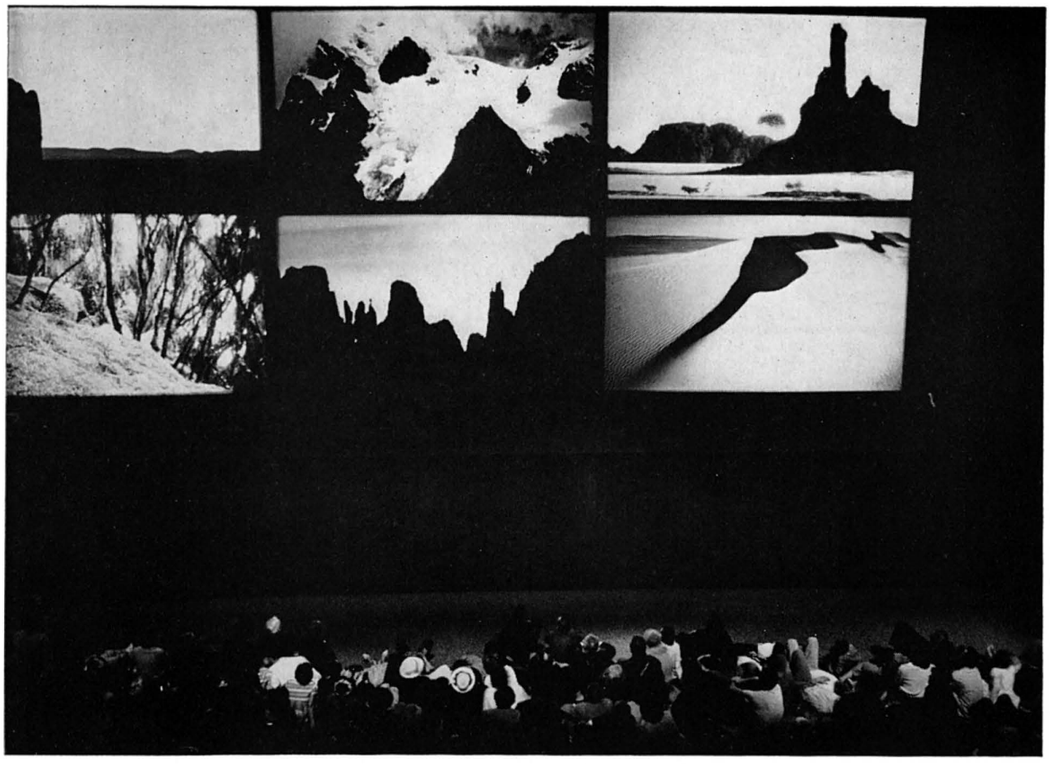
VIEW OF SAN FRANCISCO BAY FROM ROOF DECK ABOVE PARKING STRUCTURE.



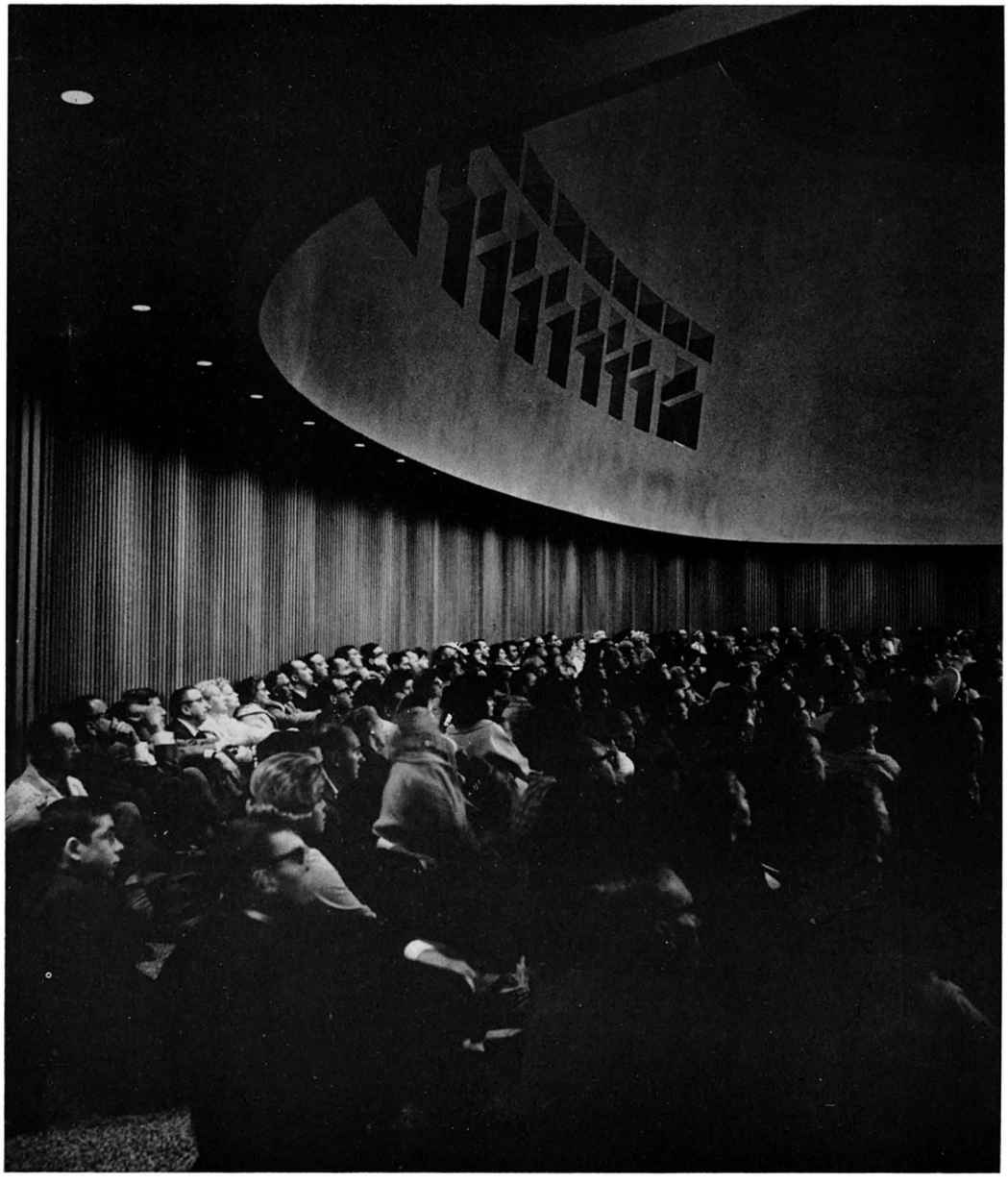
VIEW OF METRO-LINEAR SAN FRANCISCO WATER FRONT.

FROM A CONTINUING STUDY OF THE METROPOLIS, DEVELOPED ON LINEAR PRINCIPLES. REGINALD F. MALCOLMSON HAS UNDERTAKEN THE CREATION OF STUDIES IN THE BUILDING OF THE NEW URBAN ENVIRONMENT, AND WHAT APPEARS HERE IS A PART OF HIS WORK UNDER A GRANT FROM THE GRAHAM FOUNDATION FOR ADVANCED STUDIES IN THE FINE ARTS. MR. MALCOLMSON WAS A GRAHAM FELLOW FOR 1961.





A SCIENCE FILM



The United States Science Exhibit at Seattle's Century 21 World's Fair uses the medium of film to give visitors their first taste of Science at the Fair. Designer Charles Eames has produced a film which is shown as an introduction to the U. S. Science Exhibit. The film illustrates the variety and richness of science by means of multiple images cast from seven 35-millimeter motion picture theatre projectors onto a 34-foot concave wall which encircles the viewers.

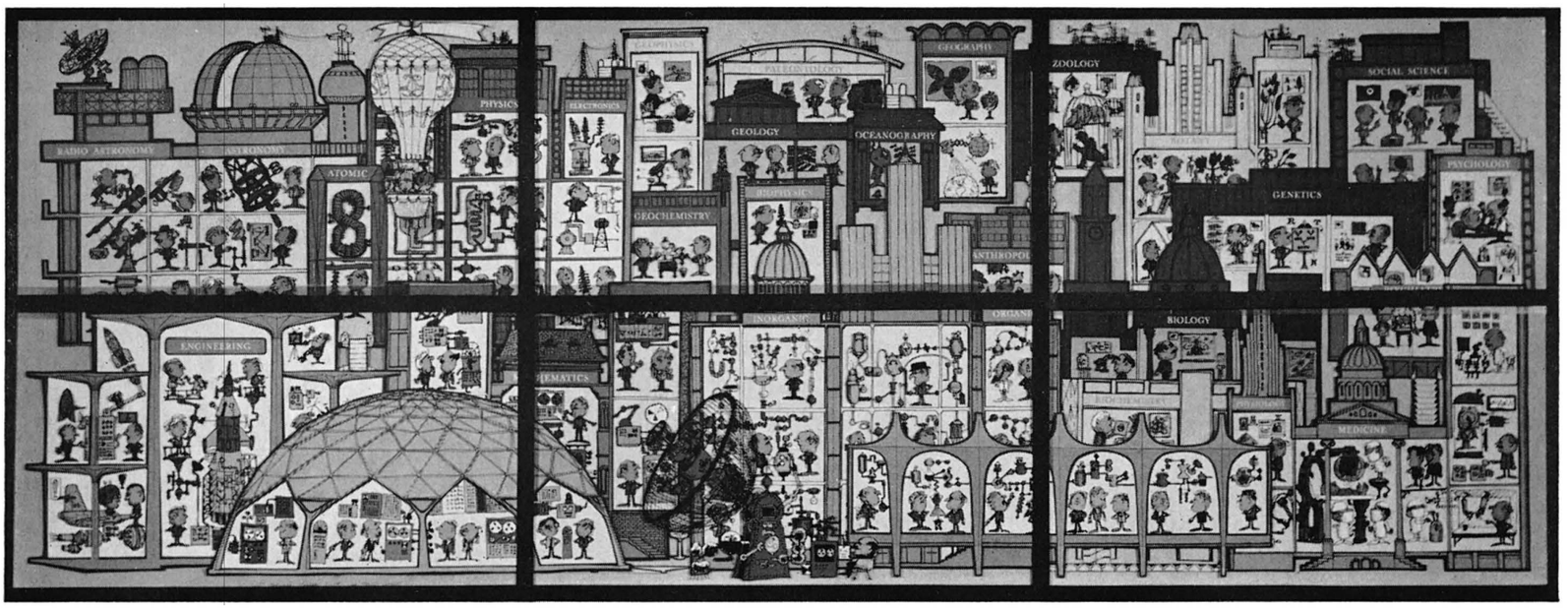
It is intended to prepare the visitors for what lies beyond in the exhibition and to give them a feeling of the extreme diversity of scientific endeavor.

The film opens with an animation sequence which treats the development of science as an architectural allegory. The natural philosophers appear first in a simple pavilion. As the scientist-philosopher becomes interested in special studies, lean-tos are added; these become rooms, then wings. New buildings take form and these grow. This four-minute sequence shows how science got the way it is and dramatically illustrates the tremendous acceleration at which science has grown in recent times.

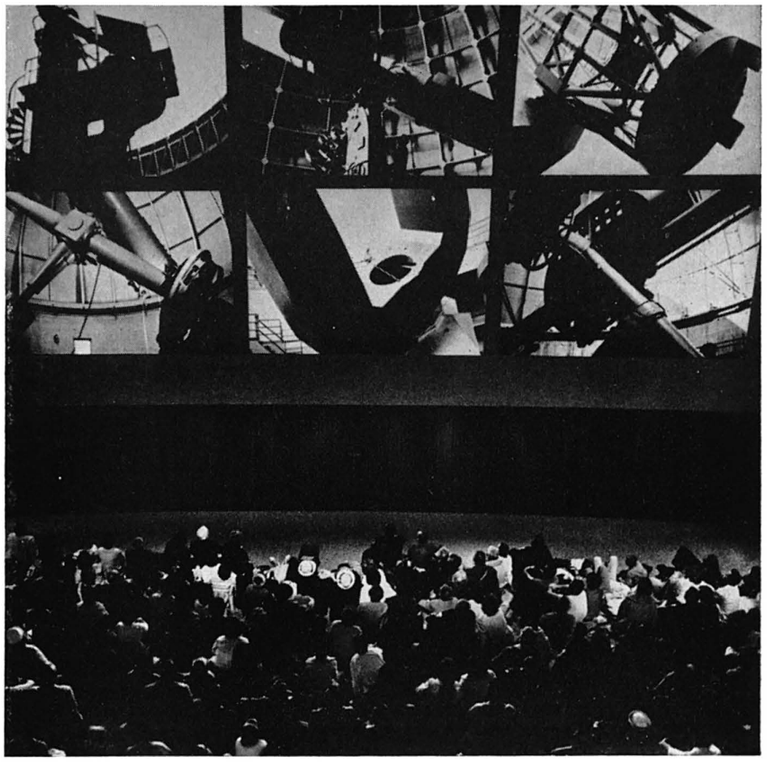
The main body of the film runs nine minutes and is a kaleidoscopic view of the scientific landscape. Through six images at a time, we see the scientists themselves; the surroundings in which they work; their areas of inquiry; their tools; and something of the attitude which has made the scientific discipline.

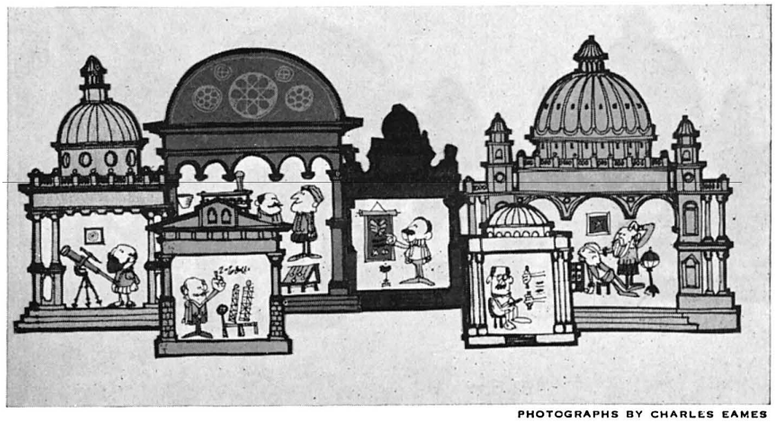
Charles Eames co-produced this film with his wife Ray and Glen Fleck who executed the animation. Thomas Kuhn, science historian at the University of California, served as advisor on the film, and the original musical score was written by Elmer Bernstein.

The Century 21 film offers a wealth of information to the interested viewer, but is so conceived that even the most casual observer will become aware that there are no boundaries to science and that each scientist is motivated by a search for order in the world about him.

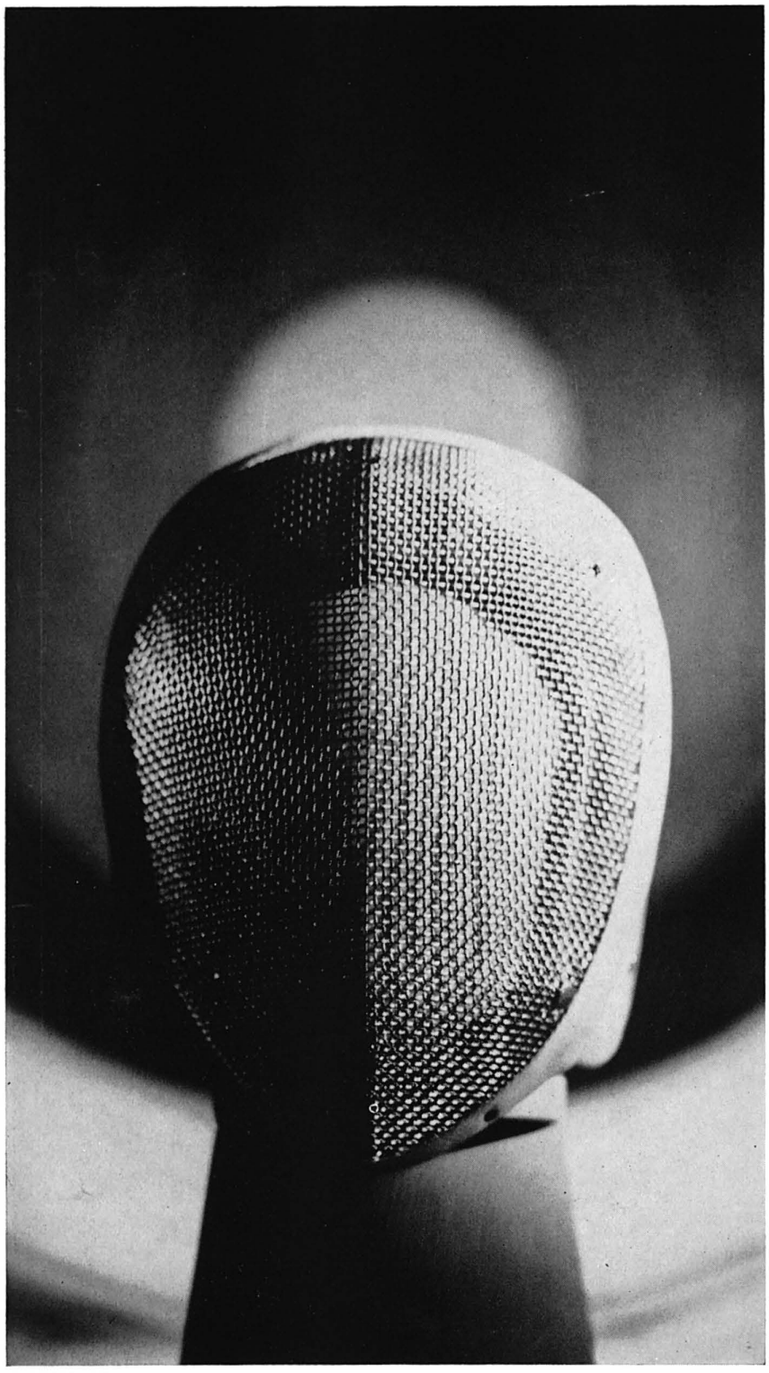


BY CHARLES EAMES





PHOTOGRAPHS BY CHARLES EAMES



FENCING MASK.

RACING DRIVER'S HELMET.

We think of an object as being well designed when its form bears a reasonable relation to its function; when the object does actually function well; and when its form is pleasing to look at. For most of the objects used by the general public, as distinguished from those used by skilled technicians, satisfactory performance is equated with convenience. A vacuum cleaner, for example, requires no special skill on the part of the housewife who uses it, and indeed would be considered unfunctional if it did. Even automobiles and other highly complicated mechanisms are continuously revised to make their use effortless and automatic.

There are two categories of useful objects that offer striking contrasts to this condition. Tools, whether hand operated or electrically powered, require a degree of skill and conscious effort on the part of the user. This is true also of complex heavy machinery and certain kinds of laboratory and electronic equipment, even when their forms are removed from direct human contact required with hand tools.

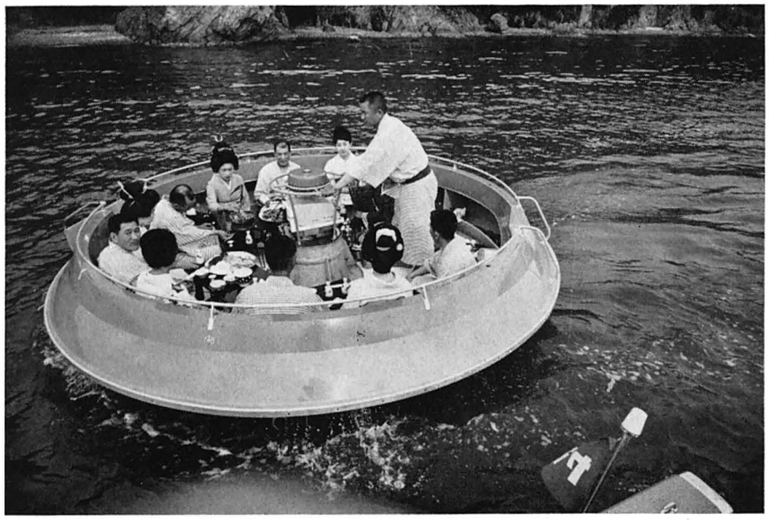
Sports equipment, like tools, cannot be used without effort. It demands active participation and the cultivation of skill. The design of such equipment is therefore evaluated by a public that takes pride in its abilities, and receives an even more critical evaluation by professionals in every sport.

These high standards of performance serve to discipline the designer. He is largely free of those irrelevant considerations which guide the development of what are called consumer objects: artificial obsolescence and dubious innovations created for merchandising purposes. He is expected to use good and durable materials, and is able to devote his time and talents to improving his work. The designs that emerge from this continuous process are characterized by intensely developed forms which directly contribute to proper use.

The objects in this exhibition range from the crossbow, the kite and the discus, which have been developed and refined for centuries, to racing cars and hydroplanes, which are mechanized products of the mid-20th century. Most were designed by groups of technicians; a few were designed by individuals whose personal preferences constitute an identifiable style. In the hands of sensitive designers they acquire a compelling visual expressiveness, and the discipline of use is made to yield objects of extraordinary beauty.

ARTHUR DREXLER

DESIGN FOR SPORT



ROUND BOAT, JAPAN.

Design for Sport is an exhibition of 115 examples of sports equipment gathered from various parts of the world presented by the Museum of Modern Art, in cooperation with Sports Illustrated and the National Sporting Goods Association.

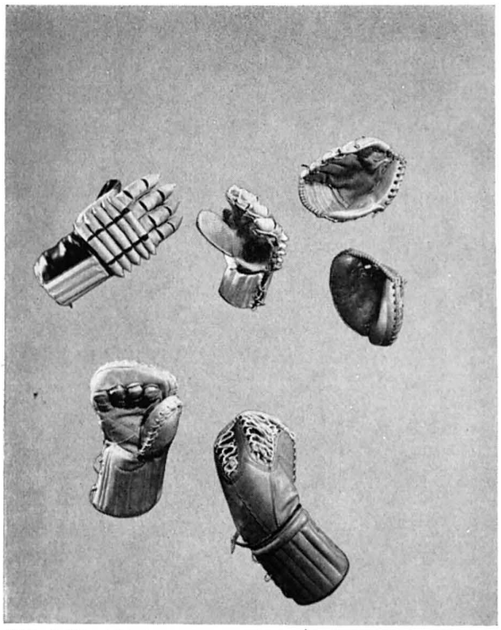
The objects, which range from diving masks to a racing car and include a sail plane and an ice boat, are being shown in an 80-foot-square tent erected especially for the exhibition.

The armor of football players, fencers, hockey players and boxers, the equipment of fishermen, archers and baseball players, a lacrosse stick and rugby ball are among objects used in 56 sports represented in the exhibition.

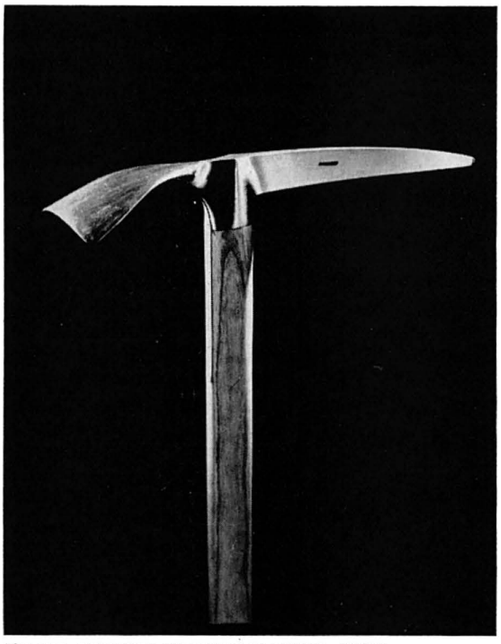
The objects were selected by the Museum's Director of Architecture and Design, Arthur Drexler, with Mildred Constantine and Greta Daniel, Associate Curators.

Brightly colored walls have been built around the perimeter of the tent in which the smaller objects in the show are installed. Boats are displayed in a special area that is covered with crushed marble. A sail plane with a 52-foot wing span soars overhead on an 8-foot pedestal.

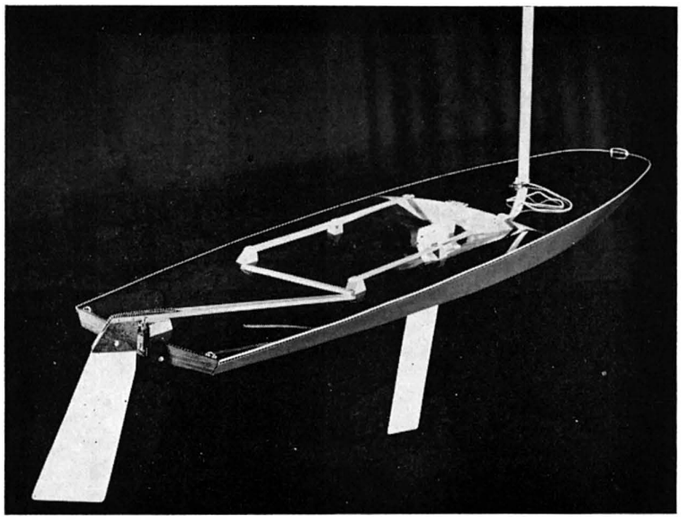
Design for Sport, on view from May 15 through July 31, is one of a continuing series of exhibitions the Museum of Modern Art has presented of well designed artifacts.



TOP ROW: ICE HOCKEY GLOVE, FIRST BASEMAN'S MITT, CATCHER'S MITT. LOWER ROW: ICE HOCKEY GOALIE STICK MITT, ICE HOCKEY GOALIE CATCHING MITT.



ICE-AXE, DESIGNED BY FRATELLI GRIVEL, ITALY.



BOAT, MINI SAIL, DESIGNED BY IAN PROCTOR, ENGLAND.

HUNTING SADDLE, DESIGNED BY J. STUBBEN, GERMANY.

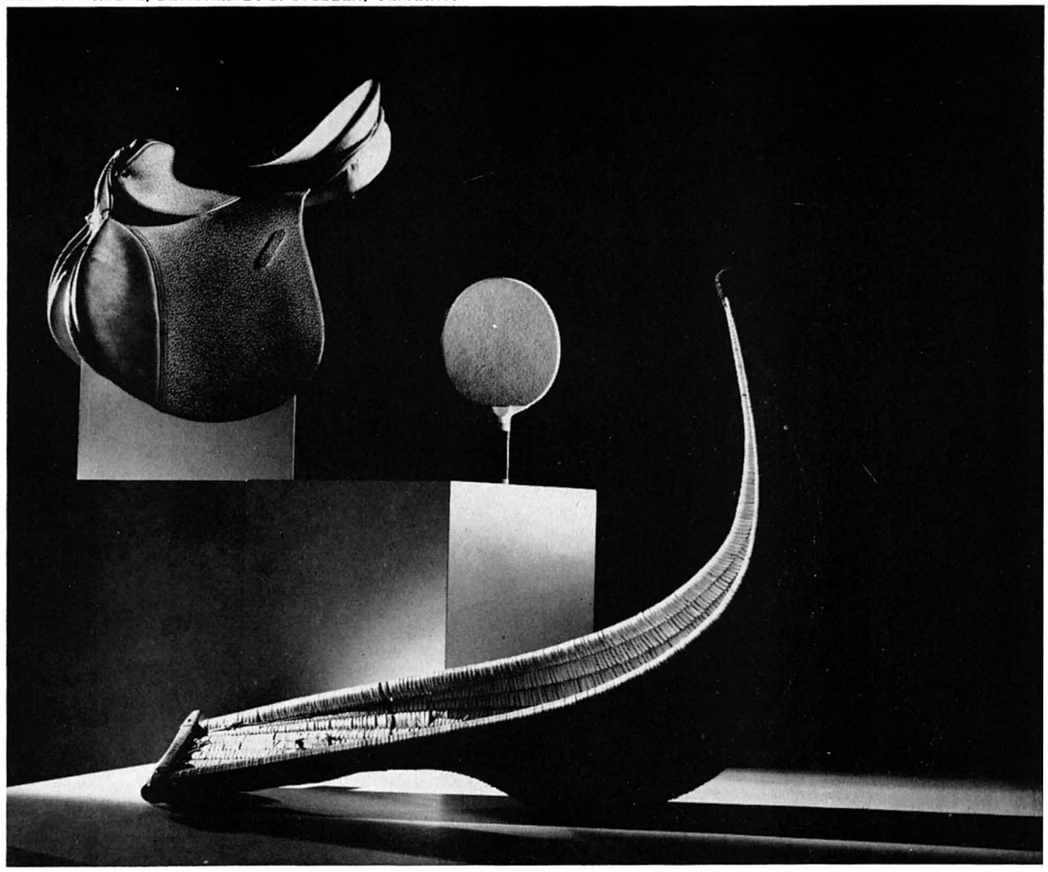
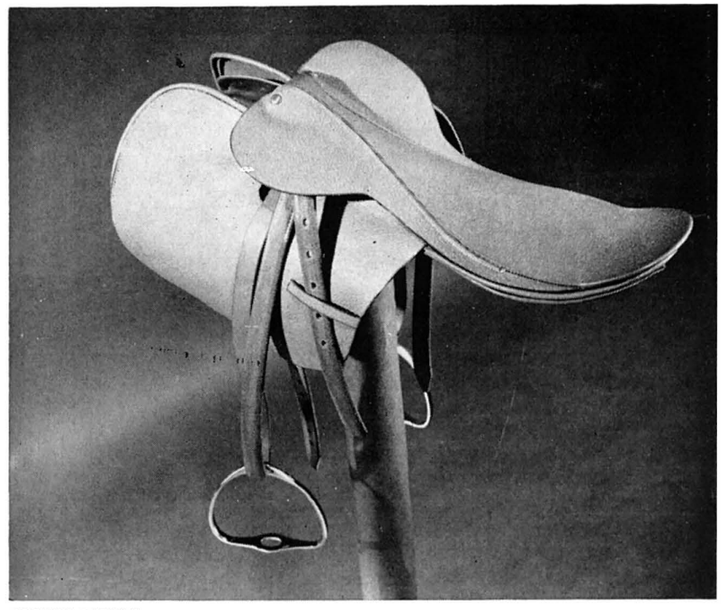
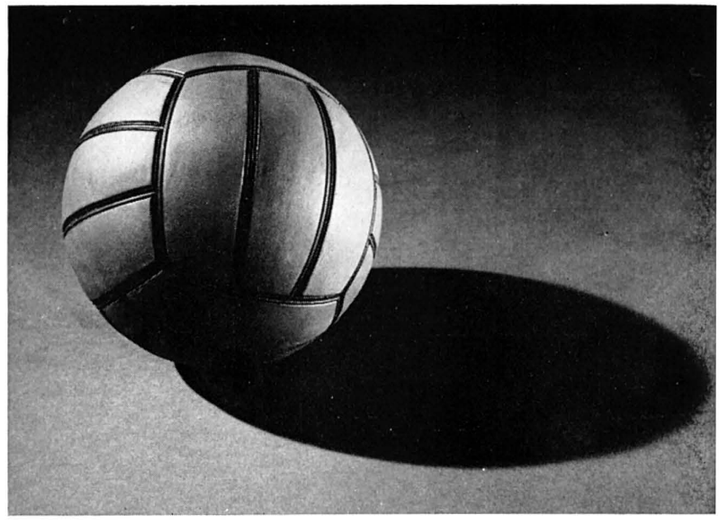


TABLE TENNIS PADDLE, ITALY; JAI ALAI CESTA, DESIGNED BY JOSE ECHAVE, SPAIN.



JOCKEY SADDLE.

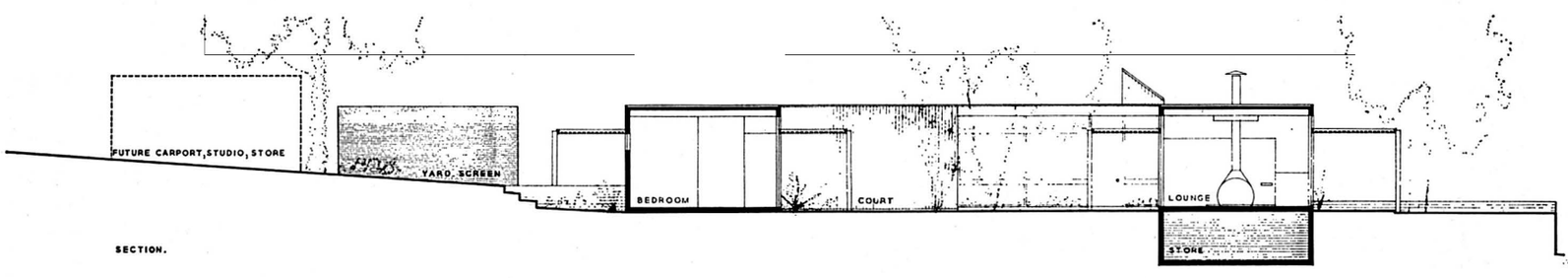


SOCCER BALL.

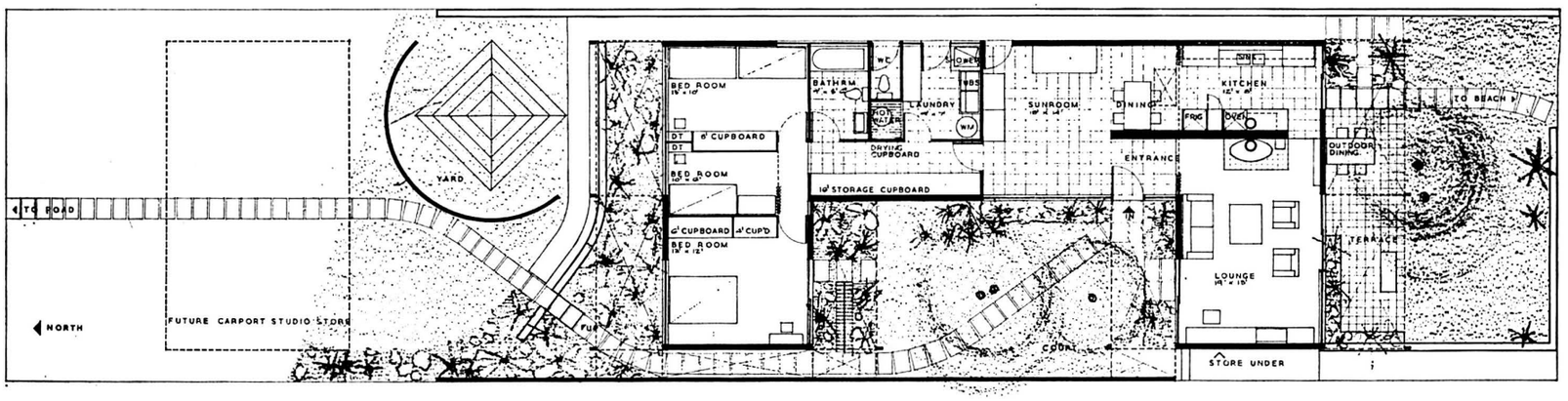
HOUSE IN AUSTRALIA BY ANDREW YOUNG, ARCHITECT

The site was originally selected for its closeness to the city of Sydney, bush setting, waterfrontage, and comparatively low cost. Its disadvantages were its width, only 35′, and the southerly exposure. Tight planning and a courtyard solved the problem while the proximity of a large two-story house on the western side was used to shade the court from the afternoon sun.

The living room and the kitchen directly overlook the water and a quarry tile terrace where all the summer meals are eaten. The dining room, also used as a sun and playroom, looks onto the court which is sufficiently sheltered to allow tropical planting. The entire area is visually one volume, divided by a six-foot high, white, bagged brick wall, and full height, burnt orange curtains. The three bedrooms are divided by demountable storage space. Future expansion includes a workshop-studio, and an office.



SECTION.



PHOTOGRAPHS BY MAX DUPAIN

THE ARTIST AND THE SCIENTIST—JULES LANGSNER

(Continued from page 19)

of cellular deterioration so that the ancient dream of a Fountain of Youth has an excellent chance of turning into reality, with explorations proceeding on a number of fronts. Among the most promising of these studies are experiments in bringing dead dogs back to life by means of transfusions, forced lung expansion, and mechanical heart pumping now being conducted by the Russian surgeon, V. A. Negowsky and the staff of the Institute of Defribrillation and Resuscitation in Moscow. As a result of the many studies of cellular deterioration in recent years, Huxley's grim metamorphosis of human beings into centuries old gibbous monsters in *After Many Summer Dies The Swan* now would have to be revamped to show centenarians in good health living in the everyday world.

The implications of such studies are awesome. Decisions will have to be made with regard to criteria for bringing one person back to life rather than another. Who is to have authority in this life and death matter? Certainly there is no reason to assume that an enormous increase of life span is wholly on the plus side. Consider for a moment the changed proportion of the old in relation to youth and middle age. Will the vast increase of "senior" citizens—to employ the current euphemism—evntually slow creative initiative because the old tend to resist change in thought and ways of doing things. Societies dominated by their elders characteristically preserve familiar ideas and customs. Will keeping man young physically assure his mental youthfulness? What will the artist's image of man look like in a world of the aged?

Consider another aspect of the immense increase in longevity —burgeoned population with problems of birth control on a global scale. Interference with personal freedom in this most vital human concern is so threatening psychologically that our society is a long way from dealing with the many complexities of the problem, much less doing anything about it. Be that as it may, the biological sciences, on the verge of a revolutionary phase comparable to nuclear physics in the first half of the twentieth century, can be expected to change human existence profoundly. Very likely, works of art will reflect, in ways now unforeseeable, this revolution of biological thought.

Coming closer to home, none of these extraordinary developments may occur unless we intelligently manage the nuclear forces capable of wiping out our scientific culture, if not all life on Earth. Can enough people mature soon enough in their comprehension of the age of science to enable the species to enter the era of MIS and the reversal of death back to life? That, of course, is the X in the human equation at this critical juncture in our scientific civilization. Mankind's most urgent problem—nuclear disarmament—has to be solved before the full potential of the scientific age can be realized. We have only 10 years at the outside to solve this problem, according to physicist Leo Szilard, who in 1939 persuaded Einstein to write President Roosevelt of the feasibility of developing nuclear weapons.

The dilemmas we face are staggering but not insurmountable. Unprecedented changes in our situation are the result of human activities and are not the work of mysterious, inaccessible, and hostile agencies. "The Lord," Einstein once remarked, "is subtle, but He isn't simply mean." New definitions of purpose are required to direct our energies into more appropriate responses to man's condition in the age of science. There is not enough time to leave the business of defining human purposes in relation to our precarious situation to a handful of professional philosophers.

Consideration of human purposes wheels us back to the arts. Not so long ago, the purposeful aspect of the arts was thought to be of minor significance by determinists for whom the psyche was essentially a mechanism. For the sociological determinist, the work of art was the inevitable consequence of certain impersonal forces—economic, religious, political, and so forth—that shaped the artist's vision. The psychological determinist viewed the work of art as the product of unconscious drives and conflicts over which the artist has little to say. Hard and fast determinism now is discredited in the social and psychological sciences. Contemporary thought has re-instated purpose in the account of human experience. Thus it has been found that patients of Freudian analysts have Freudian dreams, just as patients of Jungian analysts have Jungian dreams. That is to say, the dreamer is not entirely withdrawn from the purposes he consciously brings to his analysis. Studies in the effects of narcotics disclose a range of reactions that vary with reference to the purpose for taking the drug. In other words, response to narcotics is not purely chemical and biologic, and cannot be understood completely if purpose in the mind of the user is disregarded.

The artist brings a different set of purposes to his work than does the scientist. The concepts and discoveries of the scientist transcend him as an individual person, and require crystallization in a form that can be tested independently by others. The application of scientific thought in the domain of practical affairs is viewed by the scientist as a side-benefit to the purpose of increasing the store of knowledge. The artist, on the other hand, directs his efforts to a certain life enhancement. The ways in which he crystallizes visual properties into meaningful images are inseparable from his personal sensibility. Some residue of himself is part and parcel of the work he creates. The artist's primary purpose is intensification of experience, not the understanding of phenomena, contrary to the claims of certain of his advocates who profess to find another (and presumably higher) order of truth in pictures and sculptures.

This is not to say that scientific inquiry may not provide rewards as an experience in its own right. Indeed, scientists often speak of the esthetic satisfactions of their work. Nor is the art object without significance as a source of knowledge. Such interpreters as the critic, historian, psychologist, and social scientist have added to our store of knowledge as a result of studies of the arts. Nevertheless, these additions to knowledge are a side-benefit to the work's primary purpose, that of life enhancement.

(First part of an article to be concluded in the August issue.)

CURRENTLY AVAILABLE PRODUCT LITERATURE AND INFORMATION

Editor's Note: This is a classified review of currently available manufacturers' literature and product information. To obtain a copy of any piece of literature or information regarding any product, list the number which precedes it on the coupon which appears below, giving your name, address, and occupation. Return the coupon to Arts & Architecture and your requests will be filled as rapidly as possible. Listings preceded by a check (✓) include products which have been merit specified for the Case Study Houses 20, 21, The Triad, 25.

NEW THIS MONTH

(405a) Recessed and Accent Lighting Fixtures: Complete range 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—soft satin thermopal glass in glowing geometric shapes for unusual decorative effects. Prescolite Manufacturing Corporation, 1251 Doolittle Drive, San Leandro, California.

(409a) Handsome illustrated folder describes and gives complete details on the Container Corporation of America Color Harmony Manual based on the Oswald system, and designed to improve the planning and use of color by artists, designers, manufacturers and consumers. Folder includes sample color chip. Write to Color Standards Department, Container Corporation of America, 38 South Dearborn Street, Chicago 3, Illinois.

APPLIANCES

(399a) Full color illustrated brochure describes new Thermador Bilt-In Dishwasher; stainless steel is used for actual tank and inside door liner of washing compartment eliminating chipping, staining, rusting, odor problems, specially developed insulating, sound-deadening material makes operation nearly noiseless; new exclusive "washing arm", food residue separator, drying system, completely automatic, service-free controls; style and color co-ordinated with other Thermador Bilt-In kitchen equipment; brochure gives detailed specifications. Write to Thermador, 5119 District Boulevard, Los Angeles 22, California.

(316a) Automatic Dishwashers: Waste King Super Dishwasher-Dryers with complete flexibility in the selection front panels. Any color, any metal finish, any wood panel may be used to match other kitchen colors or cabinets. Seven major benefits and ten exclusive features including humidity-free drying which keeps all hot, steamy air inside the tub. Complete information and specifications available on request. Waste King Corporation, 3300 East 50th Street, Los Angeles 58, California, LUdlow 3-6161.

(292a) Built-in Ranges and Ovens: Latest developments in built-in ovens with Glide-out Broiler, also motorized Rotisserie. Table top cook top ranges (4 or 6 burners) ready for smart built-in installation. Available in colors or stainless steel to provide sparkling interest in spacious contemporary kitchens. Send for color brochure, photos, and specifications. Western-Holly Appliance Company, 8536 Hays Street, Culver City, California.

(250a) Built-in appliances: Oven unit, surface-cooking unit, dishwasher, food waste disposer, water heater, 25" washer, refrigerator and freezer are featured built-in appliances merit specified for Case Study House No. 17. Recent introductions are three budget priced appliances, an economy dryer, a 12½ cubic-foot freeze chest and a 30" range. For complete details write Westinghouse Appliance Sales, a division of Westinghouse Electric Supply Company, Dept. AA, 4601 South Boyle Avenue, Los Angeles 58, California.

(350a) Appliances: Thermador presents two new brochures. The 14.2 cubic-foot Refrigerator-Freezer is featured in one brochure. All sections of the interior are explained in full; choice of colors and detailed specifications are given. The second brochure colorfully illustrates Thermador's Bilt-In Electric Ranges. The special features of the Bilt-In Electric Ovens, such as the Air-Cooled door, 2-speed rotisserie, scientifically designed aluminum Broiler tray, are shown. The Thermador "Masterpiece" Bilt-In Electric Cooking Tops are detailed. For these attractive brochures write to: Thermador Electrical Manufacturing Company, 5119 District Boulevard, Los Angeles 22, California.

ARCHITECTURAL WOODWORK

(295a) Manufacturers of architectural woodwork, specializing in all types of fixtures for stores, offices, churches and banks. Large and complete shop facilities offer a complete range of work from small specialty shops to complete departments in large stores. Experienced staff to discuss technical or structural problems, and to render information. Laurel Line Products, 1864 West Washington Boulevard, Los Angeles 7, Calif.

ARCHITECTURAL METAL WORK

(294a) Architectural Interior Metal Work: Specializing in the design and fabrication of decorative metal work, murals, contemporary lighting fixtures and planning, room dividers, and decorative fixtures of all types for stores, office buildings, restaurants, cocktail lounges, hotels and homes. Sculptured metals, tropical hardwoods, mosaics, glass and plastics are used in the fabrication of these designs. Send for information and sample decorative plastic kit. Nomad Associates, 1071 2nd Avenue West, Twin Falls, Idaho.

ARCHITECTURAL POTTERY

(303a) Architectural Pottery: Information, brochures, scale drawings of more than 50 models of large-scale planting pottery, sand urns, garden lights, and sculpture for indoor and outdoor use. Received numerous Good Design Awards. In permanent display at Museum of Modern Art. Winner of 1956 Trail Blazer Award by National Home Fashions League. Has been specified by leading architects for commercial and residential projects. Groupings of models create indoor gardens. Pottery in patios creates movable planted areas. Totem sculptures available to any desired height. Able to do some custom work. Architectural Pottery, 2020 South Robertson Boulevard, Los Angeles 34, Calif.

DECORATIVE ACCESSORIES

(364a) Contemporary Clocks and Accessories. Attractive folder Chronopak contemporary clocks, crisp, simple, unusual models; net lights and bubble lamps, George Nelson, designer. Brochure available. One of the finest sources of information, worth study and file space.—Howard Miller Clock Company, Zeeland, Michigan.

DOORS AND WINDOWS

(396a) Sun Control: New 8-page catalog describes the Arcadia Brise Soleil 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. Write to Northrop Architectural Systems, 5022 Trigg Street, Los Angeles 22, Calif.

(327a) Sliding Doors & Windows: The product line of Bellevue Metal Products consists of steel and aluminum sliding doors and a steel sliding window used for both residential and commercial purposes. Designed and engineered for easier installation and trouble-free service. Units feature live wool pile weatherstrip for snug anti-rattle fit; bottom rollers with height adjustors at front and back; cast bronze or aluminum hardware and custom designed lock. Doors can always be locked securely and have safety bolt to prevent accidental lockout. Catalog and price list available on request by writing to Bellevue Metal Products, 1314 East First Street, Los Angeles, California.

(274a) Sliding Wardrobe Doors: Dormetco, Manufacturers of Steel Sliding Wardrobe Doors, announces a new type steel sliding wardrobe door, hung on nylon rollers, silent operation, will not warp. (Merit specified for Case Study House No. 17.) Available in 32 stock sizes, they come Bonderized and Prime coated. Cost no more than any good wood door. Dormetco, 10555 Virginia Avenue, Culver City, California. Phone: VErmont 9-4542.

(273a) Jalousie Sash: Information and brochure available on a louver-type window which features new advantages of design and smooth operation. Positive locking, engineered for secure fitting, these smart new louver windows are available in either clear or obscure glass, mounted in stainless steel fittings and hardware with minimum of working parts, all of which are enclosed in the stainless steel channel. (Merit specified for Case Study Houses #17 and #20.) Louvre Leader, Inc., 815 North Baldwin Street. El Monte, California.

(395a) Window Wall Systems: New 8-page catalog presents the Arcadia 800 Series Window Wall Systems of aluminum framing for self-contained floor-to-ceiling installations. Any desired configurations of fixed and sliding panels, spandrel or transom panels, door frames or special windows are possible. Write to Northrop Architectural Systems, 5022 Triggs Street, Los Angeles 22, California.

(210a) Soule Aluminum Windows—Series 900: From West's most modern alumiliting plant, Soule's new aluminum windows offer these advantages: alumilite finish for longer wear, low maintenance; tubular ventilator sections for maximum strength, larger glass area; snap-on glazing beads for fast, permanent glazing; Soule putty lock for neat, weather-tight seal; bind-free vents, 90% openings; ¾" masonry anchorage; installed by Soule-trained local crews. For information write to George Cobb, Dept. BB, Soule Steel Company, 1750 Army Street, San Francisco, California.

(256a) Folding Doors: New catalog is available on vinyl-covered custom and standard doors. Emphasizes their almost universal applicability. Folding doors eliminate wasteful door-swing area, reduce building costs. Mechanically or electrically operated. Modernfold Door, Inc., 3836 East Foothill Boulevard, Pasadena 8, California.

(332a) Jaylis Traversing Window Covering — Room Dividers: Constructed from DuPont Lucite and DuPont Zyetel Nylon; reflects 86% infrared rays and absorbs 99% ultra-violet rays; low maintenance cost; lasts a lifetime; may be used indoors or out; stacks one inch to the foot. For complete details write to: Jaylis Sales Corporation, Dept. A., 514 West Olympic Boulevard, Los Angeles 15, California.

(393a) Northrop Architectural Systems' product lines include Arcadia sliding windows, available in a wide range of stock sizes, and Arcadia aluminum sliding glass doors in stock and custom designs, including the Acme 500 sliding 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 one dealing with the Acme 500. Write: Northrop Architectural Systems, 5022 Triggs Street, Los Angeles 22, California.

(222a) Architectural Window Decor: LouverDrape Vertical Blind's colorful new catalog describes LouverDrape as the most flexible, up-to-date architectural window covering on today's market. Designed on a 2½ inch module, these vertical blinds fit any window or skylight—any size, any shape and feature washable, flame-resistant, colorfast fabric by DuPont. Specification details are clearly presented and organized and the catalog is profusely illustrated. Write to Vertical Blinds Corp. of America, 1710 22nd Street, Santa Monica, California.

(284a) Solar Control Jalousies: Adjustable louvers eliminate direct sunlight and skyglare at windows and skylights; some completely darken for audio-visual. Choice of controls: manual, switch-activated electric, completely automatic. In most air-conditioned institutional, commercial and industrial buildings, Lemlar Solar Control Jalousies are actually cost-free. Service includes design counsel and engineering. Write for specifics: Lemlar Corp., P. O. Box 352, Gardena, Calif., tel: FAculty 1-1461.

(202a) Sliding Doors and Windows: New 12-page catalog-brochure profusely illustrated with contemporary installation photos, issued by Steelbilt, Inc., pioneer producer of steel frames for sliding glass doorwalls and windows. The brochure includes isometric renderings of construction details on both Top Roller-Hung and Bottom Roller types; 3" scale installation details; various exclusive Steelbilt engineering features; basic models; stock models and sizes for both sliding glass doorwalls and horizontal sliding windows. This handsomely designed brochure is available by writing to Steelbilt, Inc., Gardena, Calif.

EXHIBITS

(382a) Exhibits and displays engineered, fabricated and installed by competent artists and craftsmen. Executed from your designs or ours in wood, metal, plastic, etc. in our modern 30,000-square-foot plant. One letter or phone call may solve your exhibit problems. Brand, Worth & Associates, 16221 South Maple Avenue, Gardena, Calif. Telephone: FAculty 1-6670, (Los Angeles).

FABRICS

(322a) Fabrics: Prize-winning design source, Laverne Originals, offers a complete group of architectural and interior drapery fabrics — handprints on cottons, sheers, all synthetic fibers and extra strong Fiberglas in stock and custom colors. Suitable casement cloths for institutional requirements. An individual designing service is offered for special projects. Coordinated wall coverings and surface treatments are available for immediate delivery, moderately priced. Write for complete illustrated brochures and samples. Laverne, 160 East 57th Street, New York 22; Phone PLaza 9-5545.

(307a) Fabrics: Anton Maix Fabrics for architecture. Outstanding collection of printed designs by finest contemporary designers. Unique casement cloths for institutional requirements. Coordinated upholstery fabrics. Plastics & synthetics. Special finishes. Transportation materials. Custom designs. Nat'l sales office—162 E. 59th St., N. Y. 22, N. Y. Showrooms in Los Angeles, San Francisco & New York. Write for illustrated brochure and coordinated swatches: L. Anton Maix, 162 East 59th Street, New York 22, New York.

FURNITURE

(400a) Herman Miller Inc. offers a series of coordinated brochures illustrating the Herman Miller Collection. Also available is a Comprehensive Storage System Workbook and a Residential book. Write to Herman Miller, Inc., Zeeland, Michigan.

(370a) Contemporary Furniture for the Home: Open showroom to the trade, featuring such lines as Herman Miller, Knoll, Dux and John Stuart. Representatives for Architectural Pottery, Bailey-Schmitz, Brown-Jordan, Brown-Saltman, Costa Mesa Desks, Edgaard Danish Furniture, Glenn of California, Howard Miller, Nessen Lamps, Omni Wall System by George Nelson, Raymor Lamps, Pacific Furniture, Raymor Omnibus Wall System, Gunnar Schwartz, String Shelves, Tempo. Vista, Hans Wegner Designs, Peter Wessel Wall System, Peter Wessel Norwegian Imports, Heath Ashtrays. These lines will be of particular interest to architects, decorators and designers. Inquiries welcomed. Carroll Sagar & Associates, 8833 Beverly Boulevard, Los Angeles 48, California.

(358a) Manufacturers of contemporary furniture, featuring the Continental and "Plan" Seating Units, designs by William Paul Taylor and Simon Steiner. Selected Designs, Inc., 2115 Colorado Avenue, Santa Monica, California.

(383a) Knoll Furniture Guide—Illustrated 30-page brochure of the Knoll collection of contemporary furniture designs for residential and commercial interiors. Includes chairs, sofas, tables, chests, cabinets, desks and conference tables by internationally famed designers including Florence Knoll, Eero Saarinen, Harry Bertoia, Mies van der Rohe, Isamu Noguchi, Pierre Jeanneret. Knoll Associates, Inc., 320 Park Avenue, New York 22, New York.

(384a) Wall Furniture: Broad and versatile line of wall-hung furniture, manufactured and warehoused in Los Angeles; the Peter Wessel line wall furniture line is of the highest quality and workmanship constructed of genuine walnut, oil finished. Special custom finishes, color matched to customer's selection available. Ideal for home, office, and institutional use. Write for catalog and price list to Peter Wessel Ltd., 9306 Santa Monica Boulevard, Beverly Hills, California.

(270a) Furniture (wholesale only): Send for new brochure on furniture and lamp designs by such artists as Finn Juhl, Karl Ekselius, Jacob Kajaer, Ib Kofod-Larsen, Eske Kristensen, Pontoppidan. Five dining tables are shown as well as many Finn Juhl designs, all made in Scandinavian workshops. Write Frederik Lunning, Inc., Distributor for Georg Jensen, Inc., 315 Pacific Avenue, San Francisco 11, California.

(321a) Furniture: Laverne Furniture, test-proven by leading architects and business organizations, has attained the status of a classic. A unique and distinctive group—finest calfskin and saddle leathers, precision steel work and carefully selected imported marbles. Write for complete illustrated brochure. Laverne, 160 East 57th Street, New York 22, New York.

(325a) Chairs: 10-page illustrated catalog from Charles W. Stendig, Inc., shows complete line of chairs in a variety of materials and finishes. The "Bentwood Armchair," "Swiss" aluminum stacking chair designed by Hans Coray, "H-H" steel and leather chair are a few of the many pictured. Well designed line; data belongs in all files. Write to: Charles W. Stendig, Inc., 600 Madison Avenue, New York 22, New York.

(345a) Office Furniture: New 80-page Dunbar office furniture catalog; fully illustrated in black and white and four colors; complete line designed by Edward Wormley; collection includes executive desks, storage units, conference tables, desks and conference chairs, upholstered seating, occasional tables and chests, and a specially screened series of coordinated lighting and accessories; meticulous detailing, thorough functional flexibility. For free copy write to Dunbar Furniture Corporation of Indiana, Berne, Indiana.

(375a) Contemporary Danish and Swedish Furniture. Outstanding design and quality of craftsmanship. Information available to leading contemporary dealers and interior decorators. Pacific Overseas, Inc., 478 Jackson Street, San Francisco, California.

(385a) Norwegian Furniture: Complete collection of outstanding Norwegian imports. Upholstered furniture and related tables, dining groups, specialty chairs, modular seating groups. Teak and walnut; included in the collection is an outstanding selection of fabrics of bold contemporary color and design. Immediate delivery. For further information write Peter Wessel, Ltd., 9306 Santa Monica Boulevard, Beverly Hills, California.

(377a) Furniture: A complete line of imported upholstered furniture and related tables, warehoused in Burlingame and New York for immediate delivery; handicrafted quality furniture moderately priced; ideally suited for residential or commercial use; write for catalog. — Dux Inc., 1633 Adrian Road, Burlingame, Calif.

(363a) Furniture, Custom and Standard: Information one of best known lines contemporary metal (indoor-outdoor) and wood (upholstered) furniture; designed by Hendrick Van Keppel, and Taylor Green—Van Keppel-Green, Inc., 116 South Lasky Drive, Beverly Hills, California.

(371a) Contemporary Furniture for Offices and all Institutional Use: Open showroom for architects, interior designers and their clients. Display of furniture: Knoll, Lehigh, Herman Miller, Jens Risom, Robert John, Leopold, Albano, Stow & Davis, Steelcase, Shelbyville, Domore, Avalon, Costa Mesa. Seating: Brown-Saltman, Pacific, Crucible, Kasparians, Dux, Kevi, Johnson, Stendig. Fabrics: Arundell Clarke, Ben Rose, Isabel Scott. Accessories: Smith Metal Arts, Giftcraft, Peter Pepper, Qualiton. Nessen Lamps and Architectural Pottery. Manufacturers literature available. Carroll Sagar/Office Interiors, 8751 Beverly Boulevard, Los Angeles 48, California.

• Catalogs and brochure available on leading line of fine contemporary furniture by George Kasparian. Experienced custom/contract dept. working with leading architects. Wholesale showrooms: Carroll Sagar & Assoc., 8833 Beverly Blvd., Los Angeles 48, Calif.; Bacon & Perry, Inc., 170 Decorative Center, Dallas 7, Texas; Executive Office Interiors, 528 Washington St., San Francisco 11, Calif.; Castle/West, 2360 East 3rd, Denver 6, Colo, Frank B. Ladd, 122 West Kinzie Street, Chicago, Illinois. For further information, write on your letterhead, please, directly to any of the above showrooms. Kasparians, 7772 Santa Monica Blvd., Los Angeles 46, California.

(347a) A new abridged 24-page catalog, containing 95 photos with descriptions of dimensions and woods, is offered by John Stuart Inc. Showing furniture produced from original designs by distinguished international designers, it is a storehouse of inspirations. 50c John Stuart Inc. Dept. DS, Fourth Avenue at 32nd Street, New York 16, N. Y.

GRAPHICS

(381a) Brand, Worth & Associates has the program to solve your graphics and signing problem. Specializing in the custom fabrication and installation of two- and three-dimensional art work for department stores, cocktail lounges and markets across the country. Executed from your designs or ours in wood, metal, plastic, etc. in our modern 30,000-square-foot plant. Write or call for further information. Brand, Worth & Associates, 16221 South Maple Avenue, Gardena, Calif. Telephone: FAculty 1-6670, (Los Angeles).

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(380a) Grillework: Infinilite and Grillewall. Infinilite makes possible an entirely new architectural emphasis on luminous ceilings. Through the combination of a new suspension system and the unique circular louver design, the entire Infinilite ceiling becomes a single, uniform panel with true non-modular appearance. This highly versatile plastic grillework offers unlimited design possibilities. Grillewall, the non-modular aluminum grillework, can be used as sun screen, area divider, balustrade, window cover, fence, etc. For brochures write: Integrated Ceilings & Grilleworks, Inc., 11766 West Pico Boulevard, Los Angeles 64, California.

(357a) Decorative Grilles: Suncontrol and decorative grilles in all metals and finishes; 12 stock patterns for interior and exterior use. Can be used for ceilings, fluorescent louvers, overhead lattice work. Write for illustrated catalog. Nomad Associates, 1071 2nd Avenue West, Twin Falls, Idaho.

HARDWARE

(372a) Hardware: A distinctive group of contemporary hardware for commercial or residential projects. Furniture and cabinet pulls of solid brass inlaid with marble, stone, mosaic, etc. Entrance door pulls of handmade glass combined with brushed chrome. Also architectural hardware. Era Industries, 2207 Federal Avenue, Los Angeles 64, California.

HEATING AND COOLING

(387a) Heating—Rusherheat specializes in engineering, fabricating, and installing quality radiant heating and cooling systems, warm air heating systems and air conditioning systems in houses and specialized commercial and industrial applications. Economy and flexibility of design permit floor, wall and ceiling installations as well as outdoor and pool heating. Engineering consultation and complete packaged systems available; merit specified for Case Study House No. 24. Write for brochure to Rusherheat, Inc., 211 West Beach Avenue, Inglewood, California.

INTERIOR DESIGN

(359a) Interior Design: Crossroads have all the components necessary for the elegant contemporary interior. Available are the finest designed products of contemporary styling in: furniture, carpets, draperies, upholstery, wall coverings, lights, accessories, oil paintings, china, crystal and flatware. For booklet write to: Crossroads, 15250 East Whittier Boulevard, Whittier, California.

LIGHTING EQUIPMENT

(366a) Contemporary Fixtures: Catalog, data good line contemporary fixtures, including complete selection recessed surface mounted lense, down lights incorporating Corning wide angle Pyrex lenses; recessed, semi-recessed surface-mounted units utilizing reflector lamps: modern chandeliers for widely diffused, even illumination; Luxo Lamp suited to any lighting task. Selected units merit specified for CSHouse 1950. Harry Gitlin, 917 3rd Avenue, New York 22, New York.

(339a) Lighting: New Lighting Dynamics catalog featuring dozens of new architectural ideas for lighting, cost-range indicators for quick indication of cost. Complete photometric data done by the Interflectance method. Write to Interior System, Inc., 3381 East Olympic Boulevard, Los Angeles 23, California.

(277a) Lighting Fixtures: Complete information on contemporary lighting fixtures by Chiarello-Frantz. Feature is "Light Puff" design: pleated, washable, Fiberglas-in-plastic shades with anodized aluminum fittings. Also in brass. Accessories include wall brackets, floor and table standards, and multiple canopy fixtures for clusters of lights. Write to: Damron-Kaufmann Inc., 440 Jackson Square, San Francisco 11, California.

(402a) "Change of Plane" concept developed by Marco, brand name of Marvin Electric Manufacturing Company, eliminates large exposed metallic trims. Illumiline trims are designed to minimize this problem. All trims are nested in the matching seats of plaster rings. Trim plates are concave to add the change of plane to the change in texture beween trim and the ceiling. The aperture, being regressed above the ceiling surface, is completely concealed at lower viewing angles. This change of plane also provides additional shielding from glare. Write: Marvin Electric Manufacturing Company, 6100 Wilmington Avenue, Los Angeles 1, Calif.

(360a) Target Lighting: For home, library, museum there is a small, handsome Art Beam-Lite to provide concentrated lighting on large or small paintings, objets d'art, and sculpture. This compact light can project a round, rectangular or oblong beam up to 25 feet. Also from France comes the Art Beam-Lite 100, 102 and 105 which have detachable bases and interchangeable lenses. For complete information write to: Morda Distributing Company, P.O. Box 24036, 12041 Wilshire Boulevard, Los Angeles 24, California.

(259a) Lighting Equipment: Booklet available on the "C-I Board," (Century-Izenour Board) first all electronic system for stage lighting control. Main elements are Preset Panel, Console Desk, and Tube Bank. Advantages include adaptability, easy and efficient operation, low maintenance. Write to Century Lighting, Inc., 521 W. 43rd St., New York 36, New York.

(408a) Plastoveil Trimplate is Marco's solution of inconspicuousness plus accessibility in recessed lighting fixtures. The new Trimplate allows opening to be filled with same material as ceiling surfaces—plaster, acoustical tile, wood, or many other materials, yet the plate can be easily pulled down on torsion springs. By reducing the opening to a minimum without sacrificing easy access to fixture Marco has achieved maximum light, with minimum fixture intrusion. Write: Marvin Electric Manufacturing Company, 6100 Wilmington Avenue, Los Angeles 1, California.

(218a) Permalite-Alexite Plaster Aggregate: Latest information on this highly efficient fireproofing plaster presented in detail in completely illustrated brochure. Brochure contains enough data and authority on authentic fire resistance to warrant complete, immediate acceptance of Permalite-Alexite for perlite plaster fireproofing. Many charts and detailed drawings give fire-ratings, descriptions and authorities and describe plaster as lightweight, economical and crack-resistant, withstanding up to 42% greater strain than comparable sanded plasters. Write to Permalite, Perlite Div., Dept. AA, Great Lakes Carbon Corp., 612 South Flower Street, Los Angeles 17, California.

(401a) Multicone Baffle, an advanced baffling concept eliminating brightness caused by interflectances between the conventional horizontal baffle plates. The light is allowed to pass through the perforated cylinder instead of being trapped within the area of a baffle. The beveled baffles project upwards, rather than toward the customary horizontal. These innovations reduce light bounce and glare. Write for Catalog No. 131 to Marvin Electric Manufacturing Company, 6100 Wilmington Avenue, Los Angeles 1, California.

(376a) Architectural Lighting: Full information new Lightolier Calculite fixtures; provide maximum light output evenly diffused; simple, clean functional form: square, round, or recessed with lens, louvres, pinhole, albalite or formed glass; exclusive "torsiontite" spring fastener with no exposed screws, bolts, or hinges; built-in Fiberglas gasket eliminates light leaks, snug self-leveling frame can be pulled down from any side with fingertip pressure, completely removable for cleaning; definitely worth investigating. — Lightolier, 11 East Thirty-sixth Street, New York, N. Y.

(255a) Lighting Equipment: Skydome, basic Wasco toplighting unit. The acrylic plastic dome floats between extended aluminum frames. The unit, factory assembled and shipped ready to install, is used in several Case Study Houses. For complete details write Wasco Products, Inc., 93P Fawcett St., Cambridge 38, Massachusetts.

(389a) Seven entirely new concepts in recessed incandescent lighting are illustrated in full detail in a handsome new catalog just brought out by Marvin Electric Manufacturing Company. Complete specifications are given on the manner in which these seven new concepts are utilized in over 100 new lighting fixtures. For brochure, write Marvin Electric Manufacturing Company, 6100 Wilmington Avenue, Los Angeles 1, California.

(403a) Lanterns, a major innovation in lighting designed by George Nelson and manufactured by the Howard Miller Clock Company, are shown in a two-color, four-page brochure just issued. 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 price. Distributed by Richards Morgenthau, Inc. Write: Howard Miller Clock Company, Zeeland, Michigan.

MISCELLANEOUS

(252a) Stained Glass Windows: 1" to 2" thick chipped colored glass embedded in cement reinforced with steel bars. A new conception of glass colored in the mass displays decomposing and refracting lights. Design from the pure abstract to figurative modern in the tradition of 12th century stained glass. For brochure write to Roger Darricarrere, 1937 San Fernando Road, Los Angeles 65, Calif.

(394a) Store fronts and Entrances: Northrop Architectural Systems includes full Acme line of architectural aluminum storefronts and entrances. Known for advanced and economical design, Acme includes encapsulated floor closers, strong door corners and entire snap-together framing systems. For a new 16-page catalog, write to Northrop Architectural Systems, 5022 Trigg Street, Los Angeles 22, Calif.

(306a) Acrylite: New catalog available on Acrylite, an important new material for interior and exterior design. Acrylic sheets in which a variety of designs and textures have been embedded provide new design technique for separate living, dining kitchen, and other areas in a way that room dividers and panels become a central decorative feature in the room. May be coordinated with drapery and upholstery designs, as well as colors. Wasco Acrylite is sold as a panel or by the square foot, with varying thickness, size and design embedments. Send for complete information, Wasco Products, Inc., 93P Fawcett St., Cambridge 38, Mass.

(225a) Kaiser Aluminum, for Product Design & Manufacture: A new 24-page booklet containing up-to-date information on Kaiser Aluminum mill products and services is now available. Includes data on aluminum alloys, forms, properties, applications and availability. An abundance of tables and charts throughout provides convenient reference material. Booklet may be obtained from Kaiser Aluminum & Chemical Sales, Inc., Industrial Service Div., Dept. AA, 919 North Michigan Avenue, Chicago 11, Illinois.

(211a) New Soule Steel Stud: Major improvement in metal lath studs, Soule's new steel studs were developed to give architects, builders stronger, lighter, more compact stud than previously available. Advantages: compact open-webb design, notched for fast field-cutting; continuous flanges; five widths; simplifies installation of plumbing, wiring, channel. For steel stud data write George Cobb, Dept. AA, Soule Steel Company, 1750 Army Street, San Francisco, California.

(331a) Industrial Equipment: For shop and plant areas—Borroughs adjustable steel shelving and shop equipment, Lyon lockers, Royal industrial and cafeteria seating, GR Soundex partitioning, steel or wood floor-to-ceiling walls. Large warehouse stocks. Display facilities available to architects and their clients. Write to The Hart-Cobb-Carley Company, 2439 South Yates Avenue, Los Angeles 22, California.

(300a) Home Furnishings: A series of brochures illustrating its new line of contemporary home furnishings and decorative accessories is now available from Raymor. Clocks, wall decor, Scandinavian and domestic furniture, lighting, occasional furniture and many artware and decorative accents are among the units newly cataloged. All literature is available to the trade upon written request on professional letterhead. Inquiries should be addressed to Raymor, 225 Fifth Avenue, New York 10, New York.

(369a) Contemporary Ceramics: Information prices, catalog on contemporary ceramics by Tony Hill, includes full range table pieces, vases, ash trays, lamps, specialties; colorful, full fired, original; among best glazes in industry; merit specified several times CSHouse Program magazine Arts & Architecture: data belong in all contemporary files. — Tony Hill, 3121 West Jefferson Boulevard, Los Angeles, California.

(247a) Contemporary home furnishings: Illustrated catalog presenting important examples of Raymor's complete line of contemporary home furnishings shows designs by Russell Wright, George Nelson, Ben Seibel, Richard Galef, Arne Jacobsen, Hans Wegner, Tony Paul, David Gil, Jack Equier and others. Included is illustrative and descriptive material on nearly 500 decorative accessories and furnishings of a complete line of 3000 products. Catalog available on request from Richards Morgenthau, Dept. AA, 225 Fifth Ave., New York 10, New York.

(397a) Information on all plastics for building: samples, design data on structural plastics, translucent sandwich panels, curtainwall panels, skylights, partition wall panels, and luminous ceiling materials available. New unbreakable Lucite Fiberglas flat sheet and sandwich panels are the most weather resistant, light and color stable panels available for exterior application; sandwich panels utilizing various core and skin materials for curtainwalls and partitions. Consultant and engineering staff, detailing and design details available. Write to: Plastics In Architecture, Inc., 8322 Beverly Boulevard, Los Angeles 48, California, OL 3-7777.

(337a) Contemporary Serving Accessories: A running catalog on a comprehensive collection of dinnerware and serving components which can be combined in unlimited ways. Excellent for designers in working with clients. A continuing creative program within a nucleus of basic vessels in porcelain, ironstone, rockingham, earthenware, etc. Design directed by La Gardo Tackett, Imported by Schmid International, Distributed by Richards Morgenthau, 225 Fifth Avenue, New York, New York.

(267a) Fireplace: Write for free folder and specifications of "Firehood," the conical fireplace, designed by Wendell Lovett. This metal open hearth is available in four models, black, russet, flame red and white, stippled or solid finish. The Condon-King Company, 1247 Rainier Avenue, Seattle 44, Washington. Southern California Representative: Scan, Inc., 102 South Robertson Boulevard, Los Angeles 48, California.

(392a) New 6-page illustrated brochure from Stanthony Corporation presents the "400" line of ventilating hoods scientifically engineered and quality built, with 2-speed blower, automatic safety shut-off switch, built-in control switches, three easy to clean filters, concealed lights, heavy gauge steel hood, built-in draft damper; available in a wide range of standard lengths. Also described is the electric "Char-Broiler" barbecue unit, with griddle and rotisserie, merit specified for Case Study House No. 24. Brochure gives specifications and rough-in details; write to: Stanthony Corporation, 5341 San Fernando Road, Los Angeles 39, California.

(374a) Fiberglas (T.M.Reg. U. S. Pat. Off.) Building insulations: Application data, specifications for insulating walls, top floor ceilings, floors over unheated space. Compression-packed, long continuous rolls, self-contained vapor barrier. Goes up quickly, less cutting and fitting. High thermal efficiency. Non-settling, durable, made of ageless glass fibers. Owens-Corning Fiberglas Corp., Toledo 1, Ohio.

(388a) New Proportional System—The Kidjel Cali-Pro is a new instrument created from the discovery of the one universal ratio for all proportions in design, modern and classic, and spatial harmony in all types of layout. This new found ratio solves the secret of proportions as achieved by the ancient Greeks, now brought up to date in a precision-built, light-weight instrument, easy to use. For detailed information write to: Maurice Kidjel, Pres. — Kidjel-Young & Associates, Inc., 1012 Piikoi Street, Honolulu 14, Hawaii.

PHOTOGRAPHIC REPRODUCTIONS

(334a) The Averycolor reproduction is a color-fast, non-glare, satin-finish print of durable photographic stock, not acetate base material. Two years of research coupled with twenty years of experience in the photographic field have resulted in a revolutionary change in making reproductions from architectural renderings. Other services include black-and-white prints, color transparencies, custom dry mounting and display transparencies. For further information write: Avery Color Corporation, 1529 North Cahuenga Boulevard, Hollywood 28, California.

PAINTS

(335a) A new exterior body and trim finish which gives up to two years additional life is available from W. P. Fuller & Company. This new paint, called "Fuller House Paint," gives a longer life of freshness and brilliance which lengthens the repaint cycle. Color card and data sheets may be obtained from W. P. Fuller & Company, 222 North Avenue 23, Los Angeles 54, California.

(353a) Pittsburgh ACRYLIC House Paint—blister and peel resistant, protecting homes for extra years. Pittsburgh FLORHIDE Latex Floor Paint—for exterior and interior concrete surfaces—no acid etching needed. Pittsburgh DURETHANE Enamel — offers maximum toughness and flexibility combined with beautiful gloss. REZ clear sealer and primer for exterior and interior wood surfaces. For free illustrated booklets on any of these or other Pittsburgh Paints, write to Dept. K, Pittsburgh Plate Glass Company, 742 Grayson Street, Berkeley 10, California.

ROOFING

(223a) Built-up Roofs: Newest brochure of Owens-Corning Fiberglas Corp. outlining and illustrating advantages of a Fiberglas-reinforced built-up roof. A built-up roof of Fiberglas is a monolithic layer of waterproofing asphalt, reinforced in all directions with strong fibers of glass. The porous sheet of glass fibers allows asphalt to flow freely, assures long life, low maintenance and resists cracking and "alligatoring." The easy application is explained and illustrated in detail with other roofing products. Owens-Corning Fiberglas Corp., Pacific Coast Division, Dept. AA, Santa Clara, California.

SOUND CONDITIONING

(310a) Sound Conditioning: Altec Lansing Corporation, manufacturers of complete matched and balanced quality home high fidelity systems. (Merit Specified for Case Study House #18.) Altec Lansing equipment includes tuners, preamplifiers, power amplifiers, loud speakers, loud speaker systems, and loud speaker enclosures. Complete home high-fidelity systems available from $300.00 to $1,600.00. Prices for professional and commercial equipment available upon request. Altec Lansing is the world's largest producer of professional sound equipment, and specified by leading architects the world over for finest reproduction of sound obtainable for homes, offices, stadiums, theatres, and studios. Engineering consultation available. For complete information write to: Altec Lansing Corp., Dept. AA, 1515 South Manchester Avenue, Anaheim, Calif.

SPECIALTIES

(404a) Selections from the diversified decorative accessory collections designed by George Nelson for the Howard Miller Clock Company are presented in a new illustrated, four-page brochure, available to architects and interior designers without charge, upon request. The brochure covers clocks (both built-in and surface mounted); Bubble lighting fixtures; Net Lights; planters; room dividers; and the versatile space divider, Ribbonwall. All information necessary for specifying is provided. Write Howard Miller Clock Company, Zeeland, Michigan.

(373a) Mosaic: Extensive group of contemporary Mosaics designed by Evelyn Ackerman. Framed and ready to hang for interior use. Also excellent facilities for special, large projects for exterior or interior. Era Industries, 2207 Federal Avenue, Los Angeles 64, California.

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(407a) Plywood For Today's Construction, a new catalog with basic information about fir 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 available free from Douglas Fir Plywood Association, Tacoma 2, Washington.

(207a) Unusual Masonry Products: Complete brochure with illustrations and specifications on distinctive line of concrete masonry products. These include: Flagcrete—a solid concrete veneer stone with an irregular lip and small projections on one face —reverse face smooth; Romancrete—solid concrete veneer resembling Roman brick but more pebbled surface on the exposed face; Slumpstone Veneer—four-inch wide concrete veneer stone, softly irregular surface of uneven, rounded projections;—all well suited for interior or exterior architectural veneer on buildings, houses, fire places, effectively used in contemporary design. Many other products and variations now offered. These products may be ordered in many interesting new colors. Brochure available by writing to Department AA, General Concrete Products, 15025 Oxnard Street, Van Nuys, California.

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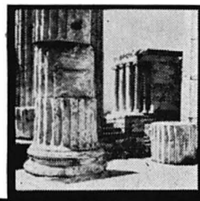

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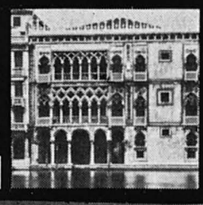

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(340a) Davidson Brick Company manufacturers of Modular Steeltyd Common Brick and other structural clay products, are now exclusively manufacturing the Bel Air Flat. The 6" x 12" x 2" nominal dimension of the brick provides an ideal unit for patios, pool decks, window ledges, garden walks, wall-capping and many other uses. Offers 45% savings in construction costs. Sample brick and literature available from Davidson Brick Company, 4701 East Floral Drive, Los Angeles 22, California.

(344a) General Concrete Products, Inc. has a new compact file folder illustrating fifteen screen or venter block of concrete; gives the advantages of residential and commercial, exterior and interior uses; tells measures and design fashions of special interest to architects, contractors and interior decorators. For this informative work-sheet folder write to: General Concrete Products, Inc., 15025 Oxnard Street, Van Nuys, California (STate 5-1126).

(208a) Texture One-Eleven Exterior Fir Plywood: This new grooved panel material of industry quality, is in perfect harmony with trend toward using natural wood textures. Packaged in two lenghs and widths; has shiplap edges; applied quickly, easily; immune to water, weather, heat, cold. Uses include: vertical siding for homes; screening walls for garden areas; spandrels on small apt., commercial buildings; inexpensive store front remodeling; interior walls, ceiling, counters. For detailed information, write Dept. AA, Douglas Fir Plywood Association, Tacoma 2, Washington.

(349a) Available from the West Coast Lumbermen's Association is an excellent 44-page catalog entitled: "Douglas Fir Lumber — Grades and Uses." This well illustrated catalog includes detailed descriptions of boards, finish, joists and panels, and light framing with several full-page examples of each; conversion tables, stresses, weights, properties of Douglas fir. For a copy write to: West Coast Lumbermen's Association, 1410 S.W. Morrison Street, Portland 5, Oregon.

(355a) Philippine Mahogany Exterior Siding: Developed, engineered and manufactured by Jones Veneer and Plywood Co., Eugene, Oregon. Write for brochures and literature describing America's newest siding. Easy to handle, labor-saving mahogany plywood panels. Illustrated folder shows five available vertical grooved patterns. Jones also offers a complete line of genuine Philippine mahogany interior pre-finished paneling. Merit specified for Case Study House 1960. Jones Veneer and Plywood Company, Eugene, Oregon.

(309a) Structural Material: New construction data now available on Hans Sumpf adobe brick. This waterproof masonry is fire-, sound-, and termite-proof, an excellent insulator—ideal for construction of garden walls, lawn borders and walks. The bricks come in 7 sizes ranging from 4 x 3½ x 16 to 4 x 12 x 16. For further information write for free booklet to: Hans Sumpf Company, Route No. 1, Box 570, Fresno, California.

(219a) Permalite-Alexite Concrete Aggregate: Information on extremely lightweight insulating concrete for floor slabs and floor fills. For your copy, write to Permalite Perlite Div., Dept. AA Great Lake Carbon Corporation, 612 So. Flower Street, Los Angeles 17, Calif.

(391a) "Exterior Finishes," a colorful, new eight-page booklet by the California Redwood Association discusses different treatments of redwood siding from no finish at all—favored by the Association — through water repellents, bleaches, stains, and paint. The booklet replaces and combines former CRA exterior finish and weathered redwood data sheets, and includes the results of years of research by the Association and others. It repeats the wood industry's warning against the use of clear finishes, such as varnishes, on exterior surfaces. Available free from Dept. AA-2, California Redwood Association, 576 Sacramento Street, San Francisco 11, California.

SURFACE TREATMENTS

(406a) New 24-page brochure, "The pleasure of planning your home with Mosaic Tile," depicts unusual uses of tile, presents a variety of home planning ideas; large selection of handsome color photographs. Tiled steps, hallways, tiled fireplaces, kitchens, bathrooms, patios and swimming pools show the versatility and wide color choices as well as low maintenance costs and lifetime advantages of ceramic tile. Brochure may be obtained by writing The Mosaic Tile Company, 131 North Robertson Boulevard, Beverly Hills, California, or calling OLeander 5-7083.

(378a) Celotone Tile: New, incombustible, highly efficient acoustical tile molded from mineral fibres and special binders. Irregular fissures provide travertine marble effect plus high degree sound absorption. Made in several sizes with washable white finish. Manufactured by The Celotex Corporation, 120 So. La Salle St., Chicago 3, Illinois.

(336a) Surface Treatments: Vitrocem glazed cement finishes are being used by more and more architects where a hard, durable impervious surface is essential. Available in unlimited colors and multi-color effects, it is being used for interior and exterior over all types of masonry and plaster surfaces and over asbestos panels for spandrel and window - wall construction. For information and samples, please write to Vitrocem, P.O. Box 421, Azusa, California. EDgewood 4-4383.

(291a) Decorative Natural Stone: For residential and commercial application. Quarried in Palos Verdes Peninsula of Southern California. Palos Verdes Stone offers wide range of natural stone in most popular types, distinctive character, simple beauty with great richness. Soft color tones blend on all types construction to create spacious beauty and appeal. For interior and exterior use. Send for complete color brochure and information. Palos Verdes Stone Dept. Great Lakes Carbon Corporation, 612 South Flower Street, Los Angeles 17, Calif.

(343a) Uni-Dek—complete ceramic tile counter-top in a package: This complete ceramic tile installation offers exclusive appearance. Fewer pieces to set, greater economy because you can set the same area for less cost. Handsome, neat appearance. Only countertop with exclusive Ceratile patterns on back-splash. Fewer grout joints make for easier cleaning. Uni-Dek has one-piece stretchers and angles, all in standard 6" x 6" size. Backsplash available in plain colors or patterns. For colorful new brochure on Ceratile and Uni-Dek, write to Pacific Tile and Porcelain Company, 7716 Olive Street, Paramount, California.

(362a) Ceramic Tile: Brochures, samples and catalogs of Pomona Tile's line of glazed ceramics are available to qualified building professionals. Included are "Tile-Photos," full color, actual size, reproductions of Pomona's Distinguished Designer Series of Sculptured and Decorator Tile. This series features unique designs by many of America's foremost designers including George Nelson, Paul McCobb, Saul Bass and Dong Kingman. Pomona Tile also offers a complete line of glazed floor and wall tile in 42 decorator colors. For further information write: Pomona Tile Manufacturing Co., 621-33 North La Brea Avenue, Los Angeles 36, California.

(320a) Surface Treatments: Laverne Originals offer imaginative and practical wall and ceiling treatments — wallpaper handprints, fabric-supported wall coverings and a new group of 3-dimensional deep-textured vinyl plastics now being introduced. This is the only source in the world for The Marbalia Mural — stock sizes 21 x 9 feet on one bolt or to your measurements. All Laverne products available in custom colors. An individual design service is offered for special products. Write for complete brochure and samples. Laverne, 160 East 57th Street, New York 22, New York. Phone PLaza 9-5545.

(346a) Triangle Tile by Hermosa, 6" equilateral glazed ceramic triangles available in all Hermosa colors, in bright glaze, satin glaze, and Dura-Glaze. Triangle Tile brochure shows unlimited possibilities of this medium for light duty floors, walls, wainscots or entryways in any room. Excellent for bold design effects or abstract murals. Triangle Tile has all durable features of Hermosa glazed ceramic tile and has spacers for accurate setting. Write for complete brochure to Gladding, McBean & Co., 2901 Los Feliz Blvd., Los Angeles 39, Calif.

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(379a) Tapestries: Largest group of handwoven and handhooked tapestries . . . bold colors. Designed by Evelyn Ackerman. Executed in Mexico and other parts of the world. Special designs can be executed. For further information write: Era Industries, 2207 Federal Ave., Los Angeles 64, Calif.

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(352a) Write for new full color folder showing complete line of Trade-Wind ventilators for kitchen, bath and other small rooms. Also includes illustrations of built-in Canolectric can opener and electric wall insert heaters. Trade-Wind, Division of Robbins & Myers, Inc., 7755 Paramount Place, Department AA, Pico-Rivera, Calif.

(233a) Pryne Blo-Fan—Ceiling "Spot" ventilator: Newly available information describes in detail the principles and mechanics of Blo-Fan, an effective combination of the breeze fan and the power of a blower in which best features of both are utilized. Includes many two-color illustrations, helpful, clearly drawn diagrams, specifications and examples of fans of various types and uses. Blo-Fan comes in three sizes for use in parious parts of the house and can also be combined with a recessed light unit, amply illuminating range below. For this full and attractive brochure, write to Pryne & Co., Dept. AA, 140 North Towne Avenue, Pomona, California.

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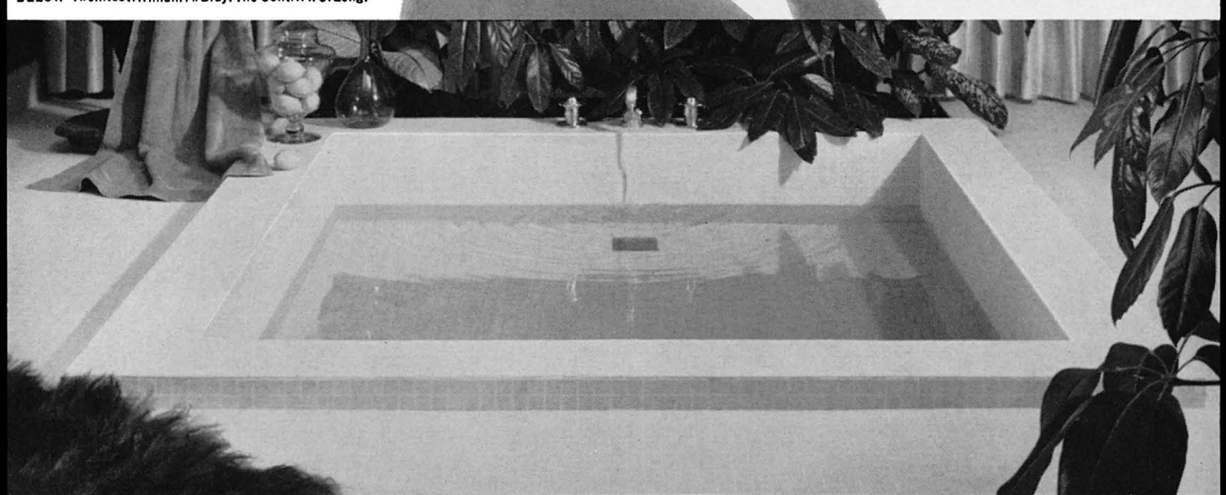

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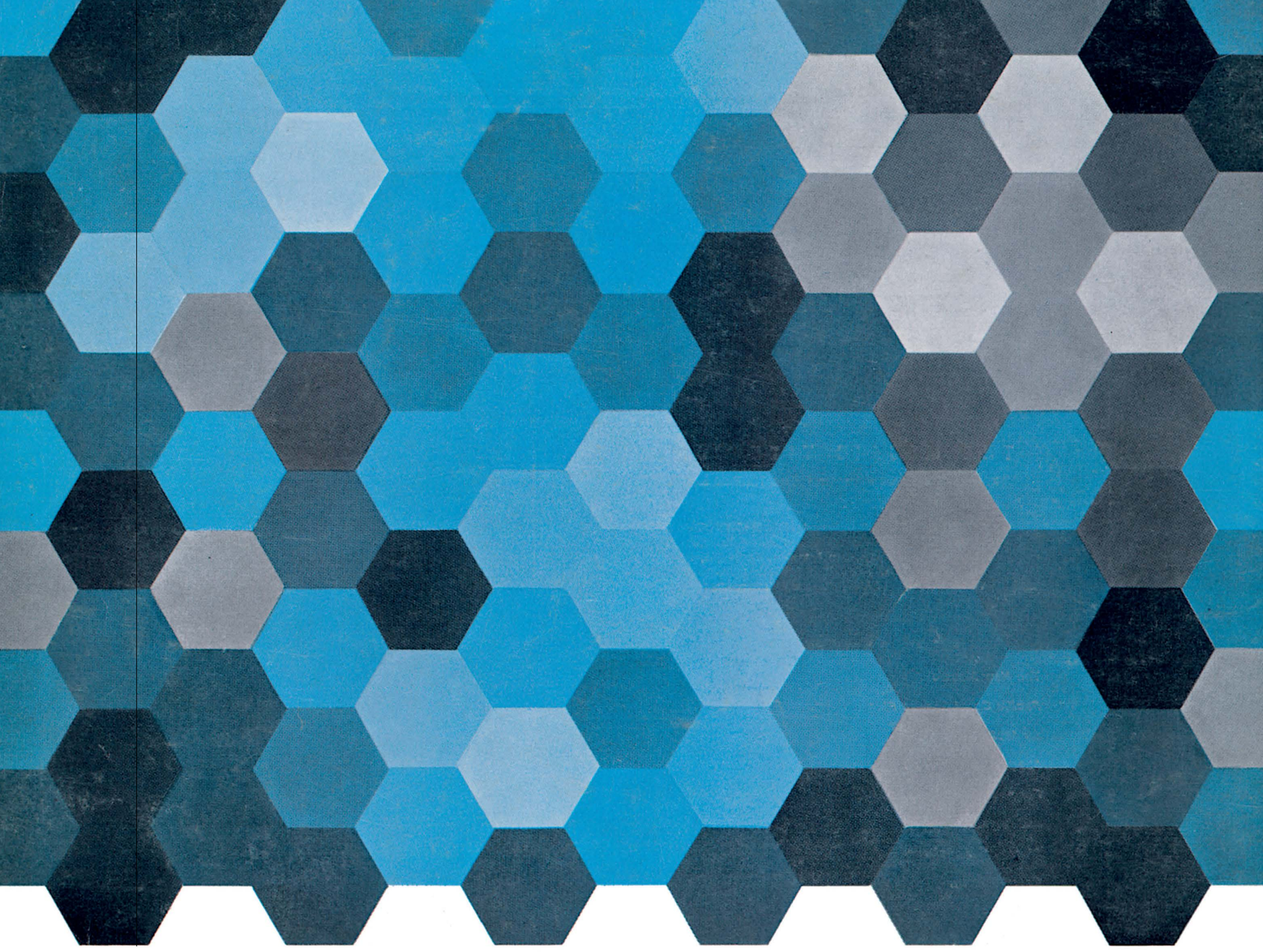

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