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MUSIC

STRAVINSKY'S 76TH & ROBERT CRAFT

When you have been putting on concerts for a few years, if you take the trouble to listen at all, many impresarios do not, you learn to listen to the audience. After a while you can tell by listening just about what the audience is thinking. Your listening to the audience becomes an internal counterpoint around your own response to whatever is being played.

Sometimes the occasion will carry the event. In June 1957, at the Stravinsky 75th birthday concert, Robert Craft directed three major works by Stravinsky, with only one of which the audience could have been acquainted. One was a world premiere, the other an American premiere. Many people expressed their doubts about the music, though not about Stravinsky, each of whose new works, however unacceptable at the moment, is expected to succeed. Very few thought to question how well the three works were being played. As a matter of fact, the performances were fabulous — which does not mean, as some try to believe, that all the notes were played correctly. They were not. The current fading fashion holds that any performer should reproduce the exact notation of the music, as accurately as a phonograph and as repetitively as a phonograph. The previous fashion preferred the correct notes but very decisive adjustments of the dynamics. Listen closely to Toscanini's constant dynamic adjustments against strict time in Beethoven or Cherubini. Hear Rachmaninoff's old story of the Schumann Carneval, lately reissued, and note how many rhythmic deviations he insists on, not as interpretation but musicianship. Both Toscanini and Rachmaninoff reproduced, in the delayed entry after a dotted note, the older tradition of altered rhythm. Rachmaninoff knew nothing about this; he did what his ears told him. Before Rachmaninoff, in the period of the giant pianistic interpreters, the emotional vitalizing of a work was everything, regardless of notation, phrasing, or dynamics. This was the time when performers published their interpretive editions. The performer was supposed to sweep everything before him, notes, audience, and the composer's phrasing. Much can be learned in music from the intuitive error and subsequent arbitrary corrections. A story can be carried back as far as one pleases. The great performer engages with the music and produces at the highest level a distinctive response. Down the line the fashion sets in. Each listener begins by listening in the fashion; if he works through it, he may eventually learn to hear, at the highest level, the distinctive response. Until he has heard that, his comments are mostly prejudice.

This year, for Stravinsky's 76th birthday—a quick look would estimate him ten years younger—Franz Waxman's Los Angeles Music Festival presented the same conductors, and by necessity, for last year's program could not be topped, a somewhat less heroic concert. Robert Craft opened with a set of Schubert German Dances for piano, unpublished according to the program notes until 1931 and then orchestrated by Anton Webern. Next followed Five Pieces for String Orchestra, scored by Webern from his own Five Pieces, opus 5, for string quartet. Centerpiece of the program was, surprisingly, the Clock Symphony by Haydn. After intermission we were to have had "Stravinsky Conducting Stravinsky," but the composer deferring to his host invited Mr. Waxman to conduct The Faun and the Shepherdess, dramatic songs for soprano and orchestra, an early composition that shared honors with Stravinsky's E flat Symphony at the first public concert of his music 51 years ago. The creative leap from the Symphony (1905-07) to The Fire Bird (1909-10) may be compared to the

*To go further: Landowska's authoritative Bach-playing of the last twenty years is as stiffly in the current convention as her Mozart-playing is not. The musicologist who told me her Bach would suffice for him settled no more than his own date. Horowitz will bestow upon the modern standard as inflexibly as Rubinstein; his Clementi is the timeless quintessence of piano-playing. Landowska's piano-playing has always been relaxed subtly she denies herself when prophesying at the harpsichord. Horowitz is one of those for whom music in the interpretive abstract means less than the art of instrumental playing. That is why Busoni, a pianist who saw both ways, valued as highly the piano virtuoso pieces and operatic fantasies by Liszt, Alkan, and St-Saens. If you should be fortunate enough to hear, as I did recently, one of the Bach performances recorded at the clavichord by Arnold Dolmetsch when he was 75, you will probably call the playing mannered, crotchety, eccentric, if not incompetent. Heard as a display of eighteenth-century altered rhythm, the added notes rhythmically grouped around the melodic skeleton, and the whole compounded with a dash of late nineteenth-century virtuosity, the playing opens historic vistas and articulates verifiable rhythmic conventions of another era—if you can listen to it with an open mind, a perceptive imagination, and no prejudice. It is a querulous judgment on our false notions of Bach. For one of these ancient discs, if anyone offered, I would exchange every Bach record I now own.
original flight of the Bell X-1. Stravinsky himself ended the program by conducting his one-act buffa opera Mavra.

Now, for the development, I am going to discuss what I heard, what the audience heard and did not hear, and what a local professor-composer sitting in as critic wrote that he heard.

To introduce first the audience, a packed house of Los Angeles taste, judgment, society, and money: these were the fortunate ones who did get in, while long lines stood at the boxoffice windows waiting in hope of a canceled ticket. I believe the program might have spoken more directly to the outside than to the inside audience. Nearly all who were waiting in the lines were young.

The Schubert Dances did not startle us. My critic speaks of "a pleasing and rather surprisingly conventional orchestration," proving that he and the rustling majority of the inside audience heard alike. Webern has set the small dances for full orchestra, using every instrument, not for volume, nor even for color in the ordinary sense, to produce that continuously subtle variation of register a true pianist dreams of—he knows his instrument cannot do it, but he believes that by touch and pedal he can, and this illusion he conveys in some degree to his audience. That is what Webern was doing with his orchestra, as Schoenberg has done it not more beautifully in transcribing for full orchestra the Brahms G minor Piano Quartet. We have lost this feeling for the piano, that it could be in expert hands be the equivalent of an orchestra. In fact, as contemporary piano composition indicates, we have lost nearly all our feeling for the piano as an instrument. Webern's music or knew what to expect. The man next to me rustling, and tittering between movements. Only a few present had heard Webern's music or knew what to expect. The man next to me came late and said he wished he had come later. Our critic has it.

At the piano he would cause the mechanical marvels to disappear, and instead one would be aware only of the purest relationships of an orchestra. In fact, as contemporary piano composition indicates, we have lost nearly all our feeling for the piano as an instrument. Webern's music or knew what to expect. The man next to me rustling, and tittering between movements. Only a few present had heard Webern's music or knew what to expect. The man next to me came late and said he wished he had come later. Our critic has it.

"Ansermet says that to have seen and heard Webern touch a single note at the piano was to have observed a man in an act of devotion. At the piano he would cause the mechanical marvels to disappear, and instead one would be aware only of the purest relationships of an orchestra. In fact, as contemporary piano composition indicates, we have lost nearly all our feeling for the piano as an instrument. Webern's music or knew what to expect. The man next to me rustling, and tittering between movements. Only a few present had heard Webern's music or knew what to expect. The man next to me came late and said he wished he had come later. Our critic has it.

`Anton Webern, Biography from the Complete Webern (Columbia).`

Now came the testing-point of the evening, and since neither audience nor critic thought of it as a test they failed it miserably. Some years ago, when the young Juilliard Quartet was gaining a reputation by performances of Bartok, Schoenberg, and Berg, the conventional listener and critic, here and in New York, could be relied on to explain that this group was of course incapable of doing justice to the classics. The illusion persists in some circles, though in my experience they are hardly to be equalled, except by the Budapest Quartet, in Haydn, Beethoven, or Schubert. So Robert Craft's ability to deliver music by abstruse contemporary composers, such as Webern, Boulez, or the later Stravinsky, or by abstruse ancients like Gesualdo, Monteverdi, or Machaut is not now seriously questioned, but his way with the routined orchestral classics is expected to be—well, just what one would expect. I mentioned to the man next to me that Bob would be conducting the Eroica Symphony and Verdi's.
Falstaff at the Santa Fe Festival in a couple of weeks: he depleted the thought.

Now the customary way of dealing with a Haydn symphony is to get through it rapidly and make it scintillate. This our conductor did not do. To quote our composer-critic: he "interpreted with watch-like precision... There was some warmth in the performance, but to this reviewer it seemed to emanate more from the collective ingrained musicianship of the personnel of the orchestra than from the conductor's angular gestures." That is a safe, safe commentary; it invites the majority, including the members of the orchestra, to agree with it; it reduces the remarkable to less than the ordinary; but it is not true. Mr. Craft's angular gestures do reflect his melodic style, less relaxed than either Stravinsky or Boulez. The gestures are, however, amazingly communicative. He has been known to carry more than one wavering performer through an entire reading by the explicitness of his beat. When he directs rehearsal you will see the players turning their eyes to him at every moment. His method is as good for Gesualdo or Monteverdi as for Schoenberg. It can shake the dust off the jacket of orchestral routine that encompasses each symphonic classic. It eschews the speed and costume jewelry of a Steinberg or Dorati.

A good many years ago I heard Ernest Ansermet conduct the Surprise Symphony at Hollywood Bowl. The audience, expecting little of Haydn and not hearing the symphony scintillate, gave slight attention. I went back and wrung Ansermet's hand in gratitude for a rare reading. I can state without hesitation, Robert Craft's performance did, had developed every incident to the glory of Haydn and the grandeur of his inventiveness. And Craft held the players together to the minutest detail: each tone sounded precisely, neither more nor less; the cut-offs miraculous, the changes of register, the dynamics, the pianissimi to the instant; nothing slid into or eased out of. I do not mean the musicians uniformly love him; they know he knows what to expect, and they respect themselves for being able to deliver it. I would mention particularly the drum solos, the unexampled spiralling of the fugato in the last movement. In 1928 headlines were made and critics chatted with the public for years afterwards about it, when Toscanini raised the tempo of the Allegretto movement of Beethoven's Seventh Symphony from the customary funeral meander to a true allegretto. If Craft's reputation were now what Toscanini's was then, his deliberate tempi for every movement of this symphony would provoke a similar admiring stir. Here was far more than Scherchen's dragging of the tempo in the Military Symphony to permit a showy entrance, though that entrance is as it should be, like the combined drum stop and paper mute on an early piano. I have never heard, under any conductor, a better performance of a Haydn symphony, nor do I often hear an orchestra better commanded.

Robert Craft, returning to the tradition by way of music for which no tradition exists, has given himself a unique training, enabling him to restudy each score of the classical tradition very nearly mint-fresh; having the capacity to do so, he can be expected to continue reopening these scores for his listeners almost as if they did not know them. At his age, and at the beginning of a reputation, to do so much will be considered an offence. A conductor like a football coach must be at the top of his form several years before a public belatedly discovers him. Therefore our professor-critic, whose gifts as a composer I have elsewhere questioned, could be expected to credit the players alone for what they alone without this conductor could not manage. He has heard and reported nothing of what actually happened during this performance. By the accumulating evidence, his elementary ability to hear music, except in conformance with his prejudices, may be seriously questioned.

He and I were recently at a program played by members of the faculty of the Long Beach City College in honor of Gerald Strang, who was departing to become senior professor of the Art and Music faculty. 

*Try for examples Gesualdo Madrigals and Sacred Music and Schoenberg: Variations for Orchestra; Serenade, etc., both directed by Craft (Columbia records).
THE EUROPEAN ART PRESS ON AMERICAN ART

It is unfortunate but understandable that the European "third page" has never found a parallel in the United States. The third-page concept, which permits serious and often lengthy discussions of cultural topics, is alien to American journalistic precedent. Growing from the utilitarian tradition, the American newspaper is dedicated to the straight news approach: facts and more facts in minute-to-minute coverage. This naturally eliminates general discussion and largely rules out opinion frankly presented as opinion. It is rare to find a superior intelligence using the newspaper column as a platform in this country, but it is not uncommon in Europe.

The pragmatic basis for our newspapers has its virtues: it has, for example, developed a skillful genre of journalism. It has trained us to expect meticulous reportage. But it has also eliminated the critical appraisal a healthy culture must have. (I can remember meeting a man from Florida aboard a ship going to Europe. Boasting of the superior quality of his prosperous home state, he said, "Why, we have a newspaper as big as The New York Times on Sunday" and added with pride, "and it's almost all ads!")

In Europe, the newspapers are much thinner, sometimes as few as six or eight pages. But often, a whole page is devoted to the arts, and, when the occasion warrants, sometimes three or four columns are given to visual art alone. Recently, a number of those precious columns were given to discussions of three American circulating shows: the Guggenheim's selection of 75 paintings, the "New American Painting" and Jackson Pollock retrospective circulated by the International Council of the Museum of Modern Art.

Looking through a number of serious articles from the European papers, I was struck with the different approach of the critics—different from our own journalistic criticism guided by the "factual" or descriptive journalistic ideal.

European critics are synthesists. Given the fact of an exhibition, they try to build around it a series of hypotheses concerning the overall cultural image. In a lesser intelligence, this technique can be tiresome, but utilized by a subtle mind, the generalizing technique can be more explicit than our own enumerative methods.

Actually, the European critic appears to be working directly in the Taine, or better yet, in the St. Beuve tradition. The artist is a product of his experience, and his work a reliable index to that experience. "The study of literature," St. Beuve insisted, "leads naturally to a psychological study." (L'étude littéraire mène ainsi tout naturellement à l'étude morale.) Most of the critics confronted with the Pollock show, for instance, attempted to relate the fact of Pollock to the cultural milieu in the United States. More important, they made an effort to understand the individual temperament and the circumstances within which it operated.

Naturally, many resentments creep into European appraisals. One of the most bitter clippings I came across was by a well-known French art critic, Claude Roger-Marx. M. Roger-Marx was incensed by Sweeney's selection of Guggenheim paintings which, he spitefully notes, promenades in Europe thanks to the American dollars behind it. The only value, in his eyes, is that "in France itself—and for the health of all good painting—eyes will be opened at last."

Other critics in Switzerland, Germany and France saw the Guggenheim's selection as a symbol of American progressive attitudes in painting. There were many who noted with astonishment that the American ideal was "oriented to abstraction." A French critic wrote: "We know that America is without timidity before contemporary art . . . In American paintings enter into circulation like refrigerators or automobiles of the most recent model . . . the new world perspective is oriented in a deliberate way toward what one must call abstraction."

Not surprisingly, it was the Pollock show which drew the strongest discussions, particularly in Italy. Pollock was seen from every aspect as representative of the nuclear age; as myth-maker; as diffusion of American adventurousness; as purveyor of materialistic values and as purveyor of spiritualistic values. Those who see in Pollock's work a key to American character include the august Lionello Venturi, who wrote: "there is no doubt that the art of Pollock is American: it has its technical perfection and a moral fervor."

One of the more amusing polemics occurred when a prominent critic of the avant-garde in Paris, who had not been to the United States, wrote: "in Europe, the Pollock show is a little like a cross between a Piedmontese and a Bolognese painting exhibition."

(Continued on Page 29)
Happy harmony

of home and setting is achieved
gracefully and naturally when the
home is faced with California redwood.
Appropriateness to its surroundings—
rustic or urban, casual or formal—
is one more reason today's residential
architect specifies redwood. His choice—
Certified Kiln Dried Redwood, manufactured
by the members of the California Redwood
Association and identified by the
trademark CRA.
An historian of the twenty-first century, looking back past our own age to the beginnings of human civilization, will be conscious of four great turning points which mark the end of one era and the dawn of a new and totally different mode of life. Two of these events are lost, probably forever, in the primeval night before history began. The invention of agriculture led to the founding of settled communities and gave man the leisure and social intercourse without which progress is impossible. The taming of fire made him virtually independent of climate and, most important of all, led to the working of metals and so set him upon the road of technological development—that road which was to lead, centuries later, to the steam engine, the Industrial Revolution, and the age of steel and petrol and surface transportation through which we are now passing.

The third revolution began, as all the world knows, in a squash-court in Chicago on December 2, 1942, when the first self-sustaining nuclear reaction was started by man. We are still too close to that cataclysmic event to see it in its true perspective, but we know that it will change our world, for better or for worse, almost beyond recognition. And we know, too, that it is linked with the fourth and in some ways the greatest change of all—the crossing of space and the exploration of the other planets.

The first spaceships capable of reaching another world still lie ahead, but the giant rocket is already with us and will soon be carrying men to the limits of the atmosphere and beyond. Nor will it be long before a guided missile reaches the moon and blazes the trail along which men will travel a generation later.

An attempt to construct a philosophy of astronautics is therefore far from premature: it is, if anything, a little belated. In the last few years we have seen the political and ethical chaos produced when a great technical development comes into a world which is unprepared for it.

If our civilization is to have a future, then we must see that it does not repeat its earlier mistakes. I do not suggest—as some have done—that lawyers need start worrying immediately about the ownership of the moon, but the ownership of space will soon be a matter of acute practical importance. If country A fires experimental rockets across its neighbor B, what does B do? The air above B is admittedly its own property, but how far does that jurisdiction extend? There will have to be some equivalent of the three-mile limit; otherwise in the course of a day every country will, by virtue of the earth’s rotation, lay claim to a large portion of the universe!

The ideals of astronautics are new, but the motives and impulses underlying them are as old as the human race. There was a time—not long ago—when those who advocated interplanetary travel were always being asked, “How?” Even before the war that question could be answered in general terms, but there had been no large-scale engineering achievement to support the claims put forward. It is amusing to recall that in those days—which now seem so remote—there were many people who refused to believe that a rocket could work in a vacuum or would ever be able to rise more than a few miles from the earth.

Today, the power of the rocket has been demonstrated, only too thoroughly.

The urge to explore, to discover, to “follow knowledge like a sinking star,” is a primary human impulse which needs, and can receive no further justification than its own existence. Long before the sun’s radiation has shown any measurable increase, man will have explored all the solar system and, like a cautious bather testing the temperature of the sea, will be making breathless little forays into the abyss which separates him from the stars.

Atomic power is hardly likely to advance the conquest of space by more than 10 years, but it may make it practical almost from the beginning, which otherwise would certainly not have been the case. What is equally important, it will mean that the whole solar system, and not merely the moon, will be immediately accessible to man. It requires little more power to reach the planets than it does to go to the moon, but the most economical voyages involve months or even years of free “coasting” along orbits curving halfway round the sun. With atomic power these journeys could be cut to a fraction of the time.

The last quarter of this century will be an age of exploration such as man has never before known. By the year 2,000 most of the major bodies in the solar system will probably have been reached, but it will take centuries to examine them all in any detail. Those who seem to
HENRY MOORE, SCULPTOR IN THE ENGLISH TRADITION

BY JULES LANGSNER

The history of art in England consisted, until this generation, almost wholly of the accomplishments of painters. Where were the sculptors endowed with gifts equal to those of William Blake, Turner, Constable? If, by chance, a sculptor of creative stature appeared on the English scene—a Gaudier-Brzeska or a Jacob Epstein—he turned out to be a settler with roots in other traditions. Some obscure peculiarity of temperament evidently excluded the English from expressing themselves with the tangible substance of sculpture.

The answer to the question of why England failed to produce sculptors of the first magnitude ran something to the effect the English were essentially a "word people." That is to say, the imaginative cast of the English mind was most congenial with verbal imagery. Verbal metaphors, this explanation held, have a closer affinity with pictures than with sculpture, and therefore one found, from time to time, the works of pictorial poets of genius cropping out of the soil of English culture. Sculpture was another matter. It entailed a different kind of sensibility—that of a susceptibility to the sensuousness of touch and shape inherent in sculpture but not, by any means, a requirement of painting.

This explanation seemed to hold water until our time, when, to the astonishment of many observers, including the English themselves, sculptors of the caliber of Henry Moore, Barbara Hepworth, and, more recently, Armitage, Butler, Chadwick, Paolozzi, Turnbull, advanced England to the front ranks of the modern movement in sculpture. Either the "word mentality" of the English is changing into something other than it had been, or else another explanation for the former paucity and present abundance of creative vigor of sculpture in England will have to be found.

This may appear a roundabout way to approach the impressive, often monumental, organic forms of Henry Moore's recent work. Close examination of the Upright Motives, as the artist designates these gargantuan skeletal articulations, however, reveals the ineradicable Englishness of Henry Moore. That Englishness resides in his free and easy intimacy with the visible manifestations of nature. Moore is, indeed, a latter-day English romantic, a spiritual descendant of Wordsworth and Constable, taking into account, of course, the fact that he responds to nature as a sculptor of the twentieth century.

Moore's deep sympathy with the natural world is seen in the way the extrusions and hollows of the recent Upright Motives, as in many of the earlier works as well, suggest the shapes of water-worn pebbles, bones, rolling hills and valleys. A curious elusiveness pervades these works. The viewer is not quite sure whether they are formed by the human hand or they are, perhaps, some expression of nature seeking to attain a state of sculptural consciousness.

It is spiritual kinship with nature that distinguishes the organic forms of Henry Moore from the smooth, bulbous concretions of Hans Arp or the pure condensation of shapes into archetypes found in the sculpture of Brancusi. The sculptures of Arp and Brancusi are most at home in a man-made environment, those of Moore in a natural setting. It is the difference, I suppose, between the artist whose perceptions repose within nature and the artist who observes nature from the outside. The distinction is not intended to be invidious. Both kinds of artists—the one who creates extensions of nature, as does Moore, and the artist who extracts from nature an essence hidden from view, as do Arp and Brancusi, enlarge the range of our esthetic experience.

This augmentation of organic nature is due, in some measure, to Moore's adherence to what might be called the "principle of irregularity" of biological forms. The biological side of nature may appear, in certain instances, bilateral, perfectly symmetrical. Closer scrutiny, however, invariably discloses irregularities of detail, one half of the body slightly different than the other, the veining of a leaf varying from side to side, and so forth. These irregularities result from the processes of cellular growth, and from the pressures and internal tensions to which biological forms are subject.

(Continued on Page 28)
The plans are for this small house to be situated in Chicago, Illinois on the northwest corner of a quiet residential area. This allows the private bedroom court to have north orientation, a factor that was influenced by the location of the studio. In addition, the living areas, both inside and out have south orientation, screened from the parking space and alley. Main access to the house is from the longitudinal street through the eight-foot high masonry wall into a 7'-0" x 21'-0" entry looking immediately out to a reflecting pool. A storage and plumbing core screens the bedrooms from the pool. The living-dining area is 35'-0" x 21'-0" with access to the living court and in view of the reflecting pool. It is divided by a circular steel stair to the lower level children's play room. The kitchen is the control area having direct access to the dining, service door, and through circulation for outdoor entertaining to either court. It also permits the mistress of the house a direct view to the entry.

The house proper is of steel construction. There are 9 bays 7'-0" x 35'-0" with the spanning
elements overhanging the supports 3'-6" in either direction. Each bay (see roof framing plan) is composed of a shop-welded panel of 12" channels supporting the decking above. These panels are in turn supported by 8" steel cruciform section, the longitudinal webs of which are cut to receive the channels. A rigid frame is thus achieved. The masonry court walls are structurally free from the loads of the house. Glass walls are of shop-welded bar stock construction. The paving (inside and out) is granite in a grid as shown on enclosure. The bedroom plumbing and storage core is paneled with Brazilian rosewood, sections of which act as concealed doors to the toilets and master bedroom.

The enclosed ground floor area consists of 1764 sq. ft. with a basement area of 735 sq. ft. The bedroom court is 735 sq. ft. and the living court 1225 sq. ft. Economy is dictated by the simplicity of construction, combined with many of the structural elements fabricated in the shop, reducing field work to a minimum.

BY STANLEY TIGERMAN, ARCHITECT
CASE STUDY HOUSE 21

BY PIERRE KOENIG, ARCHITECT

This is a progress report on the structure of Case Study House 21. It is anticipated that this house will be completed within the next three months when it will be open for public inspection. The steel plan, with the relative dimensions and accompanying photographs illustrate graphically the concept of the light steel frame as it appears before decking is installed.

Steel, as a material, has been fully utilized. The 8" I beams are 22 feet long and are spaced 10 feet apart for the steel roof decking. Rigid connections, left exposed, are welded and ground smooth. The entire framework as well as the roof deck is welded and left exposed. Each steel frame, actually a square, 40 feet long and 9 feet high, including beam, floor channel and three columns, are shop fabricated and delivered to the job site in one piece. With shop-fabricated frames the steel sliding doors can be welded in place without tolerances, as shown on the detail.

The 4"-wide flange columns are turned to receive the vertical steel wall decking which is welded top and bottom. To take advantage of this clear span on the interior, two layers of gypsum board are used with only one intermediate horizontal support. The first layer is nailed vertically, the second layer is glued on horizontally. Only two pieces of board per bay are needed for this second bay. Space for insulation and wiring is thus provided. As the wall deck is put in place tension is developed in the deck which presses against the column flange along its entire length creating a constant weather tight connection. As a further precaution caulking is applied in front of the joint. The top of the decking fits in back of the fascia, the bottom edge extends 4" below floor level and is cast into the concrete.

The photographs show clearly the bottom finish channel that encompasses the house continuously and extends beyond to form the patios. A new Davidson paving brick will be set within these steel frames. The steel channel also serves as a finish member for the bottom of the walls and a stiffener for the rigid frame.

The preliminary sketches of this house were shown and explained in ARTS & ARCHITECTURE, May 1958. Subsequent progress showings will continue up to and including the completion of the project.
Typical Interior Section

- Steel Plan
- Caulking
- Steel Studs
- Two Layers Kaiser Gypsum Board
- Metal Edge
- Bellevue Sliding Door

Photographs by Julius Shulman
THREE PROJECTS BY MYRON GOLDSMITH AND JAMES FERRIS

Two of the three projects illustrated were prepared in the office of Skidmore, Owings and Merrill. The bridge was commissioned as graphic material by the Atlas Cement Company.

STADIUM

Collaborator: Professor T. Y. Lin

Design for a sports stadium to seat 12,000 people under cover. Constructed of prestressed precast concrete, the roof structure, 400 ft. in diameter, is made up of a concrete compression ring supporting precast prestressed units in catenary. These units are 65 ft. long and are individually prestressed before erection. The roof is then prestressed as a whole after erection. The framing of the external walls, 80 ft. high, supports the roof and is self-bracing. Its members are subject only to direct compression or tension stresses.
**BRIDGE**

Collaborator: Professor T. Y. Lin

This is a design to carry a four-lane divided highway over a deep rocky gorge. The division between the two directions of traffic is maintained over the gorge resulting in two separate bridges.

Structural advantage is obtained by wedging the bridges between the rock walls.

Economy of formwork, one of the most important factors in concrete bridges would be achieved by constructing the forms for one bridge then moving them by means of rollers to the other bridge site.

The bridge has a length of 600 feet, but the type is also economical for lengths of about 1000 feet.

There are rockers at each abutment support and the effects of temperature changes and creep are a minimum.

The bridge is of prestressed concrete and the shape of the deck structure varies with the forces to be resisted. The struts are curved for rigidity and hinged at each end.

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**OFFICE BUILDING**

Collaborator: George Storz

It was required to design an office building with no internal columns in an area liable to earthquake. The solution consists of steel columns and beam forming 35 x 70 bays. All earthquake and wind loads are resisted by external diagonal bracing.
Statement of Problem: To provide design and engineering for a completely new industrial plant, with warehouses, and offices. To be built to expansion plans up to 1962 with additional expansion potential engineered into plant and planned for on the site. Plant designed to bring all functions of manufacture and assembly together from previously decentralized locations.

The Site: 69 acres, 700,000 square feet, room for additions of two similar factory buildings for a total of more than a million square feet. Essential facilities of railroad spurs, major east-west arteries, major freeways, power station, main trunk lines for natural gas, sewer and water, and flood control wash for storm drainage were all present.

Economic considerations and functional flexibility were major criteria. Choice of materials dictated by use and character of the structure, color accented in coordination with the location of the site.

Tilt-up panels on Facilities and Factory buildings were handled as large single plane units with expression of the assembly method made by an emphasized expansion joint.

Three buildings are placed as interlinked units. The office building has a north-south orientation fronted by a reception garden and visitors’ parking area. Facilities building contains cafeteria, experimental laboratories and air conditioning equipment and provides link and services between office and factory structures.

Colors are grey, black, red common brick, blue-green porcelain enamel and window glass, yellow door and fence accents. Steel frame structure, light steel trusses, steel decking.

A: The long expanse of tilt-up concrete panels at the Day and Night plant are relieved of monotony and given human scale by the placing of windows in every third alternate panel. Tests proved this was better for morale and lighting than high-level continuous fenestration. Windows of blue-green glass for sun control are balanced over red common brickwork and accented by yellow doors. Emphasized black expansion joints give a focal point to each single-plane panel. Drainage between the factory building and the facilities building is slanted towards landscaped islands which break the long lines delineated by the site layout.

B: Landscape architect Robert Herrick Carter employed the oriental theme of stream stones to give a different dimension to this factory structure. Off-setting the straight lines and efficiency of materials employed, the patterns are laid in careful random highlighted with plantings integrated with the redwood curvilinear bridge over the well and its equipment. Straight fences complement the straight panels of the window wall construction and contrast with the simple asymmetry of the garden.

C: A detail of the office building corner shows the use of sun control louvers to accent and contrast with vertical lines of the common-brick facing. Curtain-wall construction employs blue-green porcelain enamel panels and window glass with the sun screens of light weight natural aluminum. Mounted to the window frames they achieve a new economy of construction as well as becoming a part of the building’s function and design.
Buckminster Fuller's domes of aluminum and plastic are becoming increasingly familiar throughout the world for the spanning of great areas. However, the same geodesic principles are equally applicable to less ambitious projects.

These pictures show the erection of a 25' Douglas fir plywood dome at the last San Francisco Art Festival. The dome was erected in only two hours by a crew of three men. The 5 x 8 sheets of 1/4" plywood were sealed with neoprene strips and fastened by special screws. The layout and location of predrilled holes are exactly determined by patterns supplied by Fuller and based on his geometry.

The low cost and ease of construction make it ideal for vacation houses, farm structures, transient workers' homes and the like. They can be also used in multiples for a flexible, expandable residence.

The prototype on bedroom vacation house designed for the Art Festival has a magnesite and mosaic fireplace by Raymond Rice, wire sculpture by Ruth Asawa, and furniture by Espenet Fine Woods.

**PLYDOME VACATION HOUSE BY MARQUIS AND STOLLER**

FABRICATOR: DAN GRAE

PHOTOGRAPHS BY JON PETER WINKELSTEIN
SEASIDE HOUSE BY JOSEPH N. SMITH, ARCHITECT

This house, situated on a small knoll, is to serve as a model house for a soon-to-be-marketed tract of land on Key Largo. The property will be made available to persons desiring either a winter home or permanent residence with fishing and boating facilities. As with this particular site, most of the lots will be on the water.

Since this house is to be built before dynamiting for waterways is completed, the structure is conceived as being stable in itself, having pin-type connection to the ground. Only dry finishes will be used, eliminating the possibility of crazed or cracked surfaces caused by structural movement.

By lifting the building slightly above the crown of the knoll, car space and covered terrace is provided below and the upper decks are elevated sufficiently to afford a view of both bay and ocean. The combination of these wide decks and rooms opening only to the south give the occupant ample viewing space for the dramatically beautiful sunsets without exposing the interiors to their brutal heat.
BANK BY A. QUINCY JONES AND FREDERICK E. EMMONS, ARCHITECTS

PHOTOGRAPHS BY LEE ANGLE
This building is for a long-established bank in the city of Snyder, Texas. The community had expanded in the past few years by virtue of nearby oil-field developments, and in visualizing the new building it was particularly desirable to make the banking facilities more readily accessible to automobile drivers.

The site is on the corner of the central square facing on two streets and sloping slightly to the north. Two entrances of equal importance are provided at the ends of an 'L' shaped plan, one for pedestrians approaching from the business establishments on the square and the other for those entering from the parking lot.

In the center of the 'L' two kiosks with provisions for deposits and withdrawals are located to allow two lines of cars to either drive through and out or to continue into the parking lot. The kiosks are entered by means of a tunnel below the driveway which connects to the basement.

The main banking lobby surrounds the motor deposit area and is integrated by means of interpenetrating building materials and planting. The entire panels with Vitrocem finish. Steel beams and columns support a wood roof perforated steel beams to provide shade and relief from the hot western sun.

Bookkeeping space, vaults and utilities are concentrated on the blank wall against the adjoining building, while the desk area for the bank officials opens to the side street. A large basement provides space for employee dining, lounge, community room and toilet facilities, in addition to storage and mechanical equipment.

The building is constructed of Acme brick and Cemesto exterior wall panels with Vitrocem finish. Steel beams and columns support a wood roof framing. Interior partitions are faced with plastics, plywood, and plaster. Vinyl tile floors are provided in the public rooms.
The house was designed for an extremely steep hillside, with large old eucalyptus trees and a fine view of the city below. The owner, a psychiatrist practicing at a nearby university, desired certain unusual requirements in the house layout. As the owner lives alone, a completely open plan was recommended. The only spaces that were to be completely private were the baths, a guest bedroom and an office for part-time therapy at home. Since the site slopes downhill from the street it was felt that by planning a structure that would contact the ground at as few points as possible, and by locating those points near to the underside of the structure, considerable savings in labor and materials could be effected. The site conditions and plan requirements afforded an opportunity to create a structure which would not only allow for a horizontal, but also a vertical quality of visual space.

Entrance is by means of a bridge from the carport at street level, over a small garden below and into the living area. At this level are located the living, dining and cooking spaces. The living space is defined from the dining-cooking area by means of a low ceiling and a storage unit containing television and high-fidelity equipment. From the dining area a two-story wall of glass opens onto a small deck for outdoor dining. The cooking area is a small utilitarian space, divided from the entry by a low storage unit. The floor above contains the master bedroom and bath. In order to preserve the unity of spatial volume, the bedroom is merely a suspended mezzanine open to the living spaces below. Thus the two upper floors of the house are, in effect, one large room, divided by non-bearing storage units and changes of levels. The south wall of this space is all glass, thus affording a view from any point in the area. The roof has been made accessible by a flight of stairs and is designed to be used as an outdoor sun garden, taking full advantage of the view in all directions. The level below the living-dining area contains a guest bedroom, bath and office with a small waiting area. The office has been designed with a separate means of entrance and exit in order to facilitate privacy for visiting patients.

The structure is set upon a base of reinforced concrete block walls and light steel columns. Vertical loads are carried by a series of 3" x 12" mullions on a four-foot module. The floors are of wood, flush framed. The exterior is sheathed with vertical California redwood siding and the interiors are also finished with redwood siding, plaster and mahogany paneling. All appliances are electric built-ins. In order to avoid problems of ductwork, the heating system is composed of radiant electric cables embedded in the plaster ceilings. Colors are to be wheat-colored pigmented stain on the redwood siding, charcoal brown mullions, off-white plaster with accents of primary colors.

Project Designer: Lewis Ingleson
The site is a hillside with a view of the city. It is a corner lot, with access to the ground floor from one street and to the main floor from another. The house is essentially a luxurious apartment for the owner and his son. There is a maid’s room, utility rooms and recreation porch on the ground floor.

Variety of finishes is kept to a minimum, with drywall walls and ceilings, no natural woods, ceramic tile walls in baths, carpet and vinyl floors. Elegance will be accomplished by plain areas with restrained colors and carefully selected furnishings.

Due to extreme fill conditions on the site, the house is planned with as few supports as possible. Steel columns on caissons and steel beams support the main floor, and wood columns and beams support the roof. Otherwise the construction is wood frame with exterior plaster finish and precast concrete units for foundation and garden walls.
The sarape is the ubiquitous, colorful woolen garment worn by most men in country districts of Mexico, and is usually merely a rectangular blanket with a hole in the middle for the head. The work of the Barons is infinitely more sophisticated. Designs for these tapestries originate with the artists and are then given to weavers in many little villages in the different states of Mexico. The sketch design, transferred to a full-size cardboard or strong paper, is delivered to one of the many gifted weavers who completes the project.
Although the architecture of Greece is considered ageless, contemporary architects rarely copy Greek designs or building methods.

However, the classic qualities of enduring style and sound construction are desirable in the buildings of any era and are easily attainable by designing exterior or interior concrete walls with CARDUCO Structural Wall Units.

CARDCUCO builds Great Walls... design with CARDCUCO

The following are specifications developed by the architect for Case Study House No. 21 and represent a selection of products on the basis of quality and general usefulness that have been chosen as being best suited to the purposes of the project and are, within the meaning of the Case Study House Program, “Merit Specified.” As the house progresses, other specifications will be noted.

Steel Deck—Stran-Steel, a division of National Steel Corporation, Detroit, Michigan
Steel Studs—Stran-Steel, a division of National Steel Corporation, Detroit, Michigan
Sliding Doors—Bellevue Metal Products, 1514 East First Street, Los Angeles 33, California
Wall Board—Kaiser Gypsum Company, Inc., 1401 Water Street, Long Beach, California
Pool Drains—Josam Pacific Company, 1238 South Boyle, Los Angeles, California
Kitchen Equipment—General Electric Company, 2957 East 46th Street, Los Angeles, California
Interior Walls—Vaughan Interior Walls, Inc., 11681 San Vicente Boulevard, Los Angeles 49, California
Steel Framework—Lee and Daniel Steel Fabricators, 1461 East Walnut Street, Pasadena 4, California

HENRY MOORE—LANGSNER
(Continued from Page 10)

The Moore Upright Motives demonstrate this principle of irregularity. They suggest organic forms undergoing transformation, and one half expects, on subsequent viewing, to find they have changed a swelling here, an indentation there, so imbued are they with the sap of organic life. It is this profound imaginative sympathy with nature that places Moore in the tradition of Wordsworth and Constable, Shelley and Turner, and I might add, his keen penetration of the workings of nature places him in the tradition of the English naturalists, of the Gilbert White who wrote The Natural History of Selborne and the Charles Darvwin who wrote A Naturalist’s Voyage Round the World.

NOTES IN PASSING
(Continued from Page 9)

think that the moon is the goal of interplanetary travel should remember that the solar system contains eight other planets, at least 30 moons, and some thousands of asteroids. The total area of the major bodies is about 250 times that of earth, though the four giant planets probably do not possess stable surfaces on which landings could be made. Nevertheless, that still leaves an area 10 times as great as all the land surface of the earth.

This, then, is the future which lies before us, if our civilization survives the diseases of its childhood. It is a future which some may find terrifying, as no doubt our ancestors found the hostile emptiness of the great oceans. But the men who built our world crossed those oceans and overcame those fears. If we fail before the same test, our race will have begun its slide into decadence. Remember, too, that when the great explorers of the past set sail into the unknown they said goodbye for years to their homes and everything they knew. Our children will face no such loneliness. When they are among the outermost planets, when the earth is lost in the glare of the sun and the sun itself is no more than the brightest of the stars, they will still be able to hear its voice and to send their own words in a few hours back to the world of men.

Let us now consider the effects which interplanetary travel must have upon human institutions and ideas. The most obvious and direct result of the crossing of space will be a revolution in almost all branches of science. I shall not attempt to list more than a few of the discoveries we may make when we can set up research stations and observatories upon the other planets. One can never predict the outcome of any scientific investigation, and the greatest discoveries—the ones which will most influence human life—may come from sciences as yet unborn.

Astronomy and physics will, of course, be the fields of knowledge most immediately affected. In both these sciences there are whole areas where research has come to a dead end, or has never even started, because our terrestrial environment makes it impossible.

The atmosphere, which on a clear night looks so transparent,
is in reality a colored filter blocking all rays beyond the ultra-violet. Even in the visible spectrum the light that finally struggles through the shifting strata above our heads is so distorted that the images it carries dance and tremble in the field of the telescope.

An observatory on the moon, working with quite small instruments, would be many times as effective as one on earth. For greater magnifications could be employed, and far longer exposures used. In addition, the low gravity would make relatively simple the building of larger telescopes than have ever been constructed on this planet.

In physics and chemistry, access to vacua of unlimited extent will open up quite new fields of investigation. The electronic scientist may well look forward to the day when he can build radio tubes a kilometer long, if he wishes, merely by setting up his electrodes in the open! We may learn more about gravity when we can escape partially or wholly from its influence.

The prospect of building stations in space, circling the earth like tiny moons in orbits beyond the atmosphere, is one that has a peculiar fascination. Meteorological observatories in space could see at a glance the weather over half the planet, could watch in detail the movement of storms and rain areas. The wonder photographs of the earth from V-2 rockets give a hint of what may be done in this direction. Indeed, really accurate forecasting may have to wait until meteorologists get out into space.

However, the first direct results of astronautics may be less important than its indirect consequences. This has proved true in the past of many great scientific achievements. Copernican astronomy, Darwin’s theory of evolution, Freudian psychology—these had few immediate practical results, but their effect on human thought was tremendous.

We may expect the same of astronautics. With the expansion of the world’s mental horizons may come one of the greatest outbursts of creative activity ever known. The parallel with the Renaissance, with its great flowering of the arts and sciences, is very suggestive. "In human records," wrote the anthropologist J. D. Unwin, "there is no trace of any display of productive energy which has not been preceded by a display of expansive energy. Although the two kinds of energy must be carefully distinguished, in the past they have been . . . united in the sense that one has developed out of the other." Unwin continues with this quotation from Sir James Frazer: "Intellectual progress, which reveals itself in the growth of art and science . . . receives an immense impetus from conquest and empire." Interplanetary travel is now the only form of "conquest and empire" compatible with civilization. Without it, the human mind, compelled to circle forever in its planetary goldfish bowl, must eventually stagnate.

We all know the narrow, limited type of mind which is interested in nothing beyond its town or village, and bases its judgments on parochial standards. We are slowly—perhaps too slowly—evolving from that mentality toward a world outlook. Few things will do more to accelerate that evolution than the conquest of space. It is not easy to see how the more extreme forms of nationalism can long survive once men see the earth in its true perspective as a single small globe among the stars.

The solar system is rather a large place, though whether it will be large enough for a quartz-sammming mind as Homo sapiens remains to be seen. But it is surely reasonable to hope that the crossing of space will have a considerable effect in reducing the psychological pressures and tensions of our present world. Much depends, of course, on the habitability of the other planets. It is not likely that very large populations will, at least for many centuries, be able to subsist outside the earth. There may be no worlds in the solar system upon which men can live without mechanical aids, and some of the greatest achievements of future engineering will be concerned with shaping hostile environments to human needs.

We must not, however, commit the too common mistake of equating mere physical expansion, or even increasing scientific knowledge, with "progress"—however that may be defined. Only little minds are impressed by sheer size and number. There would be no virtue in possessing the universe if it brought neither wisdom nor happiness. Yet possess it we must, at least in spirit, if we are ever to answer the questions that men have asked in vain since history began.

Every thoughtful man has asked himself: is our race the only intelligent in the universe, or are there other, perhaps far higher, forms of life elsewhere? There can be few questions more important than this, for on its outcome may depend all philosophy—yes, and all religion, too.

—ARTHUR C. CLARKE
above color and varnish, with spots and marks in paroxysmic excitation yet placed in those delicate harmonies, those swarms of filaments, of nervation, atmospheres and subtle lights, in that final control of material and imagination which is really surprising.

Anda Loretano Trucchi wrote: "Pollock included the British press. The exhibition, which with which British eyes have adjusted to American painting, is phenomenal. Since British weeklies are more accessible here than other foreign papers, I will not quote any of the reviews but instead urge readers to follow columns in "The Listener," "The Observer," and lately, even "Arts News and Review" all of which have had lively discussions of American painting regularly for the past months. Incidentally, the British attitude of welcome to American concepts contrasts with the less friendly attitudes on the continent. Recently, I heard of a letter from a professor at Kingston College who was trying to arrange for graduate studies for English painters in the United States. The Mediterranean, which used to be the place for a young painter to round out his education can no longer be a sufficiently active stimulus for young artists, the professor feels. Since the great majority now look to the United States as the major source of painting ideas, he says, they should have the direct experience of the United States just as the 19th-century painter was permitted the direct experience of the Mediterranean.

MUSIC

(Continued from Page 6)

faculty at the new San Fernando State College. The Quartet, opus 22, by Webern, for clarinet, tenor saxophone, violin, and piano, was played surprisingly well, pardoning one error at the end; after the intermission, at the request of some hardy listeners and to the dismay of others less hardy, it was repeated. During the intermission our composer-critic complained that the hall was too resonant; he had been able to hear none of the rests. The hall was designed and supervised in all acoustical details by Dr. Strang, whose gifts in this line, though he is self-trained in it, have become so evident that he has been retained by his new college to supervise the acoustical design of its music building, an auditorium, and a theatre, some two-and-a-half million dollars worth. As it happens, I had seen the acoustical test-curves of the City College auditorium, which our critic-professor called too resonant, and I knew that the hall is acoustically as near perfect as human ingenuity can devise. I was aware also how thoroughly this auditorium and the music building at Long Beach City College, built earlier under Dr. Strang's supervision, have been admired by visiting experts and that copies of the blueprints of the two buildings have been carried to many parts of the world by architects and musicians who have visited it. Yet to make sure of my conviction, relying this time on no curves but ears, I listened carefully through the second reading of the Webern Quartet to determine whether the rests were being actually covered up. Well, they were not—unless one prefers the too early fading into a dulled silence so common in the
dead halls where ordinarily we hear such music played. I am writing about ears and how our hearing can be blocked by false assumptions and false local prejudices. Doubtless I have been a victim of this failing myself more often than I should like. With what care, then, and with what unflinching attention must we listen if we would hear what is actually being offered us in music. A bad performance, listened to intently, can educate our listening. What is our knowledge of music, after all, except trained listening? The score is no substitute for it. Once the routined performer has stopped listening he may go on for years, his skill is at an end.

To return to our concert: after the intermission Franz Waxman took over the orchestra, and Marina Koshetz essayed to sing the Stravinsky songs. She sang, our critic tells us, "with deep feeling and dramatic intensity," and that's as far as it went. The music was beyond her, while the orchestra, relaxing beneath the conductor's dramatic but uncommunicative gestures, slid in and out of the notes as lazily as if they had not just measured their utmost capacity in the Haydn. I am always embarrassed to say what I have to say about Mr. Waxman. Without his generosity these concerts could not exist.

Stravinsky, who never misses a dramatic entrance, popped up in the pit, amidst thunderous applause, to conduct his opera Mavra. In comparison with the earlier Soldier's Tale or his Rake's Progress, this little buffa opera is minor work. The vocal rhythms do not lend themselves to English, nor is the English translation well adjusted to the rhythms. Consequently the humor of the text is missed. Our critic sums up the damage with his acute misapprehension: "Marni Nixon, Katherine Hilgenberg, Phyllis Althof Brill, and Richard Robinson . . . sang with precision and accuracy, if not always with the most ravishing tone." They did sing with the utmost accuracy and with ravishing tone wherever the music allows. The opening tonal flourish of Miss Hilgenberg's solo aria was as ravishing as one could wish. Our critic informs us that "the Italian elements (of the opera) derived from Bellini and Donizetti." They do not. Stravinsky himself wrote — I quote by way of Eric Walter White's book — "The music of Mavra is in the direct tradition of Glinka and Dargomisky. I wanted merely to try my hand at this living form of opera buffa, which is so eminently appropriate for the story by Pushkin I had chosen as basis for the action . . . and we have had to wait a hundred years before we could appreciate the freshness of this tradition, with its bracing atmosphere, so suitable for delivering us from all the miasmata of lyrical drama . . . " The tradition is theatrical, whereas that of Bellini and Donizetti is bel canto. This is music, written to a text, arranged by a poet from a poetic work by Pushkin; it does not provide for ravishing tone and indeed parodies such full-blown operatic effects by hinting at them in situations as drily hilarious as inappropriate. The costumes and stage setting were elegantly in character, the acting as good as such an opera permits. Everything depended on understanding of the text, and that was missed. I doubt that Stravinsky, who seemed to be thoroughly enjoying himself in his music, was aware of the loss or troubled by it. And really, when we came together for his birthday party, his pleasure is our purpose. The applause was voluminous.

I have delayed until now to thank the Budapest Quartet for the program and a half I heard of their three concerts for the Music Guild. The second of the three programs opened with Beethoven's Fugue. The usual manner of playing this still unyielding master-piece is to get it going dramatically in the slow introduction and then every man for himself, an electrifying effect not always musical. The Budapest gentlemen violated this tradition for the first time in my
Budapest playing gave the fury and the art but not the desperation and wit.

The reading of the A minor Quartet, opus 132, at the end of the third evening, sounded tired and did not reach that high tonal balance of emotion without which this Quartet is apt to seem, in comparison with its fellows, relatively flat and contrapuntally unmade. I have come to the concert hoping for that successor of spiritual weariness for which this Quartet is famed and did not find it. The fault may have been mine: we must not, as I cannot say too often, expect a work of art to do our spiritual work for us, as Ravel nor the Debussy Quartets, both given virtuoso readings, could hold place, though the audience, which in my observation responds to the present art-post-art of the Budapest less consistently than to their former big style, which used to anger me, made itself snuggly at ease in these two solitary works and their more evident display. The return of Alexander Schneider as second violinist has restored this quartet to its preeminence. A quartet breathes by the vitality of its second violinist.

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. Items preceded by a ( ) indicate those which have been met by the Case Study Houses, 17, 18, 19, 20.

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(11a) Structural Materials: Full literature available from the California Redwood Association includes "Redwood Goes to School," a 16-page brochure showing how architects can use redwood to their advantage. Redwood is used in many new structures throughout California, and its use is increasing. Write for free booklet "Redwood in Modern Design," 1551 Market Street, San Francisco 2, Calif.

(31a) Concrete Structural Units: Design information and complete line data available concerning Carduco, the most unusual building material made. Carduco is structurally approved by building codes, practically important to water without peeling, and resistant to weather and water. It is used in various types of construction, such as industrial buildings, restaurants, etc. Write for complete information. University of California, Berkeley, Calif.

(31a) Decorative Natural Stone: For residential and commercial application in Polaris Verden Stone, the ideal building stones of the world. Polaris Verden Stone is durable, lasting in all weather, and is used in many structures throughout the world. Write for free booklet "Polars Verden Stone," 1270 Market Street, San Francisco 2, Calif.

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Looking ahead, Architect Richard L. Dorman, A.I.A., chose sand-gold "Mojave" Carlyle Quarry Tile (a product of Mosaic) for this permanently colorful wall at the Van Nuys Facility of Atomics International. Mosaic ceramic tile is the face of the future, because it is the face with a future. Its integral color will never fade or wear out. As a result, the designer knows the architectural spirit he creates will remain faithfully unchanged for the life of the structure. For your Mosaic Tile Western Catalog write Dept. 38-28, The Mosaic Tile Company, 829 N. Highland Ave., Hollywood 38, California. You and your clients are always welcome at our showrooms and at those of your Tile Contractors.

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Wall: 2¼" x 2¼" Carlyle Quarry Tile, Mojave color. Photo: George de Gonnaro.
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