

BUILDING BLOCKS

Half-Century Later, Questions Over Who Designed a World's Fair Dome

By DAVID W. DUNLAP

Imagine an elegant, inverted, 175-foot-wide sieve covering a half-acre of Flushing Meadows-Corona Park in Queens. Within it, long-necked cattle egrets glide overhead. A scarlet macaw scolds loudly from a branch, while northern bobwhite quails rustle the underbrush. Flashes of sapphire blue — the bills of Argentine ruddy ducks — glint against the dark waters of a small pond.

Here is where Bird Week and Building Blocks meet: at the Queens Zoo Aviary, a geodesic dome constructed 50 years ago as the 2,100-seat World's Fair Pavilion, transformed for the 1965 fair into the Churchill Center and then moved a half-mile west to serve as a birdhouse for the zoo, which opened in 1968.

There may not be as many twists to its story as there are facets on its semispherical aluminum frame, but there are plenty enough.

The latest is the question of who gets credit for the dome, one of the most resilient, handsome and purposeful of the generally odd lot of World's Fair pavilions. For years, it has been attributed to R. Buckminster Fuller, the designer and inventor most closely associated with geodesic domes. These lightweight structures, composed of tubular struts arranged in triangles and polygons, can be assembled quickly to span great volumes at relatively little expense.

It is Fuller's name that appears on a sign at the entrance to the aviary.

But a little-known architect, Thomas C. Howard, 82, seems to have had a lot more to do with it. He was the president of Synergetics Inc. in Raleigh, N.C., which

A famous inventor gets credit, but a little-known architect played a major role.

held the contract for the dome; Eggers & Higgins of New York designed the rest of the building.

These firms proved to be life savers. William Whipple Jr., chief engineer of the fair, said the budget for the pavilion, which served as the fair's assembly hall, had originally been set at \$1 million. But when the first design was put out for bids in 1963, none came in for less than \$1.75 million.

"With opening day only a year away," Mr. Whipple wrote in the June 1964 issue of Civil Engineering magazine, "all bids were rejected and an entirely new concept was sought that would fulfill the same requirements but cost not more than half as much. After a rapid examination of various unorthodox alternatives, it was decided to use as the roof a geodesic dome."

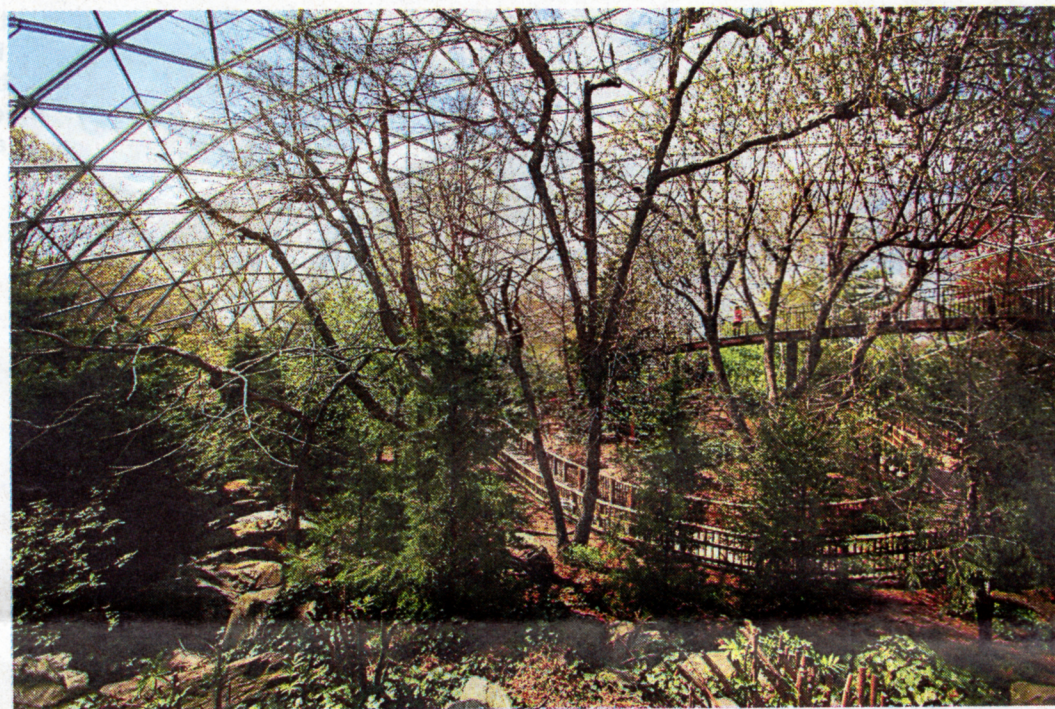
The revised design cost \$950,000. The pavilion was finished just in time.

On Jan. 24, 1965, between the fair's two seasons, Sir Winston Churchill died. Revered in the United States as the British prime minister who stood up to Nazi Germany in the most hope-



CHANG W. LEE/THE NEW YORK TIMES

A cattle egret glides beneath the 175-foot-wide geodesic dome covering the Queens Zoo Aviary. For years, the dome has been attributed to R. Buckminster Fuller.



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less hours of World War II, Churchill seemed to be a natural subject for a new attraction.

Within the dome, Philip George designed an exhibition centered on a reproduction of the study at Chartwell, Churchill's country home. Paintings by Churchill and his special passport as an honorary American citizen were among the displays.

The tribute was not without a marketing strategy. The 1964 season had not been nearly as popular or lucrative as officials had

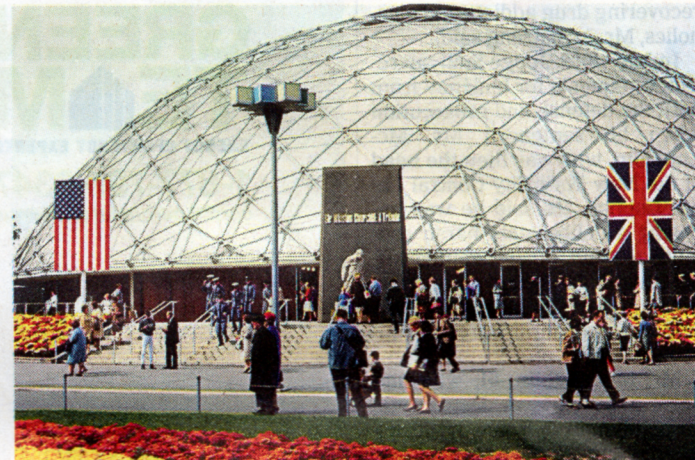
hoped. So they scrambled to find ways to entice visitors who had avoided the fair before and to lure back those who had already seen it.

Even before the fair reopened in 1965, the dome was being envisioned as a prospective birdhouse. The transformation, including the addition of an elevated walkway at treetop level, was designed by Clarke & Rapuano and Andrews & Clark.

The aviary, an open enclosure under wire mesh, was plagued by

problems, including malevolent visitors who grabbed birds or threw stones at them. After being closed for many years, it reopened in 1992, renovated by Mark K. Morrison Landscape Architecture.

Katrina Howard Fairley is now lobbying to ensure that her father, Mr. Howard, is recognized as the original designer in the long list of architects involved with the building. Those responsible for maintaining Fuller's legacy said her assertions may have



BILL COTTER

The dome when it was part of the Churchill pavilion at the 1965 World's Fair; an exhibition paid tribute to the British leader.

merit.

The executive director of the Buckminster Fuller Institute in Brooklyn, Elizabeth Thompson, said Fuller lectured globally about geodesic domes, on which he held patents, and sent business to companies like Synergetics, composed of his followers.

Jaime L. Snyder, Fuller's grandson and co-executor of the Estate of R. Buckminster Fuller in Santa Barbara, Calif., said, "The Synergetics Inc. story is important history which needs to be told."

Speaking of his famous grandfather, Mr. Snyder said: "I know he thought very highly of Mr. Howard's skills — once commenting to me that he was one of the persons who best understood his geodesic design principles. We simply have never been privy

A structure whose story has many twists is now an aviary in Queens.

to any documentation about the World's Fair Pavilion, nor other Synergetics Inc. designs that would shed any light on this matter."

Where the pavilion once stood, opposite the Festival of Gas, there is now the Buzz Vollmer Playground, named for Arnold H. Vollmer, an engineer and landscape architect. The playground was designed by Johansson & Walcavage.

At least, that's what the sign says.