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“THE RODEF SHALOM BAS-RELIEF”

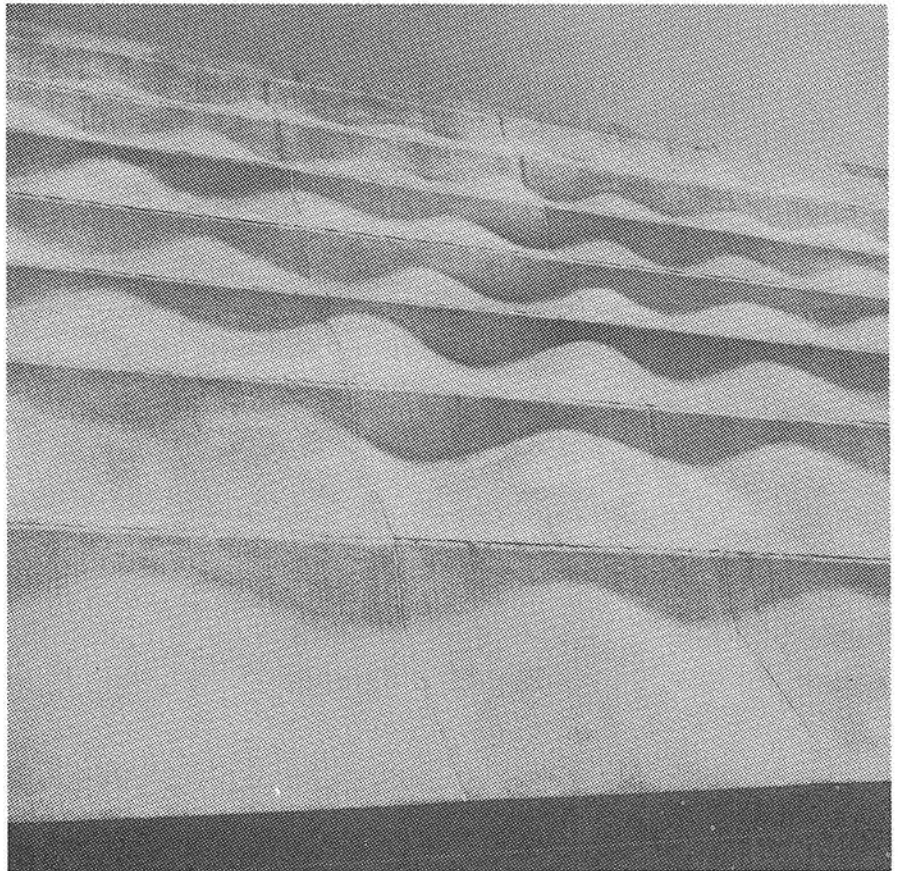
The Rodef Shalom Bas-relief

The bas-relief designed by Kent Bloomer for Pittsburgh's Rodef Shalom Congregation is a unique solution to the contemporary dilemma of monumental civic sculpture.

Public sculpture has lost its old role. The general problems which are now challenging sculpture are those of meaning, location, and proper viewing. The public no longer demands or believes in the sculptural and literal representation of their gods, heroes, or kings. The meaning of civic sculpture depends upon the extent to which the public can identify itself with it, and this identification must now be on the symbolic and emotional level.

Where does one put civic sculpture? Few architects and city planners deliberately leave room for a monumental piece. Only occasionally is a sculpture requested, and then usually as an afterthought to fill a void or hide a mistake. Large sculpture has slowly been forced from its traditional sites, the parks, city plazas, and houses of worship, into the unnatural interiors of museums.

Increasingly fast modes of transportation



Kent C. Bloomer,
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raise the problem of viewing. Travelling by car or rapid transit offers little more than a fleeting glance. The subway and airplane, moreover, offer no glance at all.

The space above the entrance to the Temple's new extension, the Solomon B. Freehof Hall, faces a busy intersection. Bloomer designed his sculpture to be seen and read visually by those travelling in trolleys or cars, as well as by the pedestrian. The sculpture is carefully "timed": that is, it changes considerably as one approaches it. To the fast-moving passenger the bas-relief shows one image, to the approaching pedestrian it shows many more. The horizontal lines reveal that they are asymmetrical and askew; the strong vertical fan-form of its shadows comes forth. Walking underneath becomes a climactic experience as the undulating forms recede beneath the sharp horizontals, and then vanish.

This sculpture also offers an architectural solution to the problem of visually connecting the old, tall, and ornate building with the clear, low, horizontal addition. The strong horizontal pattern of the relief carries the eye to the new wing while the upward flow of the "waves" acknowledges the old building. The surface of the bas-relief gradually recedes a total of 2" from the bottom to the top row to allow for a visual adjustment in perspective. The bas-relief has also changed the scale of the two connecting buildings. The 32' x 22' space it occupies no longer looks deceptively small. It has now acquired its full dimensions while visually reducing the weight of the old structure and the length of the new addition.

This bas-relief is a sun-sculpture in the old tradition. It is designed for the sun and depends on the sun for some of its dynamics. As the sun passes overhead, whether on a cloudy or bright day, the shadows shift and move over the surface; they double and they disappear; they articulate one area and then another.

The coherent pattern these shadows form reveals the sculptor's deliberate control of the undulations. Nor do the shadows appear to be confined within the edges of the relief, but seem to extend beyond either side, creating the impression of a continuum in space. When the sun is bright the high spots on the sculpture become translucent.

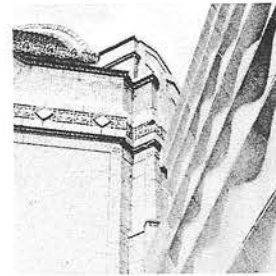
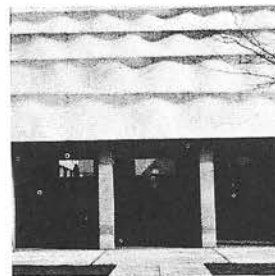
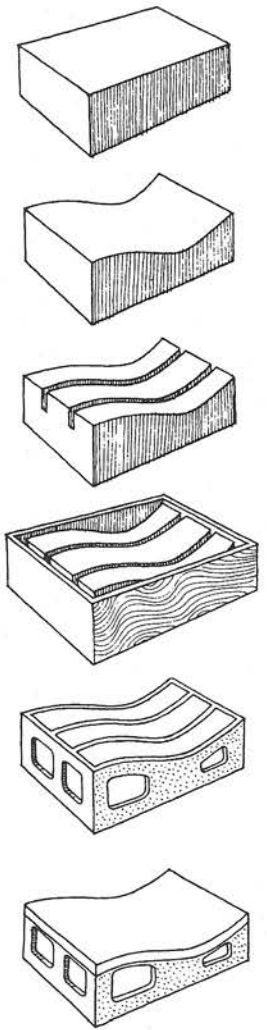
The prohibitive cost of using traditional materials such as stone or marble made it advisable to look for a more modern technological solution. Bloomer thus came upon a new wire-concrete developed at Carnegie Tech by Dr. James P. Romualdi, professor of civil engineering, who collaborated with the sculptor on this two-year project. The new material, Wirand, is concrete mixed with millions of short, thin, wire hairs which make the material highly resistant to cracking, corrosion, and other flaws, and eliminate the need for conventional reinforcing bars.

This large-scale project, completed in August, 1965, also received industrial support. The Dow Chemical Corporation contributed 720 cubic feet of styrofoam. The Pennsalt Chemical Corporation contributed labor, materials, and research facilities, while Carnegie Tech provided space and equipment.

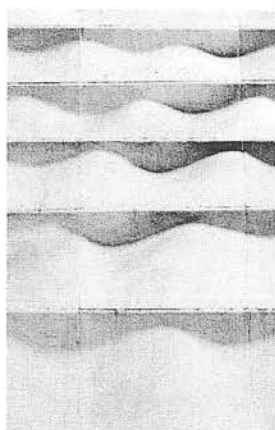
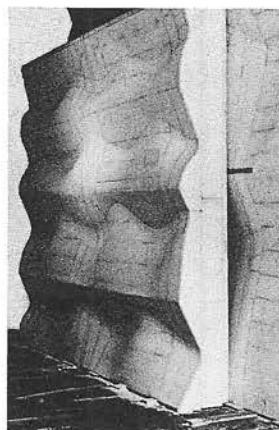
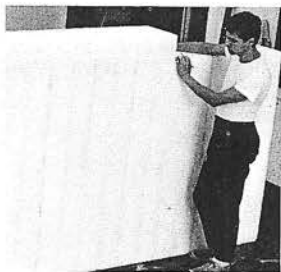
The sculpture was first carved out of styrofoam. The styrofoam wall was then cut into 35 parts, not one of which had parallel horizontal lines. Each block received a ribbing and shell of the wire-concrete mixture. The styrofoam was kept within this shell and was then coated with a quartz-silicon aggregate, the white base of which causes the translucency the sculptor had been seeking.

While the bas-relief responds to the general problems of viewing, site, and engineering, it leaves the question of imagery open. It is impossible to specify the image. Some see the sea's waves, others the desert's dunes, and still others the distilled force of nature. The image remains ineffable.

Leonor Golay



- 1
Solid styrofoam block to be carved into shape of panel.
- 2
Carved styrofoam.
- 3
Trenches cut into styrofoam to mold ribs of Wirand concrete. Any gussets of special formwork can be done at this stage. Each panel can be different.
- 4
Wooden forms around styrofoam for outside dimension of concrete casting.
- 5
Concrete casting showing ribs flush with surface of styrofoam and holes cast into sides for additional lightweightness.
- 6
Epoxy, quartz, and silicon shell applied to concrete frame and formed by styrofoam surface.

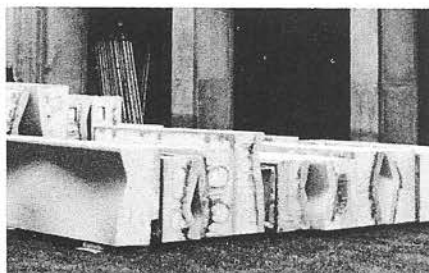
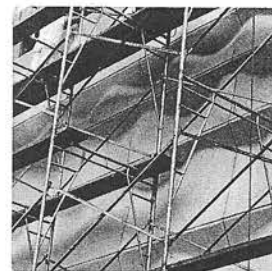


New forms in the plastic arts are often coincident with new developments in science and engineering. The Rodef Shalom bas-relief was conceived as a masonry monolith, the weight of which in traditional stone would have been in excess of 40 tons. A collaboration between sculptor, engineer, and industry produced an entirely new materials system which permitted construction with limited space and labor, and resulted in a product averaging ten pounds per cubic foot, a fifteenth the weight of stone.

The relief is a mass of styrofoam, a material that is easy to carve and employ as the core of a mold. A frame of Wirand concrete was poured into and around the styrofoam in conformity with the compound surfaces and irregular dimensions. In Wirand concrete the reinforcement is mixed with the concrete and not applied or fitted to each situation. In this way, a stable and permanent skeleton was incorporated into a weak, lightweight material, after the shape was determined.

Finally, a shell of epoxy, quartz, and silicon was added to the combination of styrofoam and concrete. This material has a high bonding strength with concrete, and is rapidly and accurately applied to complex surfaces. Solid stone was thus replaced with a masonry skeleton and skin, the greater strength of which is primarily based on more resilient bonding of aggregates, and the lightweightness of the object itself.

K.C.B.



- 1
Styrofoam block being prepared for carving.
- 2
Styrofoam monolith in studio.
- 3
Zone of deepest relief in surface of sculpture.
- 4
Finished panels delivered on site.
- 5
Scaffolding.