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Less Is More

Richard L. Meier
and Janet E. Crane

For those of us who live elsewhere, the megalopolis that focuses upon New York is the capital of the world. Among those thirty millions we see global decision makers, transnational corporate leadership, style-setting designers, best-selling writers, frontiersmen in medicine, the big-time bankers, precedent-building administrators, and the top spenders. Yet we worry about its capacity to remain at the forefront (see Figure 1).

If New York fails to produce better services more quickly than Tokyo, Paris, London, Geneva, San Francisco, Hous-

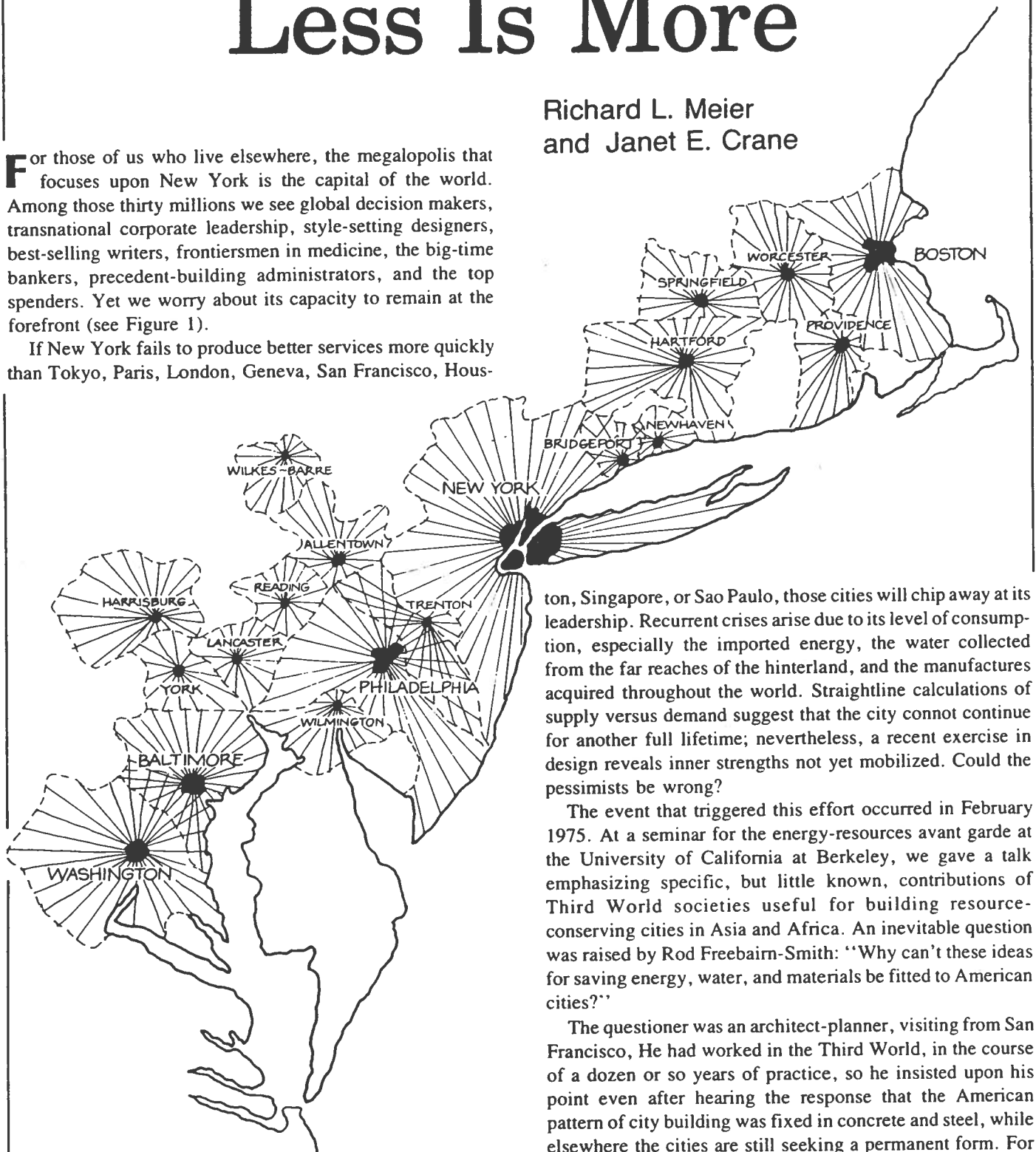


Fig. 1. The Atlantic Megalopolis.
Nineteen metropolitan areas focus upon New York City.

ton, Singapore, or Sao Paulo, those cities will chip away at its leadership. Recurrent crises arise due to its level of consumption, especially the imported energy, the water collected from the far reaches of the hinterland, and the manufactures acquired throughout the world. Straightline calculations of supply versus demand suggest that the city cannot continue for another full lifetime; nevertheless, a recent exercise in design reveals inner strengths not yet mobilized. Could the pessimists be wrong?

The event that triggered this effort occurred in February 1975. At a seminar for the energy-resources avant garde at the University of California at Berkeley, we gave a talk emphasizing specific, but little known, contributions of Third World societies useful for building resource-conserving cities in Asia and Africa. An inevitable question was raised by Rod Freebairn-Smith: "Why can't these ideas for saving energy, water, and materials be fitted to American cities?"

The questioner was an architect-planner, visiting from San Francisco. He had worked in the Third World, in the course of a dozen or so years of practice, so he insisted upon his point even after hearing the response that the American pattern of city building was fixed in concrete and steel, while elsewhere the cities are still seeking a permanent form. For example, he argued, an architectural competition set up by the Urban Development Corporation of New York for Roosevelt Island invited some new thinking. That design was expected to set a standard for high-density settlement in the

New York region. Why not apply the "less is more" thinking that Schumacher has popularized?

Place for World-Servers

Each central site in a metropolis should contribute to its future effectiveness. Otherwise the edifice must soon be dismantled and replaced by a more appropriate one. What could the end of Roosevelt Island add to the capital of the world that would help it retain its leadership? Hints may be found by searching the accumulated social, economic, and political theories of the city. Only one line of inquiry flashed a "relevant" signal.

More than a decade earlier Melvin M. Webber proposed that the activities carried out in a modern society could be stratified in a revealing way. Some activities are purely concerned with self, but many support a household, and a few contribute to the immediate neighborhood. Numerous activities involve face-to-face participation in communities comprising a few hundred to a few thousand persons. Many employed people are organized to serve a city or some other regional aggregate, and many more work in the national bureaucracy while a few act on a rarified level, for example, fundamental scientific research or global telecommunications, serving the world as a whole. Each of us is concerned with several of these levels, but vocations and avocations usually operate at one scale at a time.

Third World professionals can remain effective with an expenditure of resources one-third the level of New York

New York has attracted the greatest concentration of world-servers ever to be assembled. Almost all of them grew up in other places but worked their way up to key roles in New York-based institutions. Also, many free-lance professionals claim the world as their oyster; nowhere are they as plentiful as in Manhattan.

By this criterion, rather than any self-serving claim, New York's future becomes highly significant for the world. The presence of the United Nations is only one of a series of indications of primacy. The cluster of skyscrapers, almost all world headquarters of multinational corporations, non-governmental international organizations, and large grant-giving foundations, would by itself be enough to clinch the title of world capital. The public agencies and the communities of New York have a special duty; they must shore up these services to the rest of the human race. A new neighborhood proposed for Roosevelt Island, which happens to have a clear, unobstructed view of the physical manifestations of these world scale institutions, should become a partner pulling its own weight.

This line of reasoning uncovered a vital, expanding market for thousands of apartments convenient to the addresses of world-serving institutions and organizations. New York is the most important place to be for these people; their presence

is needed in New York to maintain its rank among world cities.

Outsiders' Images of New York

From a great distance the mention of New York evokes imagined scenes of giant capitalists striding through a cityscape of glass skyscrapers. It is a metropolis with "everything" representing modern times, including unemployment. From afar it is understandable that its proletariat is disturbed, affecting the level of public order. The underclass is expected to rebel now and then, but almost certainly less frequently than the dissident elements in one's own country. Reports about bad conditions in New York do not detract from the belief that New York is a haven for the powerful. World leaders in the mobilization of cash, in the transfer of securities, in the publication of books and professional journals, in medical research, in styles and fashions, in appreciation of the arts, and in all forms of high administration, work in New York.

Consider for a moment the new holder of a bachelor of medicine degree, first class, and with top recommendations, who comes from abroad to complete his residency. He and the other "new boys" he encounters are deeply impressed with the implications of wealth that lie behind the "throwaway society" encountered in the hospital and the city parks; they sense the control of high technology that lies behind the instrumentation. If a man is "really good," there may be a way for him to publish elegant papers and join a renowned research team. That is his world, a challenge that occupies all of his attention. Newspapers, when read, are not understood, because they contain stories about a city falling apart, ridden with crime, corruption, incompetence, failing to cope with the problems of air pollution, noise, congestion, energy, housing, mass transit, and smog. The American colleagues he knows talk about the same issues, but satirically, apparently half in jest. Yet, as compared to anything he knows, the backup system works, sometimes fantastically well. On other occasions he encounters inconsiderate behavior of such an order he wonders whether those members of urban America should pass themselves off as humans. Finally, he treasures the knowledge that in this great metropolis he can obtain a plate of food like that at home, beer or tea that tastes right, and camaraderie employing a familiar accent of the English, if not the dialect of his district. Reports to friends back home reveal all these feelings.

Consider also the vice-president of an overseas subsidiary called into headquarters to fill a slot in the parent firm. Presumably he has a shot at the top post in a decade or so. His greatest problems are with his family, since his wife ran a household with servants and does not know how to live in a New York apartment. Also, daughters will need husbands, but the kind of marriage-for-love so taken for granted in America is believed by Third World families to be too dangerous, so he has to find a marriage broker. The warm, sociable home life they want to live requires much more management in New York than he would like to devote to it.

Both of these examples of imported talent will discover that the preferred adaptation to New York, which implies a private life compatible with one's upbringing and a public life no different from that of other New Yorkers, seems likely to violate several codes and will not fit standard leases. It is convenient to have a landlord from one's own part of the world to act as a buffer.

Newcomers have a capacity to be objective about odds in a way that the locals are not. Outsiders discover quickly that New York life is vulnerable to disruptions in gas, oil, and coal supplies (in that order of likelihood) and to drastic reductions in effectiveness due to drought (which, according to *Science*, could come soon because the Northern Hemisphere seems to be moving into a period of greater climatic variability). Those born overseas know how they and their families would adjust to shortages; however, they are quite unsure of American colleagues who lack any such experience. Professionals in the Third World can remain effective with an expenditure of resources perhaps a third of the level of New York, but the arrangements that make this possible are rarely available to them there.

Resource-Conserving Strategies

Both designer and builder see New York's codes as the big block to energy economy. The codes are relics of an era when energy and capital were relatively cheap, and conflicts between interest groups were expensive, so compromises on standards required the use of energy, water, and capital to keep all parties satisfied. This was also a period when New York was establishing high performance levels for urban services such as education, parks, and libraries. In housing it was hoped that quality could be achieved incrementally as tenements and old frame units were replaced by modern structures. As a result a builder is more constrained by provisions for health, safety, fire prevention, nuisance abatement, and personal security than elsewhere.

With all these rules in force it is extraordinarily difficult to reduce net energy consumption per dwelling unit or workplace. Joel Darmstadter, of Resources for the Future, recently produced a book demonstrating how difficult it is. Entitled *Conserving Energy: Prospects and Opportunities in the New York Region*, this study suggests that even under "feasible" (that is, within the law) noncrisis conservation measures, overall energy consumption would still increase by 2.7 percent per year. Without these measures he projected 3.5 percent per year increase in energy use. Within the total it is apparent that the residential sector is the largest outside of automotive transport. The results obtained from investing in a better thermostat, or more insulation, are marginal at best. Moreover, continued high rates for energy and water use are locked into each new building completed. By far the largest share of the energy consumed is committed to automobiles and space conditioning.

How much could be saved if people returned to basics? What kinds of changes are implied? The flexible-minded designer must start with current knowledge about human

comfort and the dynamics of the primary group making up the household. In a city where land rent is high, and excessive use of space immediately introduces a need for automotive transport, he sees his conservation strategy largely reduced to that of space economy. If all the necessary functions can be carried out in half the space, then about half the energy will be needed. The relationship is not directly proportional, but heat from cooking, lights, and human metabolism become significant as living space diminishes. Water saving requires a different strategy; the designer is pushed toward recycling lower grades of water near places of consumption.

The New Yorker will become as extinct as the dodo bird. A strain of predator dependent upon fossil fuels has little hope of survival

Mentally the space-economizing designer walks through a standard apartment. He sees first the huge divan and overstuffed chairs—full of air that must be heated in the winter and cooled in the summer. They are used only a hundred to two hundred hours a year on the average. Out with them. The full-sized table bars a column of space from any other use. Eliminate it. The dining space likewise. After all, people can sit on the floor and eat from a low table that can be put away when it is not needed. The bed is a monstrosity that requires a minimum of 300 cubic feet (really 10 cubic meters, since such a designer must be future oriented). A foldout or rollout pad is all that is necessary. The dressing table can be reduced to fit.

Space saving in the kitchen and bath needs another approach. Bulky marginal items, such as ovens in the stove and the huge refrigerator-freezer, could be taken outside the apartment. A nearby bakery or cafe could do roasting or baking to order, and an economical cold locker, shared by the whole building, could be leased. The spacious bath, too, can be shared among a number of households, thus providing an opportunity for saving much of the energy expended on heating water.

Now put the apartment all back together again, introducing appropriate comforts and conveniences. Eight square meters (about eighty square feet) of action space is needed per capita in households of four or five persons with American body sizes. Cushions, stools, and low benches replace chairs and divans, storage walls and trunks replace the closets, and kitchenettes serve food well enough to get by. At the same time, public spaces gain a number of new functions, so they need redesign as well. In addition, one must find ways of orienting the structure so as to trap sunlight and reduce the leaks while introducing insulation to save winter heating; ventilate and use fans to save air conditioning; use telephones and entry into computer memory to save trips on transport systems. The time that is lost by added inconvenience is regained by time saved in cleaning and maintenance. By these means 50–80 percent of the domestic energy consump-

tion could be eliminated, with no apparent loss in human efficiency (see Figure 2).

The standard New Yorker would scorn this kind of life ("Tiny No-Frills Homes Get Chilly Reception," says the *Wall Street Journal*). His body protrudes in the wrong places and his legs would go numb. He owns too much property to stow away in such a small space. However, the standard New Yorker is an endangered species: the conditions necessary for his survival are scheduled to disappear within the lifetime of buildings recently erected. Unless some miracle unheralded by current scientific discoveries occurs, the contemporary New Yorker will become as extinct as the dodo. A strain of predator so completely dependent upon fossil fuels has little hope of survival.

There is a curious anomaly here, because the mainstream, or standard, person of average age (say about thirty) is confident he will live on for another half-century, and makes payments upon his annuity and life insurance with that expectation. By that time however, petroleum will be available only in dribbles, probably insufficient to keep all the petrochemical plants and jet airplanes in operation. Liquid fuels, the lifeblood of the standard megalopolitan life-styles, can be made from coal or solar energy, but the capital requirements seem likely to remain higher than those for nuclear energy.

Thus knowledgeable New Yorkers glumly anticipate a world with less mobility and less property, but even they have not yet made the mental adjustments necessary for adaptation.

Some Third World cultures have evolved a cosmopolitan way-of-life that fits the energy-conserving requirements set by the future. In New York they introduce a potential market that can survive the exigencies that are forecast with confidence. A designer can pursue this line of thought in much greater detail, tracing out most of the implications arising from filling the needs of the expanding population of world-servers.

Better Living through Appropriate Culture

Although the Japanese have recently progressed to loftier levels of development, their culture retains the elements of a space-conserving strategy. Some features are on display in New York's stylish Japanese restaurants. The floor is covered by straw (or synthetic) *tatami* mats, flat cushions instead of chairs, low tables, portable fans, and contrasts in texture that show up best in soft light. Decorations are ephemeral, as in flower arrangement, or extremely spare. Shoes are left at the door in order to minimize abrasion of soft surfaces. The electric rice cooker in the microkitchen saves both food and energy; the rest of the equipment is also carefully designed

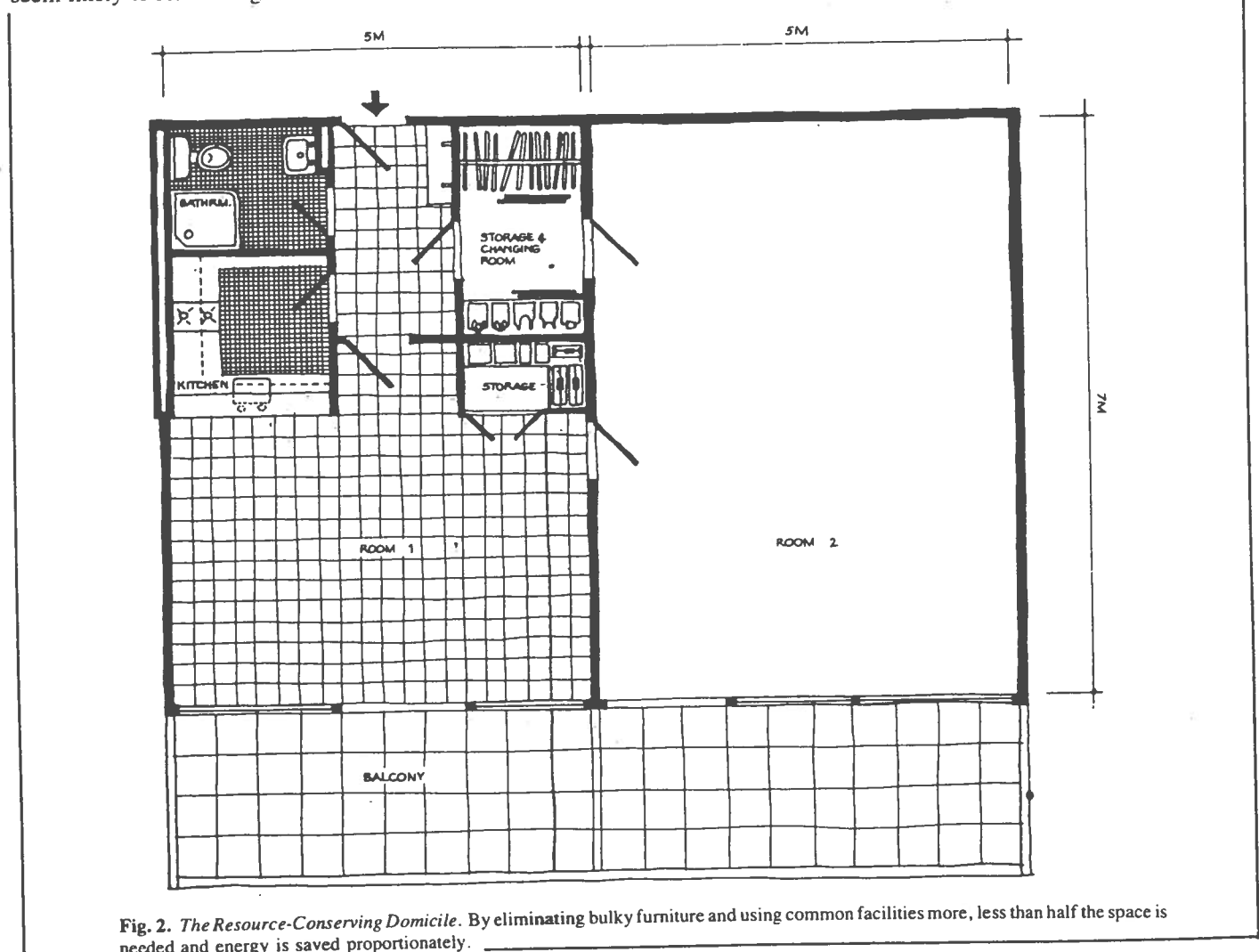


Fig. 2. *The Resource-Conserving Domicile*. By eliminating bulky furniture and using common facilities more, less than half the space is needed and energy is saved proportionately.

and competently utilized. The principal room in a Japanese house can be used for study, television, entertaining the relatives, or for bed. Guests other than family or neighbors are usually not entertained at home, so many kinds of public places are patronized—one to suit each occasion. Japanese hot baths are normally a neighborhood institution; the Finnish sauna has been elevated to a fashionable alternative in

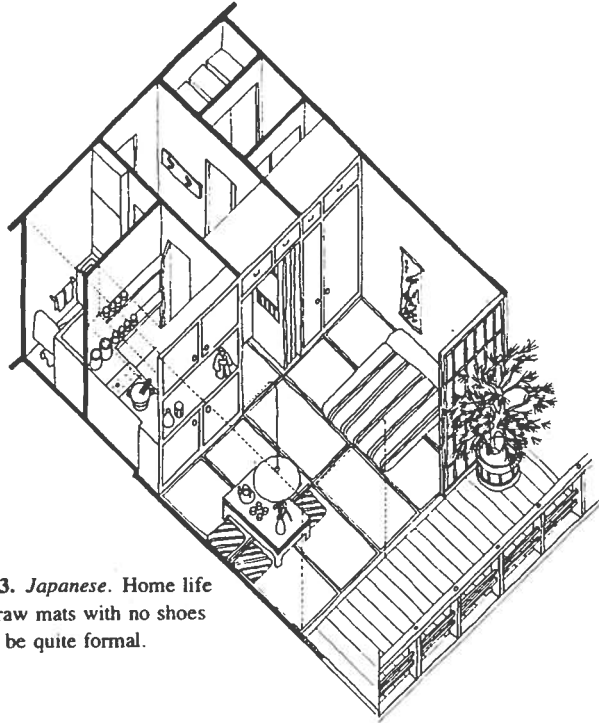


Fig. 3. Japanese. Home life on straw mats with no shoes could be quite formal.

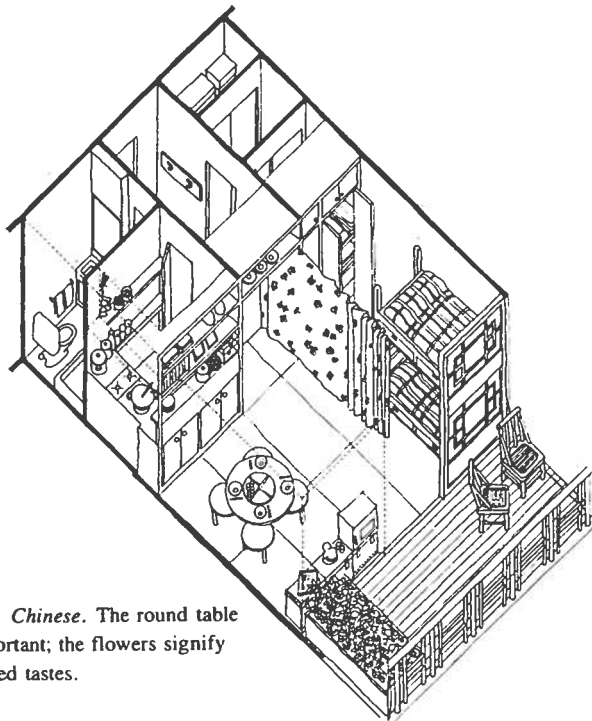


Fig. 4. Chinese. The round table is important; the flowers signify educated tastes.

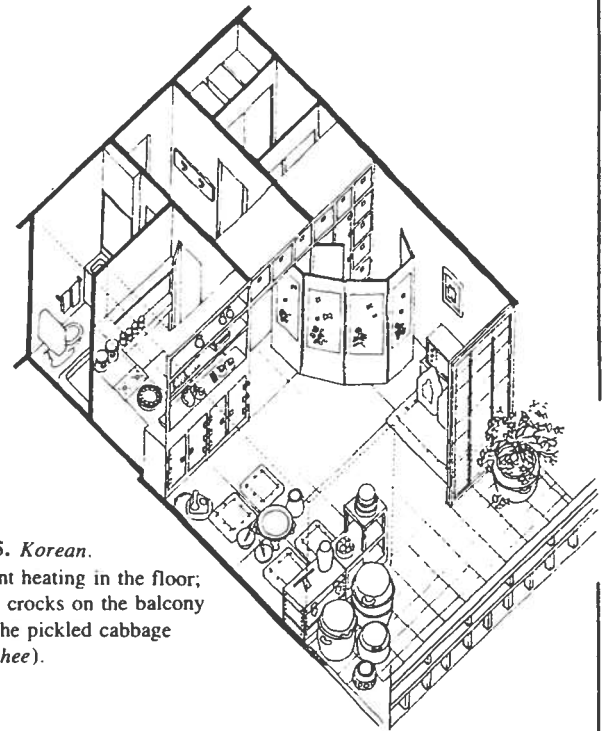


Fig. 5. Korean. Radiant heating in the floor; brown crocks on the balcony keep the pickled cabbage (*kim chee*).

Tokyo apartment houses. Since the population of Tokyo exceeds that of metropolitan New York, and the intensity of cultural transactions is roughly comparable, these Japanese solutions for megalopolitan living must be accorded highest respect (see Figure 3).

Chinese traditions vary widely and quite a few of them make no attempt at space conservation, but the Fukienese and Cantonese arriving in New York are used to the extreme compression of Hong King and Singapore, or the slightly relaxed conditions of Taipei and Bangkok. They might install bunks and a tripod for a small round table. Chinese cooking requires an extraordinary amount of energy (the major restaurants of Hong Kong are the hot spots in its urban ecology), but the tradition of bringing in dishes to go with the home-cooked rice is very strong, so energy economizing is transferred to places outside the dwelling where it is more easily managed (see Figure 4). These Chinese will accept a large share of the Japanese innovations and adaptations; overseas Chinese make up the best overseas market for household appliances from Japan. In public, however, they usually demand the highest horsepower cars and gold-plated services.

Koreans share a housebuilding tradition with the Manchu and many northern Chinese. They install radiant heating into a raised floor and insulate against Siberian winds. Bedding is unrolled at night, but the padding is thinner and the comforters are thicker. Food preparation is more often based upon noodles, dumplings, boiled potatoes, and pickled vegetables instead of rice and fresh vegetables, as with the Chinese and Japanese, and is dependent upon community services for fish and meat preparation (see Figure 5).

Altogether about a quarter-million people now living in the New York region have learned to live in one or more of these East Asian ways. The number is increasing perhaps 5 percent per year.

Wider Range of Alternatives

Hindu tradition is also hugely varied, but immigrants to New York come primarily from four locales in India. They are different enough to make it difficult to cooperate across the subcultures, although they will patronize the same delicatessen. For New York many Indians would like a floor warm enough for bare feet, low cots that could tip up during the day time, low tables, pillows, tapestries, a kitchenette with brass cooking pots, and trunks for storing valuables but which might also serve as benches. Public baths are acceptable to most Indians. New York already has 30,000 South Asians.

An equal number are acquainted with Near Eastern ways of living, from North Africa through Lebanon to Iran, and would put a richly patterned rug on the floor and sleep on pads or cushions. Storage of clothing and valuables in trunks is again very common. The food is drier than curry, requiring more grills and ovens than Indian or East Asian cuisine (see Figure 6).

Not all Middle Eastern immigrants arriving in New York will be rich—most are Palestinian Arabs, Egyptians, Turks, Cypriots, and Moroccans, among whom many have become accustomed to the *gastarbeiter* role. They like tiny semi-private gardens on rooftops, spirited music with a chance to dance, but separation of the sexes when meeting in the neighborhood tea-and-coffee houses and the sherbet shops, as well as in prayer. Baked and grilled foods could be pro-

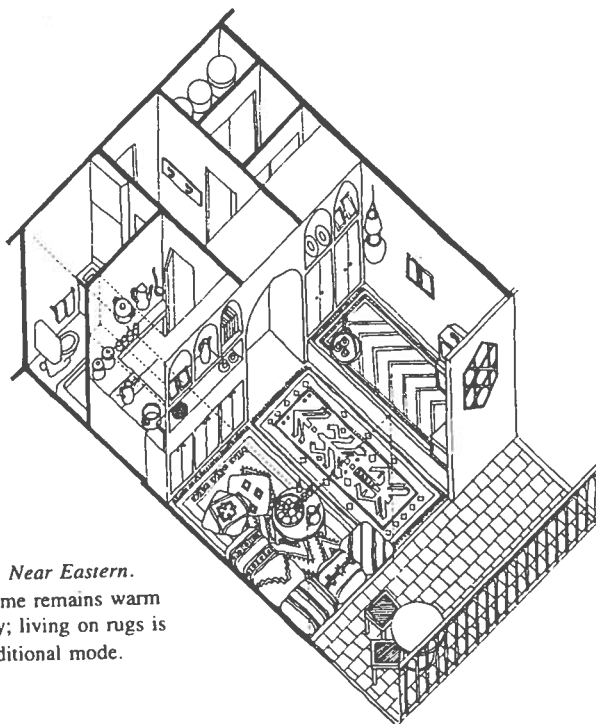


Fig. 6. Near Eastern. The home remains warm and dry; living on rugs is the traditional mode.

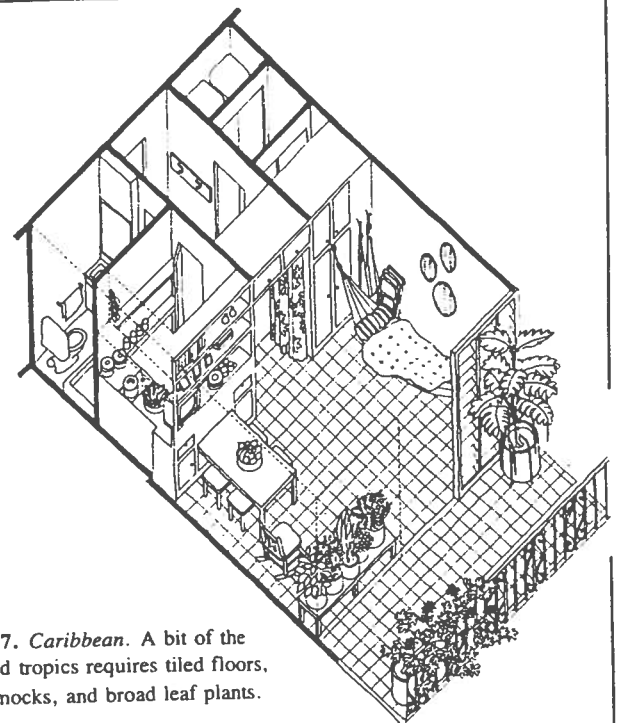


Fig. 7. Caribbean. A bit of the humid tropics requires tiled floors, hammocks, and broad leaf plants.

duced at a corner delicatessen. They need relatively little space for neighborhood cooperation and community celebrations.

On the other side of the world one finds a merging of African, Amerindian, and a bit of Mediterranean tradition into what may be called a Caribbean way of life. These people find that net hammocks are economical of space since they can be taken down or lifted to the ceiling. Sideboards can be used for dining, chairs can be stacked, the floor tiled, and the air kept comfortably humid. Private baths are preferred over communal, deep fried and steamed foods over baked, and colorful clothes over somber. Hospitality is very common so that the numbers of persons in the houses are extremely variable; often people are bedded down over all the floor space, so families get along with a meager amount of furnishing. Perhaps a third of the Caribbean Latins (400,000) know this kind of life; most have been trying to escape to join the affluent Americans (see Figure 7).

When hard-pressed Americans search diligently they discover that their own culture is varied enough to contain several space-conserving life-styles which are hardly ever noticed. One of these might be called "shipboard," although variations have been used more often for mobile homes than for cruise ships or house boats. Beds are built in, walls are cupboards and lockers, the kitchen becomes a galley, the pool (or the sea) becomes the bath. Perhaps a fifth of America is opting for this style elsewhere on the continent, but it is not allowed in New York (see Figure 8).

A comparable style, however, has evolved in Greenwich Village and a few other less distinctive locales which might be called "studio." It ranges from a single "pad" with mattresses on the floor and orange crates for furniture to a

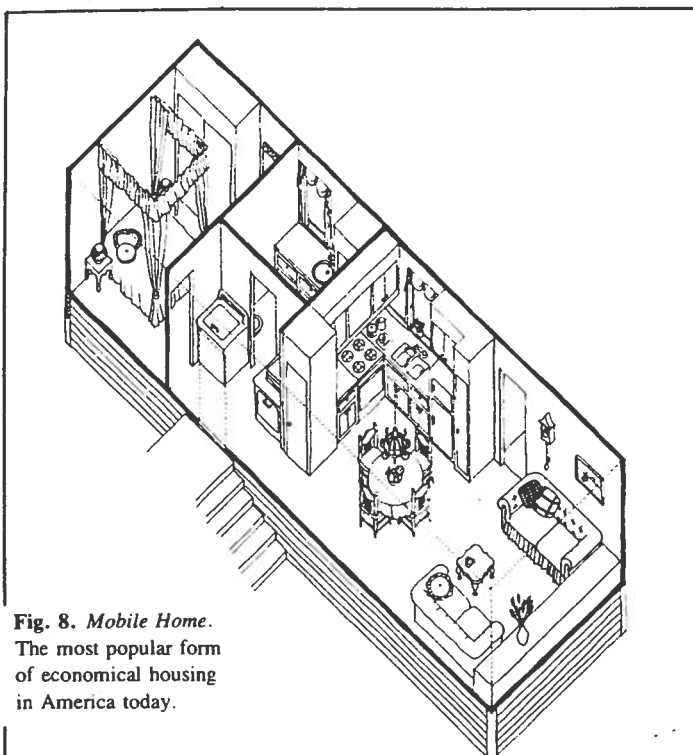


Fig. 8. *Mobile Home*.
The most popular form
of economical housing
in America today.

compact workplace for a professional, with spaces carefully planned for leading a bohemian life.

Our thinking in this direction has been strongly affected by the work of a young, intensely future-oriented architect, Joseph I. Robinson, who has been practicing in the Los Angeles region. He converted an old two-car Berkeley garage into a habitat that placed the occupant into the closest possible contact with the media—hi-fi, video, slides, film, and print. Easily cleaned white padded surfaces on the floor and walls made it possible to hold informal parties of up to thirteen people, since the bunk became a balcony with a clear view of the artistic presentation. Invisible, but exceedingly important, was the ventilation, because in a well-insulated unit metabolic heat from the human body can build up over time to make conditions quite uncomfortable (see Figure 9).

Judges from the teenage generation reacted with a "Wow! It's great!" They especially liked the square meter of carefully lit "garden" or "wilderness" that could be made front stage for meditation or composition at any time of the day or night. A balanced ecosystem fish tank might serve the same function for the hyperkinetic type who demand movement in their environment.

These discovered potentials are reassuring. They imply (1) that the unique role of New York among the world's metropolises can be reinforced despite the crises, (2) that a significant market exists for a variety of resource-conserving designs, and (3) that this is the time to begin the necessary changes. It certainly appears feasible for Roosevelt Island to move in this direction when filling up the remaining sites. The worrisome feature, however, is the *code*—although authorities allow variations that yield superior performance, architects know that they can get only one or two innovations

through on any single project. The changes from code for these different ways for economical living are so extensive that it would take more than a professional lifetime to negotiate. A "solution" which clusters tiny apartments around elevator shafts serving exotic life-styles might be elegant theoretically, but from a practical point of view it is impossible to build. Regretfully, this idea was labeled "idealistic" and set aside while other potentials for Roosevelt Island were investigated.

Ultimate Solution

Would New York be able to function after an extended coal strike or a serious flareup of the Arab wars? Undoubtedly gasoline would have to be rationed, thermostats turned down to 10°C (50°F), surplus rooms closed off, the hot water changed to tepid, and everyone would wear one or two layers more of clothing.

How would it operate after a three-year drought? Experience suggests that water-using services, like bottle washing, would shut down, and pressure in the pipes would be maintained only part of the day, being restored only for fire-fighting during the period shut down—as in Bombay before the monsoon. People would fill bathtubs, barrels, and buckets to tide them over the times the spigots gurgled but delivered little fluid.

This is not too different from fifty to seventy years ago, when sizable quantities of New York's present housing stock came into existence. The parlor in a house or a large apartment in those days was rarely heated in the dead of winter. When a blizzard blew in a family retreated to one room, the farm-style kitchen or a south-facing bedroom, each member carrying in his bedding, often reading and conversing from

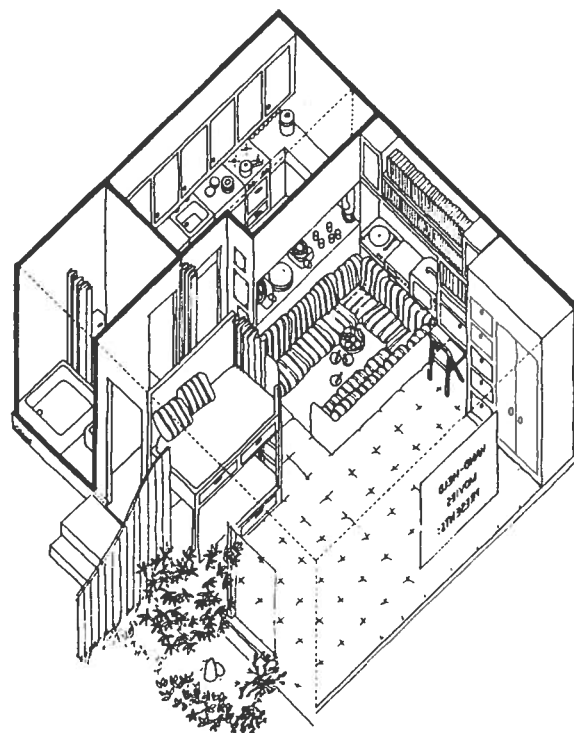


Fig. 9. *Village Studio*. The Bohemian life, open to all the media and meditation, can be lived on polyurethane foam pad.

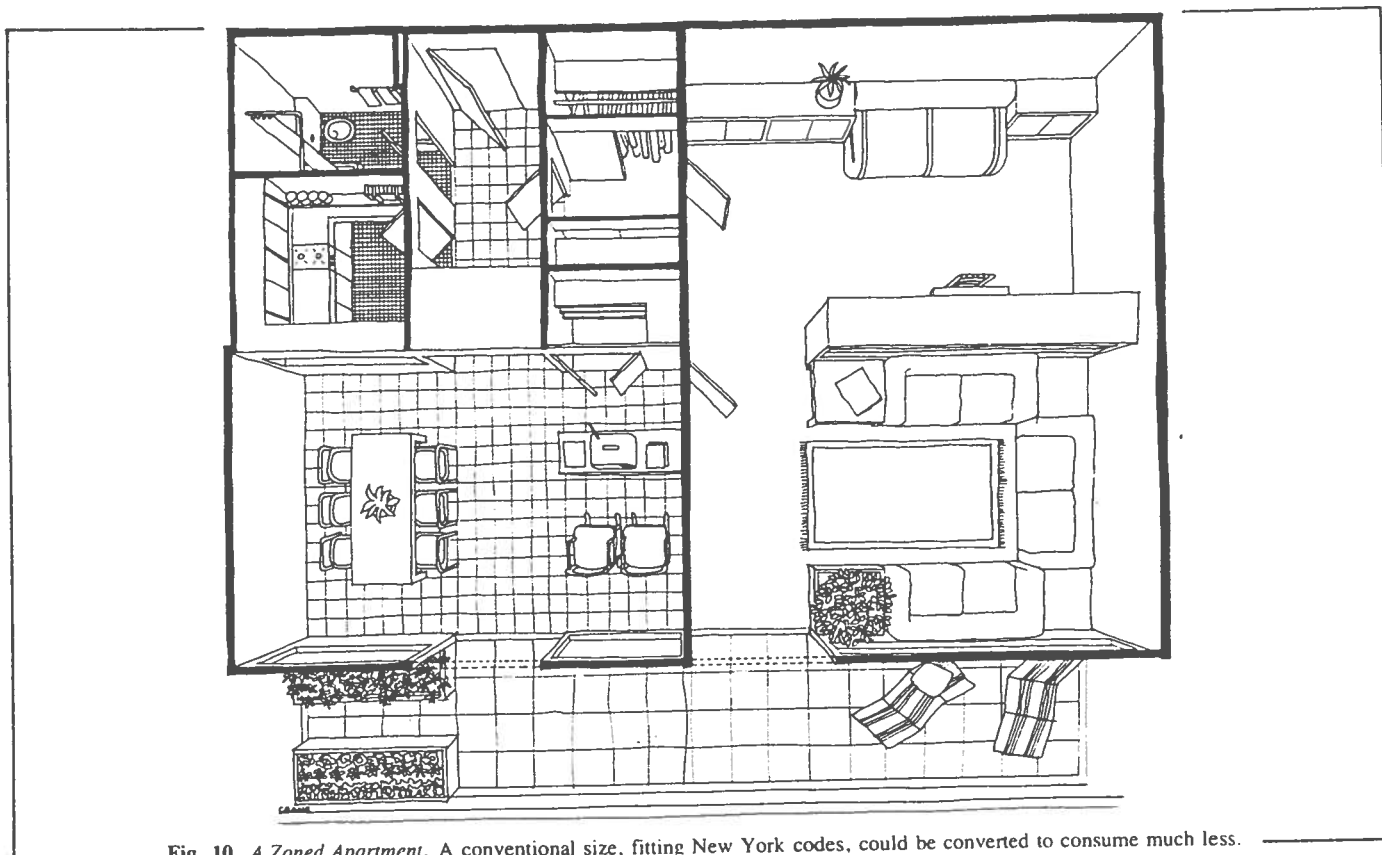


Fig. 10. A Zoned Apartment. A conventional size, fitting New York codes, could be converted to consume much less.

inside a blanket. (Bundling was a defense against the cold in an earlier era: it disappeared during the Victorian period).

At this point in our thinking the most radical, yet apparently practical, idea became almost obvious. Apartments should be designed to meet code, but the largest room should be left unheated and uncooled for resource-conserving lifestyles. A bedroom-kitchen-bath combination would be specially "zoned" for one of these modes of living, and the community facilities would be designed to reinforce it.

Then the living room area could become the unheated parlor, but it could also serve as an anteroom, an enclosed patio, a rumpus room for the kids, or a garden. People would retreat to the inner space during the cold periods and heat waves, but at other times spill out onto their private, enclosed "porch" (see Figure 10). Yet by changing the furnishing, twisting several valves, and firing up the boiler, the apartment could become a familiar lower-middle-income New York apartment, and therefore, according to the peculiar methods for appraising risk used until now by bankers and federal mortgage guarantors, it is eminently suited for full financing at the best interest rates.

This strategy might be called "getting in bed with the system." The approach is regrettable because 60–80 percent must be added to the cost to meet the code and the standards of the mortgage bankers. The total waste of natural resources over the lifetime of the apartment might be 10–20 percent of all consumption associated with living in the apartment. A price must be paid for standard, unimaginative financing.

Another new idea should be added that might make the extra cost worthwhile. Perhaps an apartment complex could

be built or remodeled to *show* New Yorkers, in advance of prospective crises, how they could survive in reasonable comfort by reorganizing their present dwelling units, during periods of restricted supply of utilities. The existence of the extra space could make the new apartments a direct analog of the units meeting code in the city. A very large share of whatever economies that could be achieved could be transferred to other apartment houses not only in New York, but throughout the megalopolis of which it is a part. Then a further thought suggests itself. Why not design an active *teaching* device? Instead of a demonstration project which implies waiting until influential people have observed, analyzed, and concluded what needs to be done to traditional housing to render it livable during times of future stress, why not *instruct* people in the behavioral routines and outlooks that should enable them to perform well under stringent conditions? Novices could seek admission to a going community, learn how to live by that style, and then set up a colony of their own elsewhere in the megalopolis.

So the design concept for Roosevelt Island changed once again. The proposed apartment complex would incorporate a number of compatible Third World and compact American communities, each of which divides the standard apartment into a cozy inner zone, a semiprivate interstitial area, and appropriate common facilities. Part of the community must be stable; it will already know how to live this way and be willing to teach others.

The novice household signs up for a three-month to a one-year lease for a furnished unit within its chosen community. It learns to sleep in a hammock, or take a Japanese bath,

adjusting to dietary changes along the way. If the style it chooses initially does not fit one or more in the family, another that seems more appealing may be tried. Quite a few of the interested families are likely to be those of real estate promoters, agents, architects, and other specialists who later undertake to "retrofit" apartment buildings to accommodate popular new life-styles. They recognize that the market is much broader than the world-server components of the Third World population residing in New York. The Roosevelt Island project could produce some of the "graduates" needed for teaching and selling others.

Thus promoters could start fads or fashions, or become gurus. New life-styles could shift behavior in the heart of the megalopolis in a direction that anyone using foresight realizes that it should go. Virtually all the foreseen changes following such a shift appear to be highly salutary. Conservationist jeremiahs living in spacious suburbia would either come back to the city, saving the energy needed to circulate on the periphery and commute to work, or be exposed as hypocrites. The foreseeable effects upon crime and delinquency would appear to counterbalance each other; the principal industrial employment that would suffer—air conditioning and heavy furniture—is located out of town. Any reduction of the indirect subsidies for energy-expensive suburban building would free funds for the inner city.

Most megalopolitans are unlikely to respond, however, until the anticipated crises are upon them. Nevertheless, they will have been entertained by such communal experiments (one can already imagine a long series of *New Yorker* cartoons exploiting local confrontations with Third World solutions). Ideas people learn through satire could be put to use rapidly if a number of tested models existed.

Because it seemed very important that something should be done soon to teach people how to live well in a resource-scarce era, we decided to team up and enter the UDC architectural competition seriously. Freebairn-Smith started to consider how the various community facilities might affect the stacking around skip-stop elevators shafts. What novel structural forms might be generated? We began to draw upon Asian and Caribbean experience, seeking the appropriate means for using the restricted amount of open space and shoreline to advantage.

Crash and Subsequent Thoughts

It was just then that the blow fell. A registered letter appeared; it had been sent off by the supervisor of the architectural competition. The letter began, "Due to financial uncertainty at the Urban Development Corporation, I advise you to stop work." The UDC announced a delay. The competition was reopened about a month later, but neither of us had time then to develop these ideas any further.

Architectural journals published brief stories about the four winners sharing the top prize. Each of them was found to utilize the site effectively, making the most of the view by massing the units in an interesting way. They were purely architectural solutions, doing well with the endowment of land and amenity, fitting neatly into Jose Luis Sert's overall

scheme for the island, representing the end of an evolutionary sequence. None of them took into consideration the energy future for human settlements planning in the strategic sense. This is no criticism of the winners, because if the UDC thought it needed such contributions, it would have said so when preparing the terms of the competition. In fact, at least one of the winners had zoned activity spaces in the apartments in such a way that they could be converted satisfactorily for a few of these ways of life. The UDC is also quoted as saying that "for the time being" it will not be able to bring any of the winning designs into being.

It would be most interesting to discover whether sophisticated urban consumers could learn from the Third World residents in their midst who know something about how to get along with less. It would be even more rewarding to find immigrants who develop the confidence to teach. When reinforcing each other in groups and communities, Third Worlders appear to have a fair chance of success. The opportunity for creating a "live-in academy" for transmitting the respective arts of efficient consumption should exist in many places besides New York, but the most promising locale from which any movement could be launched is in the heart of that city.

More challenging yet is the creative response by the new generation of Americans. Will they synthesize urban habitats with an even better fit to future conditions? They already sense better than any Third World society the need for participatory action in the full range of human groupings, from the family to the corporate giant. They might beat a nostalgic retreat to the back country, where human interference is less, but where it is also more difficult to transmit what is learned. If young Americans remain adaptive and innovative in town, New York has an excellent chance for retaining its attraction for world-servers and maintaining its function as a world capital. □

READINGS SUGGESTED BY THE AUTHOR:

Abu-Lughad, Janet, and Hay, Richard, Jr., eds. *Third World Urbanization*. Chicago: Maroufa Press, 1977.

Davis, Sam W., ed. *The Form of Housing*. Englewood Cliffs, N.J.: Prentice Hall, 1977.

Meier, Richard L. *Planning for an Urban World: Design of Resource-Conserving Cities*. Cambridge, Mass.: MIT Press, 1974.

Turner, J.F.C. *Housing by People: Towards Autonomy in Building Environments*. New York: Pantheon Books, 1977.

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