Of Paris, Penguins and Parabolas

these young lions of design compete for the Paris Prize with a model Antarctican city

LET'S FACE it, most people would not prefer to live in Antarctica, and you really can't blame them. As it is, life there would leave a few things to be desired. Like, for example, vegetation, a pleasant climate and normal sunlight. The only living things now willing to weather its weather are some warmly-dressed explorers and scientists, who know better, and a group of penguins, who don't. Even the rugged polar bear turns a cold shoulder. Like many others, he considers the icebound continent strictly for the Byrds and the birds.

Suppose, though, that a valuable ore deposit is found in Antarctica, and that its potentiality is great enough to make mining desirable. And suppose that 2,000 persons are necessary to mine the ore efficiently. These 2,000 people need a place to live. Okay, design them one.

This, briefly, is the hypothetical situation and requirement that the National Institute of Architecture Educators presented to senior architectural students in the nation's universities and to apprentice architects (eligible if under 30) who entered the 1964 competition for the 51st Paris Prize in Architecture. The winner, to be announced in May, will receive the Lloyd Warren Fellowship, worth $5,000 toward a year's study at the Ecole des Beaux Arts in Paris. The Paris Prize is one of the two most important honors a young architect may earn, the equally prestigious Rome Prize being the other.

Competition began at the local level with each school of architecture narrowing its field to no more than five finalists whose designs are sent to national NIAE headquarters for final judging. The two professors in charge of the O.U. competition, Richard N. Kuhlman and William S. Burgett, had no easy time in the selection of the five finalists from the 25 or so who comprise the senior class. The students who reach the final plateau of the five-year architecture curriculum at the University are usually good, or they wouldn't be there. Anyway, they're exceptional—there were 110 in the class five years ago. And those who reach the fifth year level are far from inexperienced, having designed everything from a penitentiary to a small FHA residence, from an international jet airport to a drive-in restaurant.

Time allotted for the project was five weeks, and a lot of ink, sweat and midnight oil were expended in the process. To quote the official statement of the problem, the students were "to design a permanent town, compound, community or settlement above ground for those who will conduct the mining operation. . . The climate-controlled community will be designed for a staff, all skilled and managerial personnel, to be composed of 500 married couples with no children plus 500 single men and 500 single women. . . . Emphasis is on the general community together with the recreational centers, living quarters and all the elements necessary to make this experiment of enforced isolation a worthwhile experience."

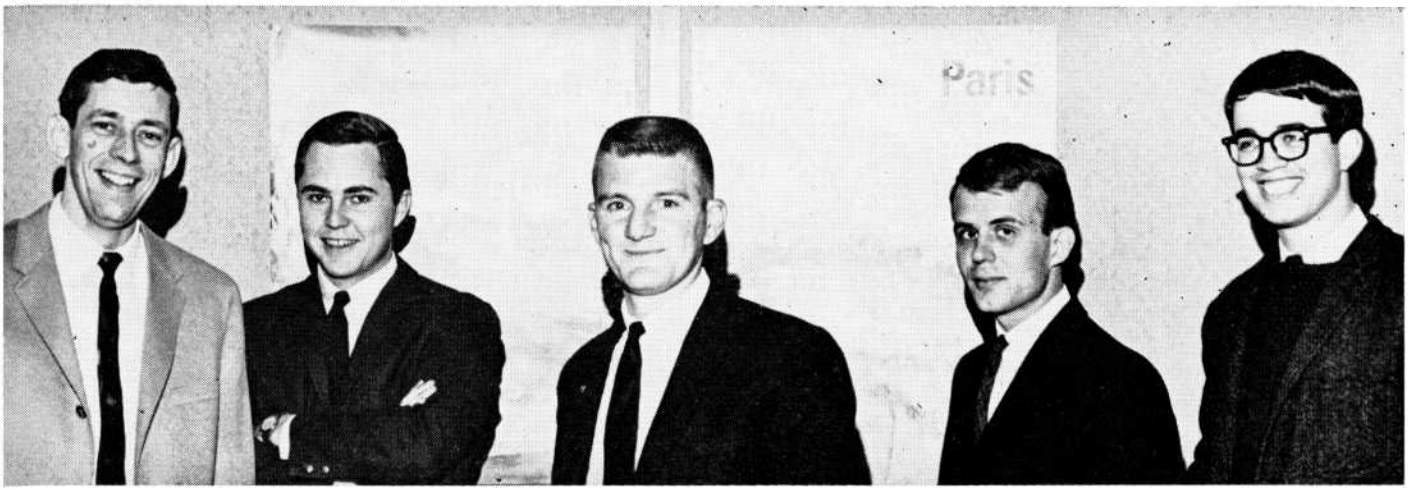
The problems of climate and the enormous physiological and sociological considerations are paramount, the statement continues. Temperatures drop as low as 100 degrees below zero. Winds are violent for considerable periods, averaging between 50 and 100 miles an hour. Another factor is the light, at times blinding, actinic, a six-sided glare. At other times, total darkness prevails for long, uninterrupted periods. Maneuverability within the community is desired. The statement also assumes that the rock-bearing surface in which the ore is found lies on an average of 10 feet below the ice, so foundations will not constitute a serious problem.

The statement ends on a challenging note: "By careful design this enforced sociological test may well turn out to be for its inhabitants a new life, replete with chimerical new horizons." If an environment like Antarctica's, it suggests, can be conquered successfully, then man could use such an achievement as a practical stepping stone toward controlling other environments equally severe and unusual. Perhaps a moon community or a city under the sea would be a logical step.

The finalists who represent O.U. in the national competition are Patton Brooks, San Francisco, California; John Linn Forbis, Dallas, Texas; Stanley Gralla, Housatonic, Massachussets; Kedrick Hoek, Sterling, Illinois, and Larry Hoskins, Duncan.

Each of their communities has similarities—each is enclosed and is powered by nuclear energy. Too, each is unique. Allow the young lions of design, as one suggested they be called, to describe their cities.

Brooks—Mine is generally horizontal in design rather than vertical to withstand the winds better. I used one basic building element—a hexagonal form—because I felt one simple modular unit was a solution to the tremendous problems created by the site and transportation to it. The hexagonal unit is 30-feet deep and is made of aluminum framing. Half of the unit is insulated aluminum panel sidings and half is glass. I believe the judges are looking for a community that can be put anywhere to fit



The five who strive for the Paris Prize are (l. to r.) Larry Hoskins, Patton Brooks, Stan Gralla, Kedrick Hoek, John Forbis.

a special situation, and I wanted a form that was flexible, allowing for easy expansion if the population grows or for easy removal if the original incentive for establishing the community runs out. . . . The community has three parts—administrative, residential and community areas. The latter contains the recreation area, auditorium, churches, schools and shops. A community core runs the length of the community area connecting with the administration area at the end. The core is bordered on each side by living areas, made of three kinds of apartments and cut by a sky-lighted interior court. All pedestrian traffic flows in from the living areas to the main core flows running uninterrupted through the length of the community core. This tends to give the individual a stronger tie with the community area rather than the administrative. . . It's a 7-minute walk from the farthest housing unit to the administrative area.

Forbis—My main preoccupation was to get diversity from a modular unit. I hoped to get a variety of spaces from the unit and avoid a specialization typical of most modular design. . . Much will be manufactured here in the United States, so it should be a modular project because of the transportation factor. The units would be the same size and thus easy to ship. My basic unit is a hyperbolic parabola, made of aluminum, 250 feet by 250 feet. During the first digging of the mine a crew can set down the parabolas. The floor parabola will be covered and landscaped with debris from the mine. Another will serve as a roof for each neighborhood unit and for the recreation, education, shopping and administrative units. A crew of from 7-15 men can erect one unit a day. After the sheltering is completed, apartments are placed. Most buildings today are held up by compressive columns which are space filling, heavy—therefore difficult to transport—and inflexible. My aluminum-walled apartments will solve this by being suspended from wires, in tension. Adjustable metal floor pans will allow each occupant to decide upon his own floor plan. I want each neighborhood unit to have a sense of individuality and pride through diversity. The feeling should be akin to a street in an English village. It can be contrasted to a typical American street. Stand in the middle of one. There's no stopping point, no beginning. These neighborhood units will curve and give the idea that it's not the same duplication. The climate will be controlled, but not constant. I prefer to have seasons. The winter will be a brisk 20 degrees. There'll be no wind, but you'll need a coat. Summers will be from 70-80 degrees. Each neighborhood will have a lake, primarily for fire protection. In summer the people, probably a hardy, athletic type or they wouldn't have come to such a place, can water-ski and boat. In the winters they can ice skate.

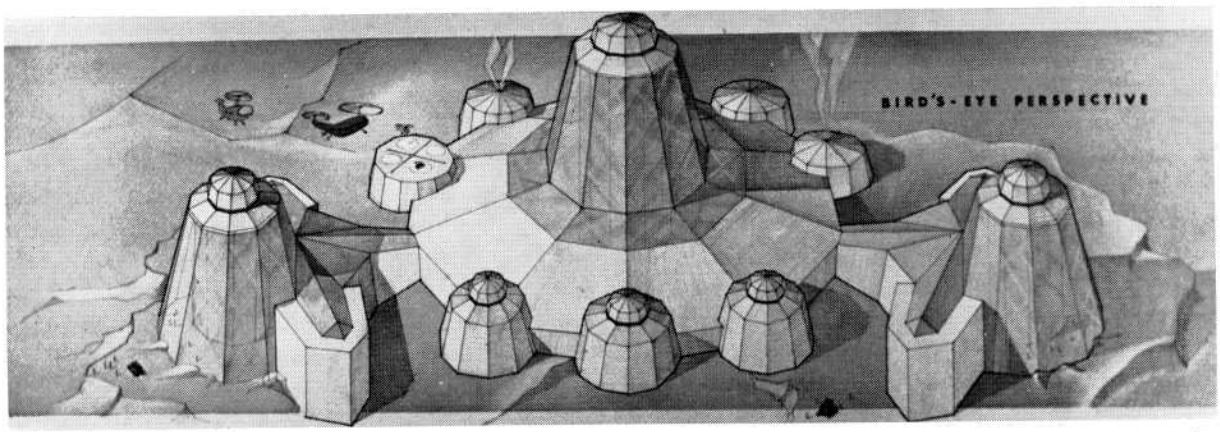
Gralla—I wanted to give the people who live in the city a variety of forms, textures, spaces. The city is enclosed by concrete and natural rock; the apartment units are movable, aluminum and set into the sides of the walls and on terrace levels up to seven stories high. All lighting is artificial because of the extreme light and darkness outside. Interesting light patterns are created artifically. There are three main living areas divided into small neighborhood clusters. These areas meet at an ampitheater and cultural center. Also in this central area are shops, a hospital, a school. Four recreational balconies rise along this community area and a grand concourse—a sculptured walkway—separates the living from the working area and gives the people a pleasant experience in going to and from work.

Hoek—Mine is a vertical city, divided into three separate parts—business, living, community. The community section has a colorful central plaza filled with bright reds, blues, greens, which is bordered by shops, restaurants, adult educational centers, schools. I am interested in forms that get away from monotony and a feeling of confinement and relate to home. Two tall buildings are reserved for living quarters. The building material is concrete. The living towers are confining, a place to be alone. When one walks out onto the balconies of the towers, he gets a dynamic change of space. The entire city is enclosed with a transparent covering. Also light domes in the roofs of the living towers and the administrative tower give a spacious feeling. The residents get exercise by going to work through tunnels which lead into the central plaza.

Hoskins—I wanted a lot of transparent area in my community. I decided to let the light in through heat-absorbing glass and control it when it was inside. Mine is a vertical, radial city. Three tall towers, 20 stories, are on the periphery. Two are for living, the other for recreation. At the hub is another tall building for the mining operations and offices. It is surrounded by a mall, landscaped and with trees. The intention is not to imitate home but to relate to it. Nine smaller units surround the mall. They serve a community function—health, religious, schools, storage, power and so-forth.—PAUL GALLOWAY

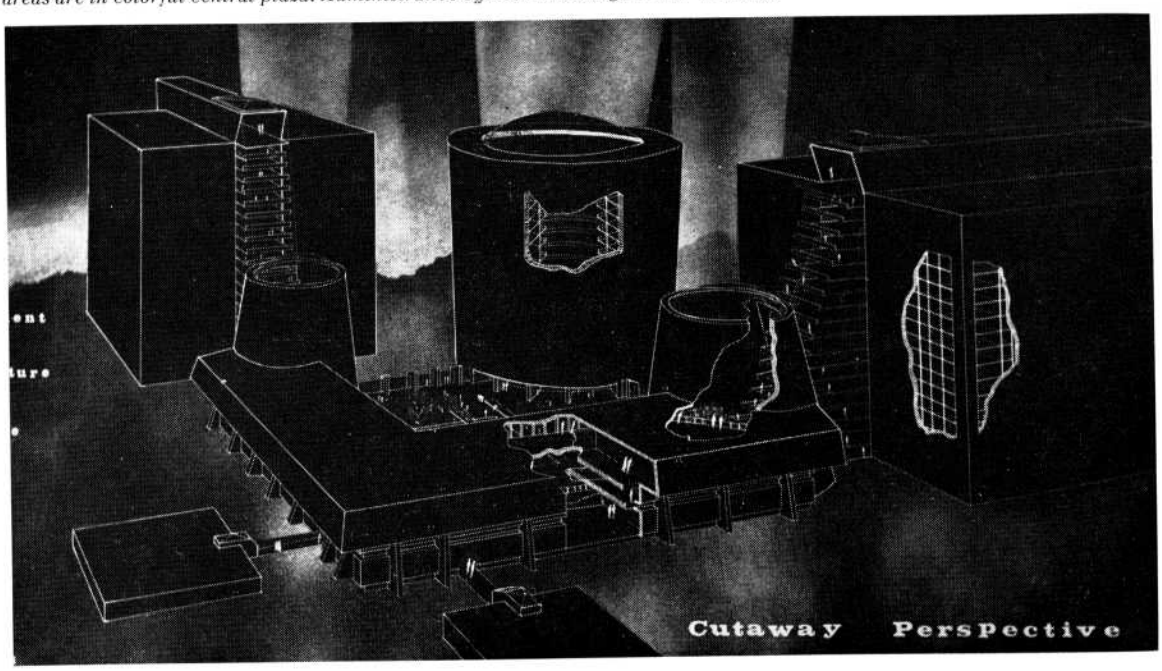
(Turn page for a look at the model communities.)

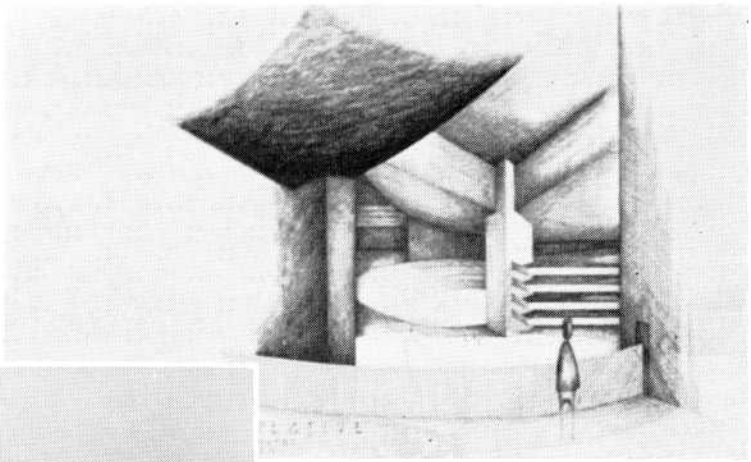
FORBIS—A cutaway perspective reveals one of the neighborhood units, sheltered by the massive hyperbolic parabolas. Apartments in tension nestle on landscaped hill at left.



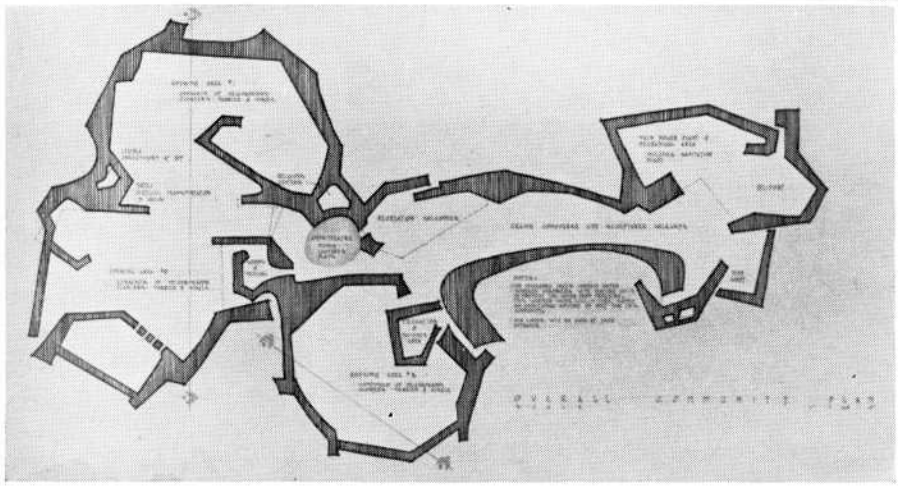
HOSKINS—At hub of glass-enclosed radial city are offices, encircled by mall, shops. Nine smaller units serve community function. Tower units at periphery are for recreation, housing.

HOEK—Two large blocks at left and right are for housing. Community shops, schools, recreation areas are in colorful central plaza. Administrative offices are in large center building.



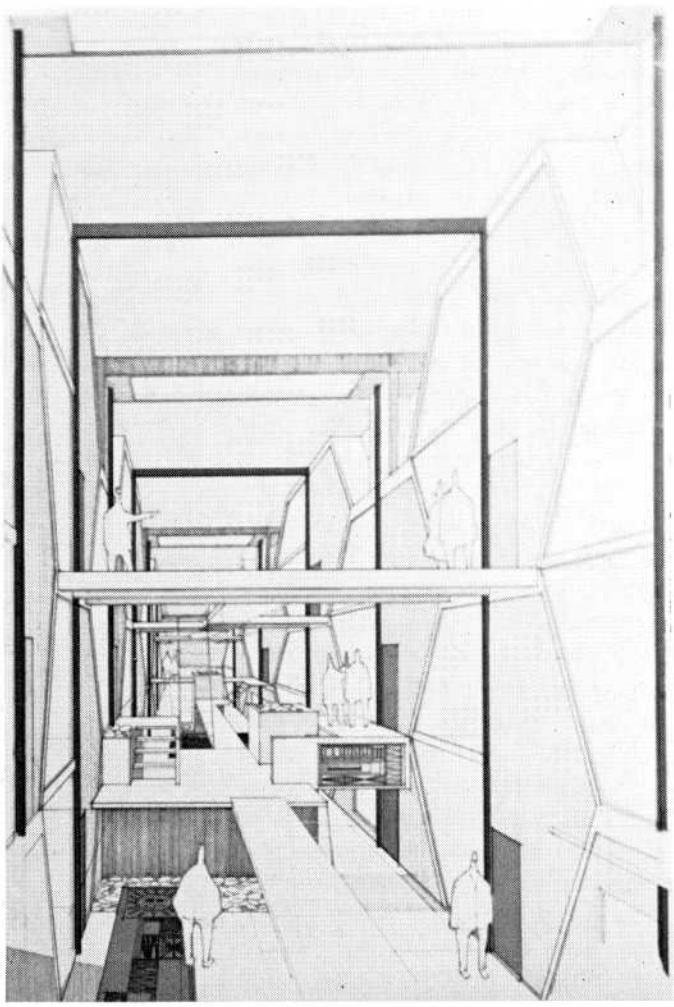


GRALLA—From terrace level at right one can look on ampitheater, community area where three neighborhood clusters meet. Clusters are at left in plans below. Grand concourse leads to the working area at the extreme right.



OF PARIS, PENGUINS AND PARABOLAS

the cities conquer the severe Antarctic climate



BROOKS—Apartments built of aluminum hexagonal units flank skylighted interior court. Apartments are parallel to central community core which connects recreational areas, churches, schools, shops.