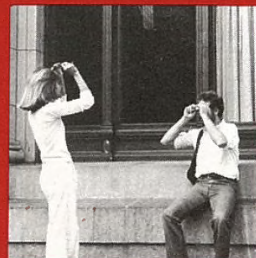


The Social Life of Small Urban Spaces



William H. Whyte

Project for Public Spaces

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by William H. Whyte

Project for Public Spaces
New York, NY

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Introduction

This book is about city spaces, why some work for people, and some do not, and what the practical lessons may be. It is a by-product of first-hand observation.

In 1970, I formed a small research group, The Street Life Project, and began looking at city spaces. At that time, direct observation had long been used for the study of people in far-off lands. It had not been used to any great extent in the U.S. city. There was much concern over urban crowding, but most of the research on the issue was done somewhere other than where it supposedly occurred. The most notable studies were of crowded animals, or of students and members of institutions responding to experimental situations—often valuable research, to be sure, but somewhat vicarious.

The Street Life Project began its study by looking at New York City parks and playgrounds and such informal recreation areas as city blocks. One of the first things that struck us was the *lack* of crowding in many of these areas. A few were jammed, but more were nearer empty than full, often in neighborhoods that ranked very high in density of people. Sheer space, obviously, was not of itself attracting children. Many streets were.

It is often assumed that children play in the street because they lack playground space. But many children play in the streets because they like to. One of the best play areas we came across was a block on 101st Street in East Harlem. It had its



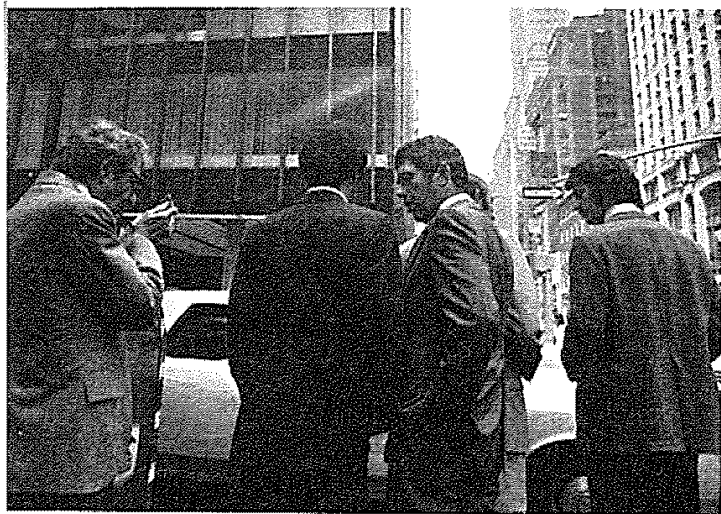
101st Street, East Harlem.



Seagram's

problems, but it worked. The street itself was the play area. Adjoining stoops and fire escapes provided prime viewing across the street and were highly functional for mothers and older people. There were other factors at work, too, and, had we been more prescient, we could have saved ourselves a lot of time spent later looking at plazas. Though we did not know it then, this block had within it all the basic elements of a successful urban place.

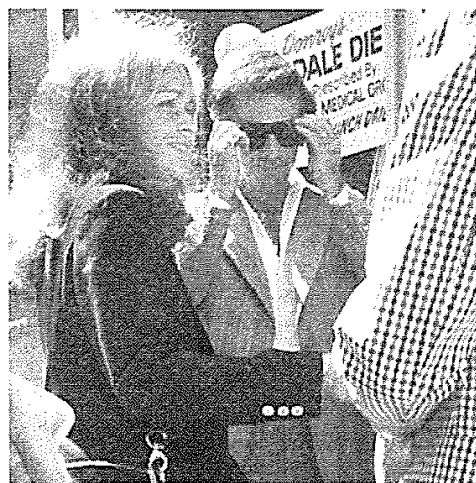
As our studies took us nearer the center of New York, the imbalance in space use was even more apparent. Most of the



crowding could be traced to a series of choke points—subway stations, in particular. In total, these spaces are only a fraction of downtown, but the number of people using them is so high, the experience so abysmal, that it colors our perception of the city around, out of all proportion to the space involved. The fact that there may be lots of empty space somewhere else little mitigates the discomfort. And there is a strong carry-over effect.

This affects researchers, too. We see what we expect to see, and have been so conditioned to see crowded spaces in center city that it is often difficult to see empty ones. But when we looked, there they were.







The amount of space, furthermore, was increasing. Since 1961, New York City has been giving incentive bonuses to builders who provided plazas. For each square foot of plaza, builders could add 10 square feet of commercial floor space over and above the amount normally permitted by zoning. So they did—without exception. Every new office building provided a plaza or comparable space: in total, by 1972, some 20 acres of the world's most expensive open space.

We discovered that some plazas, especially at lunchtime, attracted a lot of peo-

ple. One, the plaza of the Seagram Building, was the place that helped give the city the idea for the plaza bonus. Built in 1958, this austere elegant area had not been planned as a people's plaza, but that is what it became. On a good day, there would be a hundred and fifty people sitting, sunbathing, picnicking, and shmoozing—idly gossiping, talking “nothing talk.” People also liked 77 Water Street, known as “swingers’ plaza” because of the young crowd that populated it.

But on most plazas, we didn't see many people. The plazas weren't used for much

except walking across. In the middle of the lunch hour on a beautiful, sunny day the number of people sitting on plazas averaged four per 1,000 square feet of space—an extraordinarily low figure for so dense a center. The tightest-knit CBD (central business district) anywhere contained a surprising amount of open space that was relatively empty and unused.

If places like Seagram's and 77 Water Street could work so well, why not the others? The city was being had. For the millions of dollars of extra space it was handing out to builders, it had every right to demand much better plazas in return.

I put the question to the chairman of the City Planning Commission, Donald Elliott. As a matter of fact, I entrapped him into spending a weekend looking at time-lapse films of plaza use and nonuse. He felt that tougher zoning was in order. If we could find out why the good plazas worked and the bad ones didn't, and come up with hard guidelines, we could have the basis of a new code. Since we could expect the proposals to be strongly contested, it would be important to document the case to a fare-thee-well.

We set to work. We began studying a cross-section of spaces—in all, 16 plazas, 3 small parks, and a number of odds and ends. I will pass over the false starts, the dead ends, and the floundering arounds, save to note that there were a lot and that the research was nowhere as tidy and sequential as it can seem in the telling. Let me also note that the findings should have been staggeringly obvious to us had we thought of them in the first place. But we didn't. Opposite propositions were often what seemed obvious. We arrived at our eventual findings by a succession of busted hypotheses.

The research continued for some three years. I like to cite the figure because it sounds impressive. But it is calendar time. For all practical purposes, at the end of six months we had completed our basic

research and arrived at our recommendations. The City, alas, had other concerns on its mind, and we found that communicating the findings was to take more time than arriving at them. We logged many hours in church basements and meeting rooms giving film and slide presentations to community groups, architects, planners, businessmen, developers, and real-estate people. We continued our research; we had to keep our findings up-to-date, for



now we were disciplined by adversaries. But at length the City Planning Commission incorporated our recommendations in a proposed new open-space zoning code, and in May 1975 it was adopted by the city's Board of Estimate. As a consequence, there has been a salutary improvement in the design of new spaces and the rejuvenation of old ones. (Since the zoning may have useful guidelines for other cities, an abridged text is provided as appendix B.)

But zoning is certainly not the ideal way to achieve the better design of spaces. It ought to be done for its own sake. For economics alone, it makes sense. An enormous expenditure of design expertise, and of travertine and steel, went into the creation of the many really bum office-building plazas around the country. To what end? As this manual will detail, it is far easier, simpler to create spaces that work for people than those that do not—and a tremendous difference it can make to the life of a city.

The Life of Plazas 1



We started by studying how people use plazas. We mounted time-lapse cameras overlooking the plazas and recorded daily patterns. We talked to people to find where they came from, where they worked, how frequently they used the place and what they thought of it. But, mostly, we watched people to see what they did.

Most of the people who use plazas, we found, are young office workers from nearby buildings. There may be relatively few patrons from the plaza's own building; as some secretaries confide, they'd just as soon put a little distance between themselves and the boss. But commuter distances are usually short; for most plazas, the effective market radius is about three blocks. Small parks, like Paley and Greenacre in New York, tend to have more assorted patrons throughout the day—upper-income older people, people coming from a distance. But office workers still predominate, the bulk from nearby.

This uncomplicated demography underscores an elemental point about good urban spaces: supply creates demand. A good new space builds a new constituency. It stimulates people into new habits—al fresco lunches—and provides new paths to and from work, new places to pause. It does all this very quickly. In Chicago's Loop, there were no such amenities not so long ago. Now, the plaza of the First National Bank has thoroughly changed the

midday way of life for thousands of people. A success like this in no way surfeits demand for spaces; it indicates how great the unrealized potential is.

The best-used plazas are sociable places, with a higher proportion of couples than you find in less-used places, more people in groups, more people meeting people, or exchanging goodbyes. At five of the most-used plazas in New York, the proportion of people in groups runs about 45 percent; in five of the least used, 32 percent. A high proportion of people in groups is an index of selectivity. When people go to a place in twos or threes or rendezvous there, it is most often because they have decided to. Nor are these sociable places less congenial to the individual. In absolute numbers, they attract more individuals than do less-used spaces. If you



Above: Paley Park.

Below: A useful sculpture exhibit at Seagram's plaza.



are alone, a lively place can be the best place to be.

The most-used places also tend to have a higher than average proportion of women. The male-female ratio of a plaza basically reflects the composition of the work force, which varies from area to area—in midtown New York it runs about 60 percent male, 40 percent female. Women are more discriminating than men as to where they will sit, more sensitive to annoyances, and women spend more time casting the various possibilities. If a plaza has a markedly lower than average proportion of women, something is wrong. Where there is a higher than average proportion of women, the plaza is probably a good one and has been chosen as such.

The rhythms of plaza life are much alike from place to place. In the morning hours, patronage will be sporadic. A hot-dog vendor setting up his cart at the corner, elderly pedestrians pausing for a rest, a delivery messenger or two, a shoeshine man, some tourists, perhaps an odd type, like a scavenger woman with shopping bags. If there is any construction work in the vicinity, hard hats will appear shortly after 11:00 A.M. with beer cans and sandwiches. Things will start to liven up. Around noon, the main clientele begins to arrive. Soon, activity will be near peak and will stay there until a little before 2:00 P.M. Some 80 percent of the total hours of use will be concentrated in these two hours. In mid and late afternoon, use is again sporadic. If there's a special event, such as a jazz concert, the flow going home will be tapped, with people staying as late as 6:00 or 6:30 P.M. Ordinarily, however, plazas go dead by 6:00 and stay that way until the next morning.

During peak hours the number of people on a plaza will vary considerably according to seasons and weather. The way people distribute themselves over the space, however, will be fairly consistent, with some sectors getting heavy use day in

and day out, others much less. In our sightings we find it easy to map every person, but the patterns are regular enough that you could count the number in only one sector, then multiply by a given factor, and come within a percent or so of the total number of people at the plaza.

Off-peak use often gives the best clues to people's preferences. When a place is jammed, a person sits where he can. This may or may not be where he most wants to. After the main crowd has left, the choices can be significant. Some parts of the plaza become quite empty; others continue to be used. At Seagram's, a rear ledge under the trees is moderately, but steadily, occupied when other ledges are empty; it seems the most uncrowded of places, but on a cumulative basis it is the best-used part of Seagram's.

Men show a tendency to take the front-row seats, and, if there is a kind of gate, men will be the guardians of it. Women tend to favor places slightly secluded. If there are double-sided benches parallel to a street, the inner side will usually have a high proportion of women; the outer, of men.

Of the men up front, the most conspicuous are girl watchers. They work at it, and so demonstratively as to suggest that their chief interest may not really be the girls so much as the show of watching them. Generally, the watchers line up quite close together, in groups of three to five. If they are construction workers, they will be very demonstrative, much given to whistling, laughing, direct salutations. This is also true of most girl watchers in New York's financial area. In midtown, they are more inhibited, playing it coolly, with a good bit of sniggering and smirking, as if the girls were not measuring up. It is all machismo, however, whether uptown or downtown. Not once have we ever seen a girl watcher pick up a girl, or attempt to.

Few others will either. Plazas are not



ideal places for striking up acquaintances, and even on the most sociable of them, there is not much mingling. When strangers are in proximity, the nearest thing to an exchange is what Erving Goffman has called civil inattention. If there are, say, two smashing blondes on a ledge, the men nearby will usually put on an elaborate show of disregard. Watch closely, however, and you will see them give themselves away with covert glances, involuntary primping of the hair, tugs at the earlobe.

Lovers are to be found on plazas. But not where you would expect them. When we first started interviewing, people told us we'd find lovers in the rear places (pot smokers, too). But they weren't usually there. They would be out front. The most fervent embracing we've recorded on film has usually taken place in the most visible of locations, with the couple oblivious of the crowd.

Certain locations become rendezvous points for coteries of various kinds. For a while, the south wall of Chase plaza was a gathering point for camera bugs, the kind who like to buy new lenses and talk about them. Patterns of this sort may last no more than a season—or persist for years.

Some time ago, one particular spot became a gathering place for raffish younger people; since then, there have been many changeovers in personnel, but it is still a gathering place for raffish younger people.

Self-Congestion

What attracts people most, it would appear, is other people. If I belabor the point, it is because many urban spaces are being designed as though the opposite were true, and that what people liked best were the places they stay away from. People often do talk along such lines; this is why their responses to questionnaires can be so misleading. How many people would say they like to sit in the middle of a crowd? Instead, they speak of getting away from it all, and use terms like "escape," "oasis," "retreat." What people *do*, however, reveals a different priority.

This was first brought home to us in a study of street conversations. When people stop to have a conversation, we wondered, how far away do they move from the main pedestrian flow? We were especially interested in finding out how much of the normally unused buffer space next





to buildings would be used. So we set up time-lapse cameras overlooking several key street corners and began plotting the location of all conversations lasting a minute or longer.

People didn't move out of the main pedestrian flow. They stayed in it or moved into it, and the great bulk of the conversations were smack in the center of the flow—the 100 percent location, to use the real-estate term. The same gravitation characterized “traveling conversations”—the kind in which two men move about, alternating the roles of straight man and principal talker. There is a lot of apparent motion. But if you plot the orbits, you will find they are usually centered around the 100 percent spot.

Just why people behave like this, we have never been able to determine. It is understandable that conversations should originate within the main flow. Conversations are incident to pedestrian journeys; where there are the most people, the likelihood of a meeting or a leave-taking is highest. What is less explainable is people's inclination to remain in the main flow, blocking traffic, being jostled by it.

This does not seem to be a matter of inertia but of choice—instinctive, perhaps, but by no means illogical. In the center of the crowd you have the maximum choice—to break off, to continue—much as you have in the center of a cocktail party, itself a moving conversation growing ever denser and denser.

People also sit in the mainstream. At the Seagram plaza, the main pedestrian paths are on diagonals from the building entrance to the corners of the steps. These are natural junction and transfer points and there is usually a lot of activity at them. They are also a favored place for sitting and picnicking. Sometimes there will be so many people that pedestrians have to step carefully to negotiate the steps. The pedestrians rarely complain. While some will detour around the blockage, most will thread their way through it.

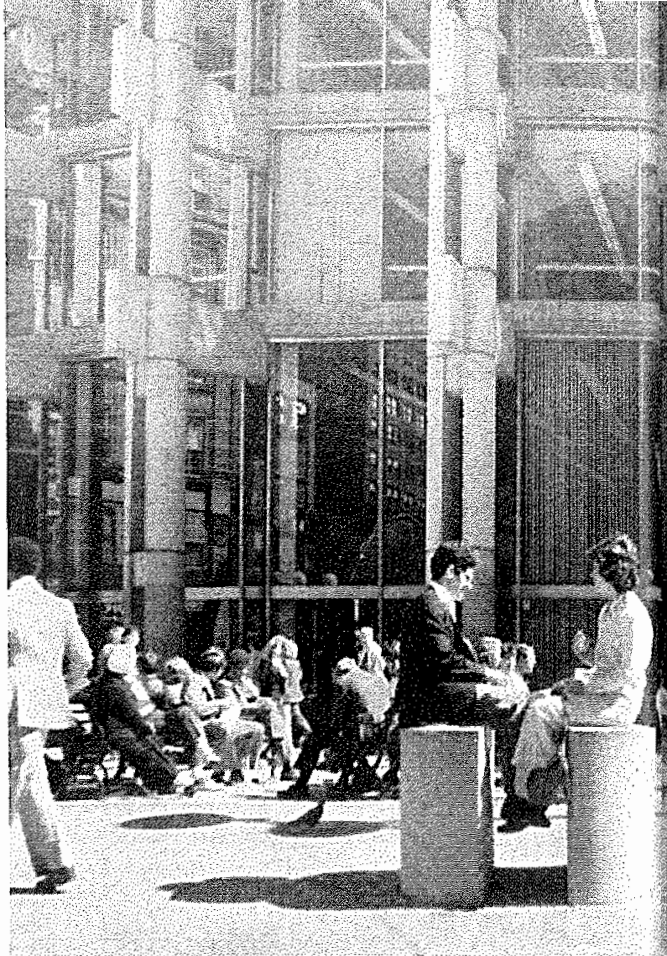
Standing patterns are similar. When people stop to talk on a plaza, they usually do so in the middle of the traffic stream. They also show an inclination to station themselves near objects, such as a flagpole or a statue. They like well-defined places, such as steps, or the border of a pool.

What they rarely choose is the middle of a large space.

There are a number of explanations. The preference for pillars might be ascribed to some primeval instinct: you have a full view of all corners but your rear is covered. But this doesn't explain the inclination men have for lining up at the curb. Typically, they face inwards, toward the sidewalk, with their backs exposed to the dangers of the street.

Foot movements are consistent, too. They seem to be a sort of silent language. Often, in a shmoozing group no one will be saying anything. Men stand bound in amiable silence, surveying the passing scene. Then, slowly, rhythmically, one of the men rocks up and down: first on the ball of the foot, then back on the heel. He stops. Another man starts the same movement. Sometimes there are reciprocal gestures. One man makes a half turn to the right. Then, after a rhythmic interval, another responds with a half turn to the left. Some kind of communication seems to be taking place here, but I've never broken the code.

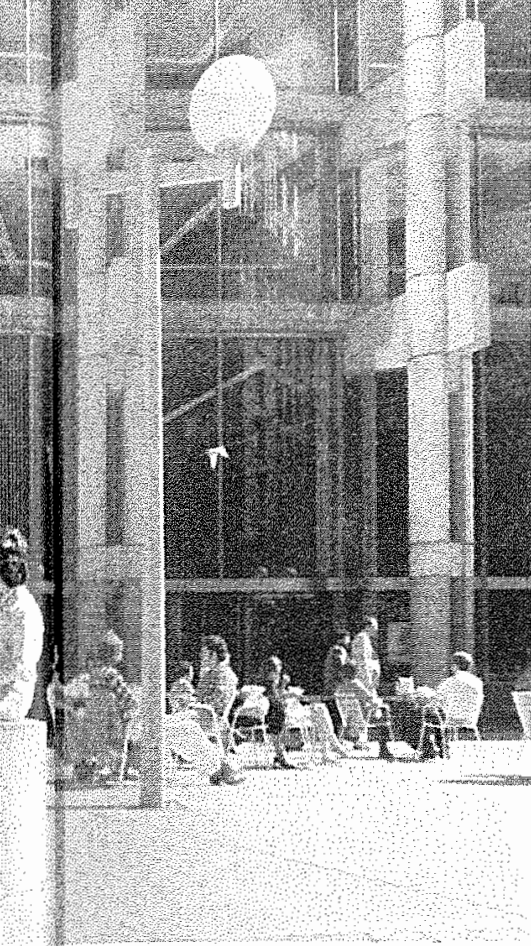
Whatever they may mean, people's movements are one of the great spectacles of a plaza. You do not see this in architectural photographs, which typically are empty of life and are taken from a perspective few people share. It is a quite misleading one. At eye level the scene comes alive with movement and color—people walking quickly, walking slowly, skipping up steps, weaving in and out on crossing patterns, accelerating and retarding to match the moves of the others. There is a beauty that is beguiling to watch, and one senses that the players are quite aware of it themselves. You see this, too, in the way they arrange themselves on steps and ledges. They often do so with a grace that they, too, must sense. With its brown-gray monochrome, Seagram's is the best of settings—especially in the rain, when an umbrella or two spots



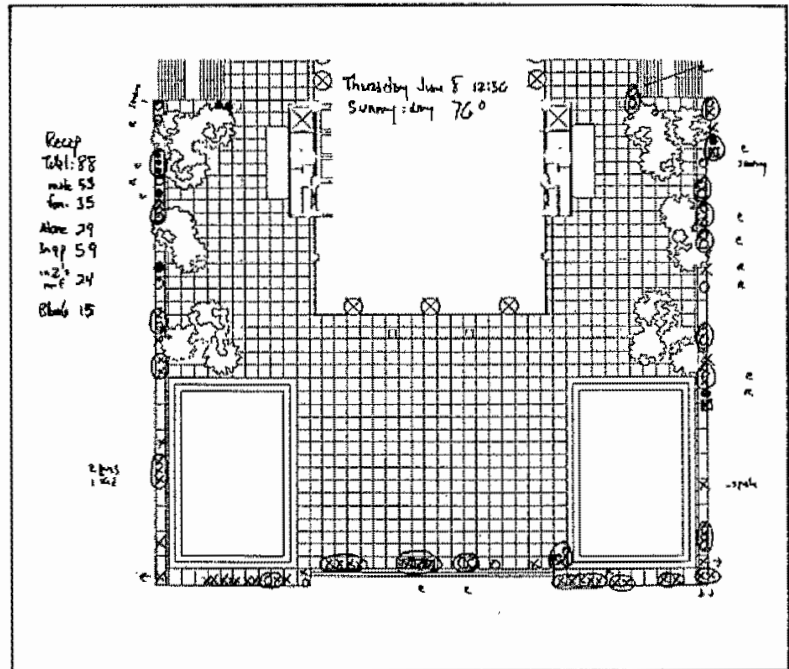
color in the right places, like Corot's red dots.

How peculiar are such patterns to New York? Our working assumption was that behavior in other cities would probably differ little, and subsequent comparisons have proved our assumption correct. The important variable is city size. As I will discuss in more detail, in smaller cities, densities tend to be lower, pedestrians move at a slower pace, and there is less of the social activity characteristic of high-traffic areas. In most other respects, pedestrian patterns are similar.

Observers in other countries have also noted the tendency to self-congestion. In his study of pedestrians in Copenhagen, architect Jan Gehl mapped bunching patterns almost identical to those observable here. Matthew Ciolek studied an Australian shopping center, with similar results.



Left: The new parklet in front of the Boston Five-Cent Savings Bank has become one of Old Boston's most congenial gathering places.



This is a typical sighting map. We found that one could map the location of every sitter, whether male (X), female (O), alone, or with others (XO), in about five minutes, little more time than a simple head count would take.

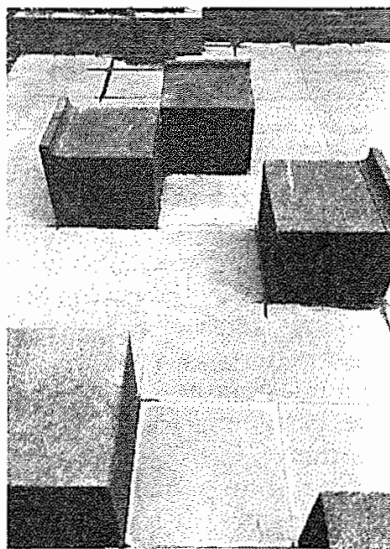
"Contrary to 'common sense' expectations," Ciolek notes, "the great majority of people were found to select their sites for social interaction right on or very close to the traffic lines intersecting the plaza. Relatively few people formed their gatherings away from the spaces used for navigation."

The strongest similarities are found among the world's largest cities. People in them tend to behave more like their counterparts in other world cities than like fellow nationals in smaller cities. Big-city people walk faster, for one thing, and they self-congest. After we had completed our New York study, we made a brief comparison study of Tokyo and found the proclivity to stop and talk in the middle of department-store doorways, busy corners, and the like, is just as strong in that city as in New York. For all the cultural differ-

ences, sitting patterns in parks and plazas are much the same, too. Similarly, shmoozing patterns in Milan's Galleria are remarkably like those in New York's garment center. Modest conclusion: given the basic elements of a center city—such as high pedestrian volumes, and concentration and mixture of activities—people in one place tend to act much like people in another.

Sitting Space

2



In their use of plazas, New Yorkers were very consistent. Day in, day out, many of them would sit at certain plazas, few at others. On the face of it, there should not have been this variance. Most of the plazas we were studying were fairly comparable. With few exceptions, they were on major avenues and usually occupied a block front. They were close to bus stops and subway stations and had strong pedestrian flows on the sidewalks beside them. Yet when we rated plazas according to the number of people sitting on them at peak time, there was a very wide range—from 160 people at 77 Water Street to 17 at 280 Park Avenue (see chart 1).

How come? The first factor we studied was the sun. We thought it might well be the critical one, and our initial time-lapse studies seemed to bear this out. Subsequent studies did not. As I will note later, they showed that the sun was important, but did not explain the difference in the popularity of plazas.

Nor did aesthetics. We never thought ourselves capable of measuring such factors, but did expect our research to show the most successful plazas would tend to be the most pleasing visually. Seagram's seemed very much a case in point. Here again, the evidence proved conflicting. Not only was clean, elegant Seagram's successful; so was the fun plaza at 77 Water Street, which some architects look on as kitsch. We also noticed that the elegance and purity of a building's design seems to

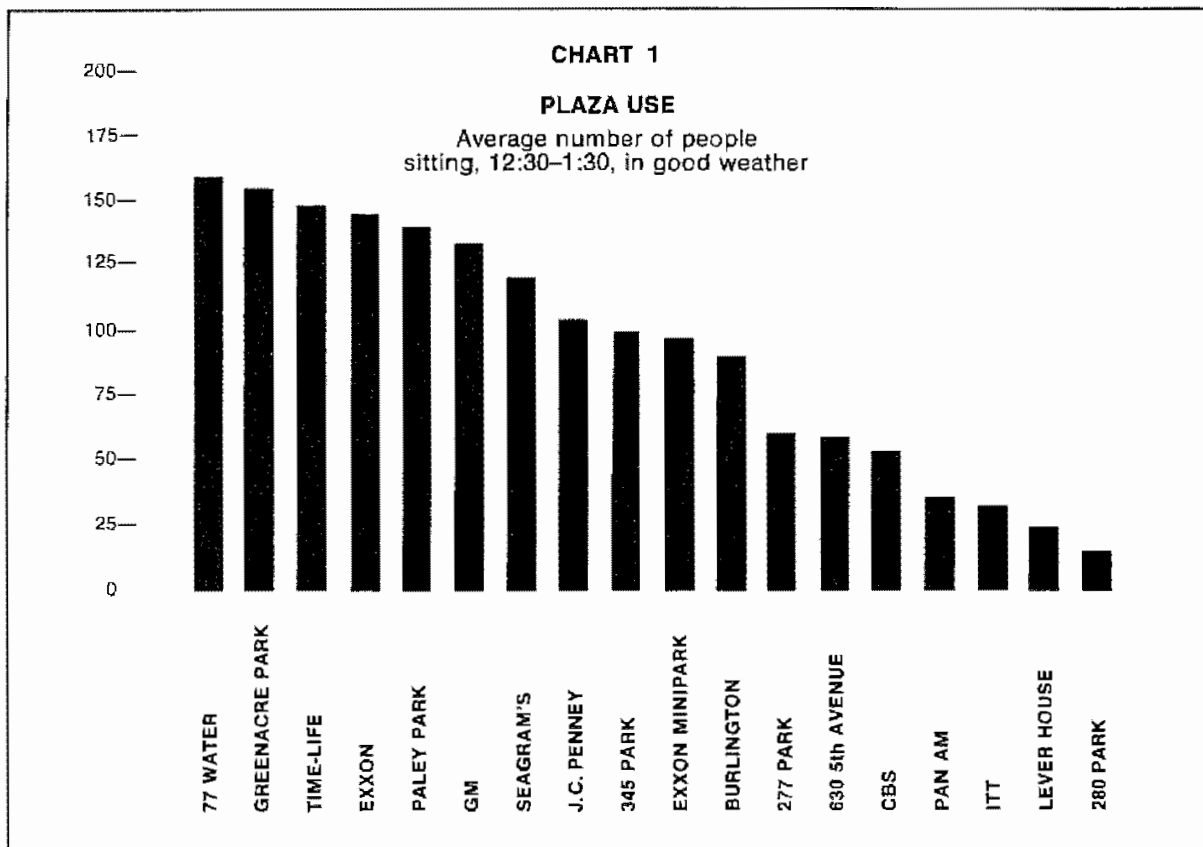


the ark
at
citicorp
center



Above: The ledge at St. Peter's Church, part of the Citicorp complex, has become one of the most-used sitting places on Lexington Avenue.

Left: Another popular place to tarry is a simple round bench at Rockefeller Center, just across the street from St. Patrick's Cathedral.



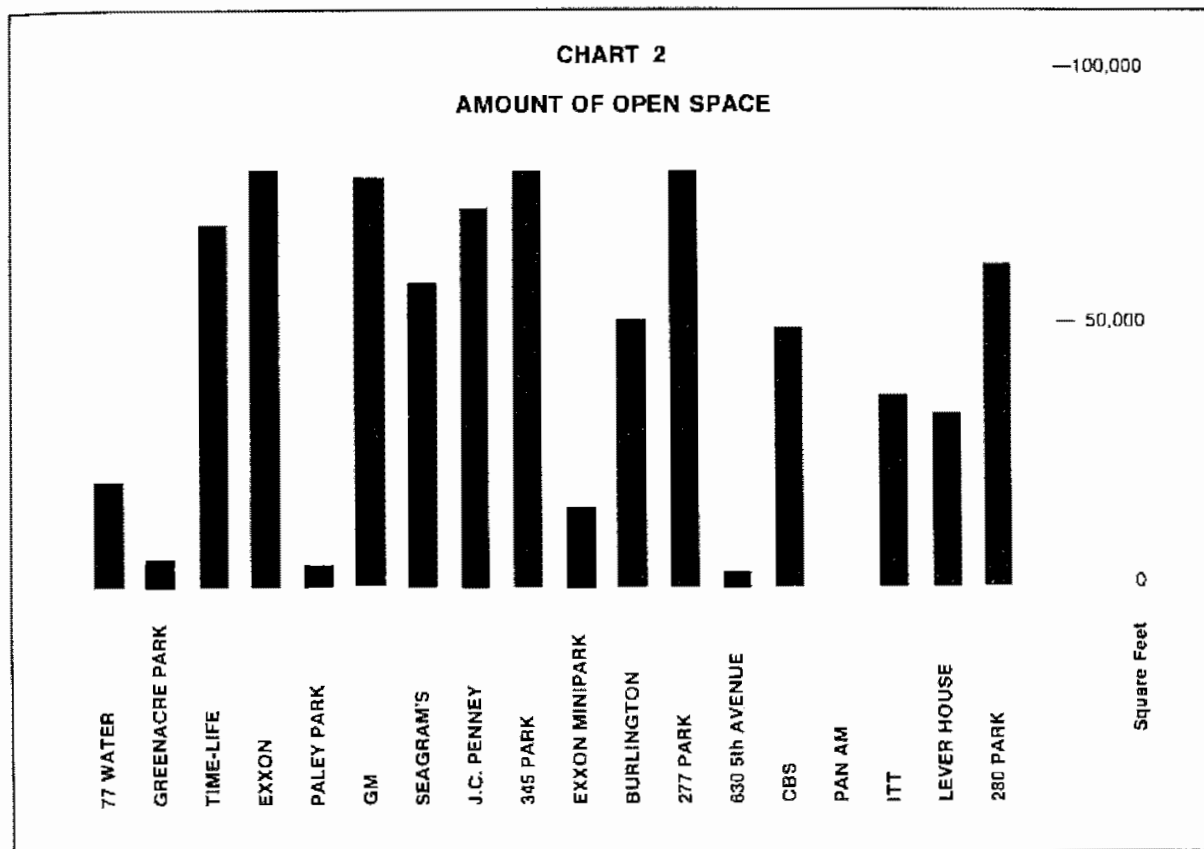
have little relationship to the use of the spaces around it.

The designer sees the whole building—the clean verticals, the horizontals, the way Mies turned his corners, and so on. The person sitting on the plaza may be quite unaware of such matters. He is more apt to be looking in the other direction: not up at other buildings, but at what is going on at eye level. To say this is not to slight the designer's eye or his handling of space. The area around Seagram's is a great urban place and its relationship to McKim, Mead & White's Racquet Club across the street is integral to it. My personal feeling is that a sense of enclosure contributes to the enjoyment of using the Seagram plaza. But I certainly can't prove this with figures.

Another factor we considered was

shape. Urban designers believed this was extremely important and hoped our findings might support tight criteria for proportions and placement. They were particularly anxious to rule out "strip plazas"—long narrow spaces that were little more than enlarged sidewalks, and empty more often than not. Designers felt a developer shouldn't get bonuses for these strips, and to this end they wanted to rule out spaces the length of which was more than three times the width.

Our data did not support such criteria. We found that most strip plazas were, indeed, empty of people most of the time. But was the shape the cause? Some square plazas were empty, too, and several of the most heavily used places were, in fact, long narrow strips. One of the five most popular sitting places in New York is es-



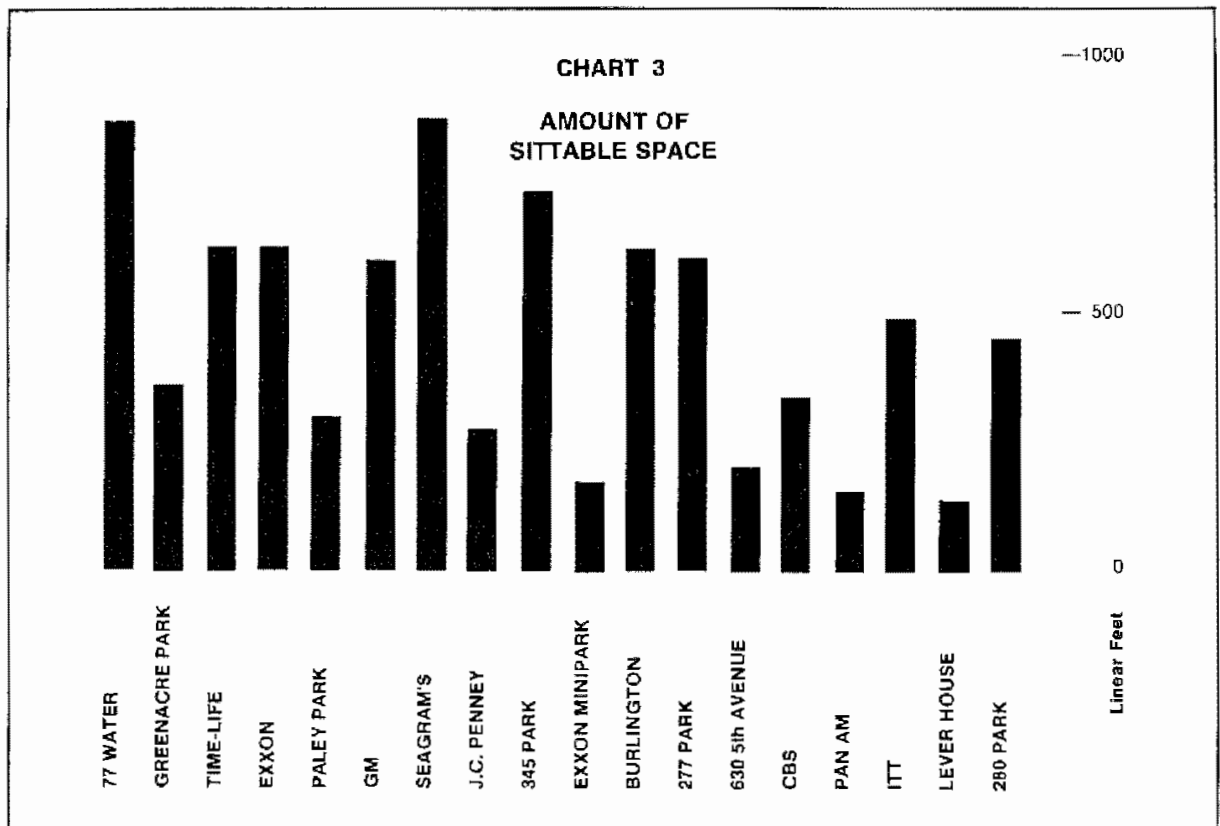
essentially an indentation in a building—and long and narrow. Our research did not prove shape unimportant or designers' instincts misguided; as with the sun, however, it did prove that other factors were more critical.

If not shape, could the *amount* of space be the key factor? Some conservationists were sure this would be it. In their view, people seek open spaces as a relief from the overcrowding they are normally subjected to, and it would follow that places affording the greatest feeling of light and space would draw the most. If we ranked plazas by the amount of space, there surely would be a positive correlation between the size of the plazas and the number of persons using them.

Once again, we found no clear relationship. As can be seen in chart 2, several of

the smaller spaces had lots of people, several of the larger had lots of people, and several of the larger had very few people. Sheer space, it appears, does not draw people. In some circumstances, it can have the opposite effect.

What about the amount of *sittable* space? Here we begin to get close. As chart 3 shows, the most popular plazas tend to have considerably more sitting space than the less well-used ones. The relationship is rough. For one reason, the amount of sitting space does not include any qualitative factors: a foot of concrete ledge counts for as much as a foot of comfortable bench space. We considered weighting the figures on a point basis—so many points for a foot of bench with backrest, with armrests, and so on. This would have produced a nicer conformance on the chart.



We gave up the idea, however, as too manipulative. Once you start working backwards this way, there's no end to it.

There was no necessity. No matter how many variables we checked, one point kept coming through. We at last saw that it was the major one:

People tend to sit most where there are places to sit.

This may not strike you as an intellectual bombshell, and, now that I look back on our study, I wonder why it was not more apparent to us from the beginning. Sitting space, to be sure, is only one of the many variables, and, without a control situation as a measure, one cannot be sure of cause and effect. But sitting space is most certainly prerequisite. The most attractive fountains, the most striking designs, cannot induce people to come and sit if there is no place to sit.

Integral Sitting

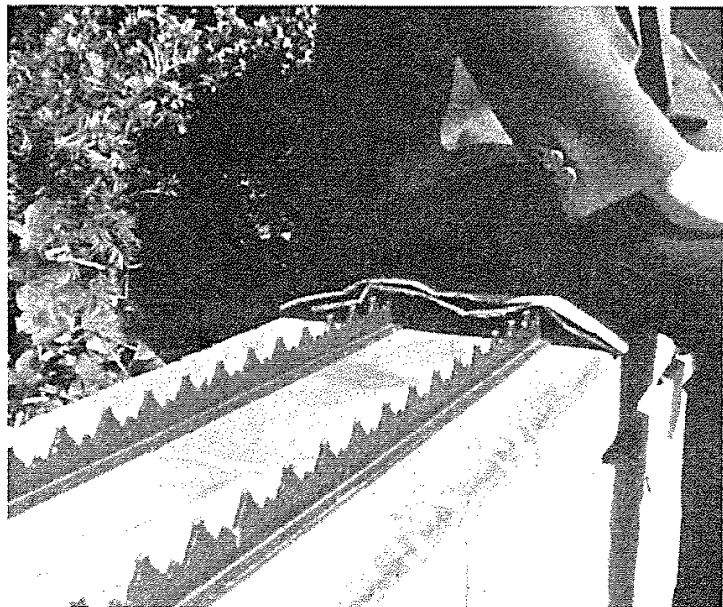
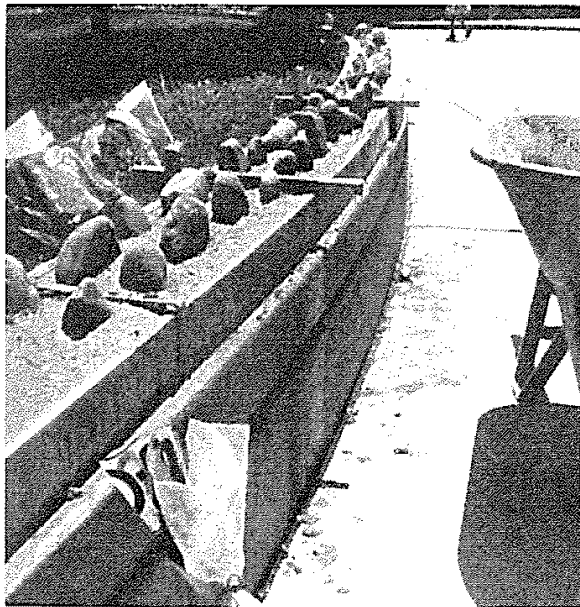
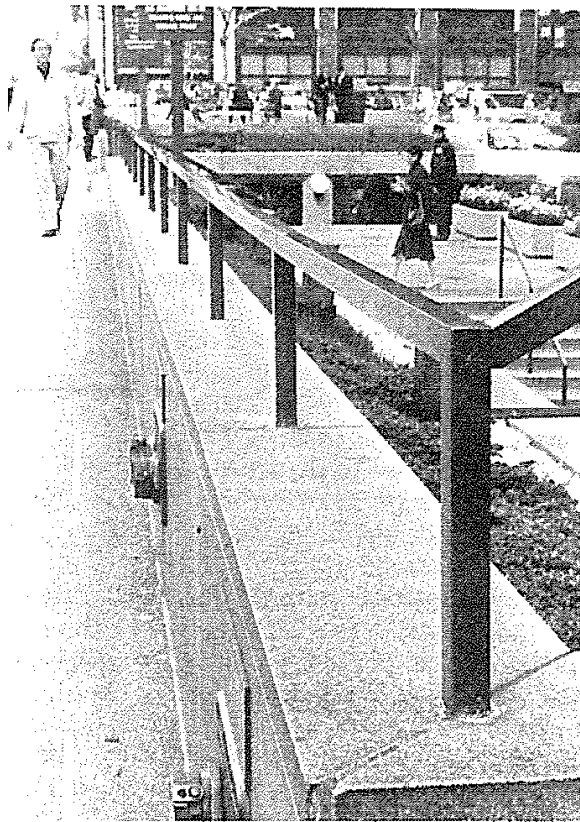
Ideally, sitting should be physically comfortable—benches with backrests, well-contoured chairs. It's more important, however, that it be *socially* comfortable. This means choice: sitting up front, in back, to the side, in the sun, in the shade, in groups, off alone.

Choice should be built into the basic design. Even though benches and chairs can be added, the best course is to maximize the sittability of inherent features. This means making ledges so they are sittable, or making other flat surfaces do double duty as table tops or seats. There are almost always such opportunities. Because the elevation changes somewhat on most building sites, there are bound to be several levels of flat space. It's no more trouble to make them sittable than not to.

It takes real work to create a lousy place. Ledges have to be made high and bulky; railings put in; surfaces canted. Money can be saved by not doing such things, and the open space is more likely to be an amenable one.

This is one of the lessons of Seagram's. Philip Johnson recounts that when Mies van der Rohe saw people sitting on the ledges, he was quite surprised. He had never dreamt they would. But the architects had valued simplicity. So there were no fussy railings, no shrubbery, no gratuitous changes in elevation, no ornamentation to clutter spaces. The steps were made easy and inviting. The place was eminently sittable, without a bench on it. The periphery includes some 600 feet of ledge and step space, which is just right for sitting, eating, and sunbathing. People use all of it.

So ledges ought to be sittable. But how should this be defined? If we wanted sittable ledges in the New York City zoning amendments we thought we would have to indicate how high or low ledges should



Most ledges are inherently sittable, but with a little ingenuity and additional expense they can be made unsittable.

be, how deep, and, since there were adversary proceedings ahead, be able to back up the specifications with facts.

The proceedings turned out to be adversary in a way we hadn't expected. The attack came on the grounds that the zoning was *too specific*. And it came not from builders, but from members of a local planning board. Rather than spell out the requirements in specific detail, the board argued, the zoning should deal only with broad directives—for example, make the place sittable—leaving details to be settled on a case-by-case basis.

Let me pause to deal with this argument. It is a persuasive one, especially for laymen, and, at the inevitable moment in zoning meetings when someone gets up and says, "Let's cut through all this crap and get down to basics," everyone applauds. Be done with bureaucratic nitpicking and legal gobbledygook.

But ambiguity is a worse problem. Most incentive zoning ordinances are very, very specific as to what the developer gets. The trouble is that they are mushy as to what he is to give, and mushier yet as to what will happen if later he doesn't. Vague stipulations, as many cities have learned, are

unenforceable. What you do not prescribe quite explicitly, you do not get.

Lack of guidelines does not give builders and architects more freedom. It reinforces convention. That is why so few good plazas were built under the 1961 zoning resolution. There was no law preventing builders from providing better plazas. There weren't any guidelines either. And most builders do not do anything far out of the ordinary. A few had sought special permits for amenities not countenanced by existing regulations. But the time-consuming route to obtain special permits makes the builder and architect run a gauntlet of city agencies, with innovation as likely to be punished as rewarded.

Sitting Heights

One guideline we expected to establish easily was the matter of sitting heights. It seemed obvious enough that somewhere around 17 inches would probably be near the optimum. But how much higher or lower could a surface be and still be sittable? Thanks to the slope of sites, several of the most sat-upon ledges provided a

Some places, like Liberty Plaza in Washington, D.C., combine good sitting heights and bad sitting heights.





When ledges are two backsides deep, choice is greatly enlarged and more people can use the ledges without feeling crowded.

range of continuously variable heights. The front ledge of Seagram's, for example, started at 7 inches at one corner, rising to 44 at the other. Here was a dandy chance, we thought, to do a definitive study. By repeated observation, we could record how many people sat at which point over the range of heights; as cumulative tallies built, preferences would become clear.

They didn't. At a given time there might be clusters of people on one part of the ledge, considerably fewer on another. But correlations didn't last. When we cumulated several months of observation, we found that people distributed themselves with remarkable evenness over the whole range of heights. We had to conclude that people will sit almost anywhere between a height of one foot and three, and this is the range specified in the new zoning. People will sit on places higher or lower, to be sure, but there are apt to be special conditions.

Another dimension is more important: the human backside. It is a dimension architects seem to have forgotten. Rarely will you find a ledge or bench deep enough to be sittable on both sides; some aren't deep enough to be sittable on one.

Most frustrating are the ledges just deep enough to tempt people to sit on both sides, but too shallow to let them do so comfortably. Observe such places and you will see people making awkward adjustments. The benches at General Motors plaza are a case in point. They are 24 inches deep and normally used on only one side. On Sundays, however, a heavy influx of tourists and other people will sit on both sides of the benches. Not in comfort: they have to sit on the forward edge, erectly, and their stiff demeanor suggests a tacit truce.

Thus to another of our startling findings: ledges and spaces two backsides deep seat more people comfortably than those that are not as deep. While 30 inches will do it, 36 is better yet. The new zoning provides a good incentive. If a ledge or bench is 30 inches deep and accessible on both sides, the builder gets credit for the linear feet on each side. (The 30-inch figure is thoroughly empirical; it is derived from a ledge at 277 Park Avenue, the minimum-depth ledge we came across that was consistently used on both sides.)

For a few additional inches of depth, then, builders can double the amount of sitting space. This does not mean that



Except on very beautiful days, the steps of the New York Public Library are underused. These steps could become one of New York's great gathering spots.

double the number of people will use the space. They probably won't. But that is not the point. The benefit of the extra space is social comfort—more room for groups and individuals to sort themselves out, more choices and more perception of choices.

Steps work for the same reason. The range of space provides an infinity of possible groupings, and the excellent sight-lines make virtually all the seats great for watching the theater of the street. The new zoning ordinance does not credit steps as sitting space. It was felt that this would give builders too easy an out and that some plazas would be all steps and

little else. But the step principle can be applied with good effect to ledges.

Corners are functional. You will notice that people often bunch at the far end of steps, especially when an abutting ledge provides a right angle. These areas are good for face-to-face sitting. People in groups gravitate to them.

One might, as a result, expect a conflict, for corners are also the places where pedestrian traffic is heaviest. Most people take short cuts, and pedestrian flows in plazas are usually on the diagonals between the building entrance and the corners of the steps. We see this at Seagram's. As mentioned previously, the main flow to



The steps at Seagram's are well used, particularly at the corners where pedestrian flows are highest.

and from the building cuts directly across the step corners, and it is precisely there that you will find the heaviest concentration of people sitting, sunbathing, and picnicking. But, for all the bustle, or because of it, the sitters seem to feel comfortable. The walkers don't seem to mind either, and will carefully negotiate through the blockages rather than detour around them.

We find similar patterns at other places. All things being equal, you can calculate that where pedestrian flows bisect a sittable place, that is where people will most likely sit. And it is not so perverse of them. It is by choice that they do. If there is some congestion, it is an amiable one, and a testimonial to the place.

Circulation and sitting, in sum, are not antithetical but complementary. It is to encourage both that the zoning stipulates the plaza not be more than three feet above or below street level. The easier the flow between street and plaza, the more likely people are to move between the two—and to tarry and sit.

This is true of the handicapped, too. If circulation and amenities are planned with them in mind, the place is apt to function more easily for everyone. Drinking fountains that are low enough for wheelchair users are low enough for children. Pedestrian paths that are made easier for the

handicapped by ramps, handrails, and steps of gentle pitch are easier for all. The new zoning makes such amenities mandatory, specifying, among other things, that all steps along the main access paths have treads at least 11 inches deep, closed risers no higher than 7.5 inches, and that ramps be provided alongside them. For the benefit of the handicapped, the zoning also requires that at least 5 percent of the seating spaces have backrests. These are not segregated for the handicapped, it should be noted. No facilities are segregated. The idea is to make all of a place usable for everyone.

Benches

Benches are artifacts the purpose of which is to punctuate architectural photographs. They're not so good for sitting. There are too few of them; they are too small; they are often isolated from other benches or from whatever action there is on the plaza. Worse yet, architects tend to repeat the same module in plaza after plaza, unaware that it didn't work very well in the first place. For example, Harrison and Abramowitz's plazas at Rockefeller Center are excellent in many respects, but the basic bench module they've stuck to is exquisitely wrong in its dimensions—7.5 feet by 19 inches. A larger rectangle

would be proportionately as good but work vastly better, as some utilitarian benches in the same area demonstrate.

The technological barriers to better bench design are not insuperable. The prime specification, that benches be generously sized, is the easiest to meet. Backrests and armrests are proved devices. The old-fashioned park bench is still one of the best liked because it provides them; of the newer designs that also do, some of the stock ones of the play- and park-equipment manufacturers are best. Architects have had a way with chairs; for some reason they seem to come a cropper with benches.

They do worst when they freeze their bench designs in concrete permanence. If some of their assumptions prove wrong—that, say, people want to sit away from the action—it will be too late to do much about it. This has been a problem with a number of pedestrian malls, where all design bets were made before the mall was opened. If some of the sitting areas go unused, there's no easy way of heeding the lesson, or, indeed, of recognizing that there is one.

Why not experiment? Some features, like ledges and steps, will be fixed, but benches and chairs don't have to be. With sturdy wooden benches or the like, some simple market research can be done to find out where and in what kind of groupings they work best. People will be very quick to let you know. We have found that by the second day the basic use patterns will be established, and these won't change very much unless the set-up is changed. And it will be clear in what direction the changes should be made.

If one looks. This is the gap. Rarely will you ever see a plan for a public space that even countenances the possibility that parts of it might not work very well: that calls for experiment and testing, and for post-construction evaluation to see what does work well and what doesn't. Existing

spaces suffer a similar fate. There are few that could not be vastly improved, but rarely is an evaluation undertaken. The people responsible for the place are the least likely of all to consider it.

Chairs

Now, a wonderful invention—the movable chair. Having a back, it is comfortable; more so, if it has an armrest as well. But the big asset is movability. Chairs enlarge choice: to move into the sun, out of it, to make room for groups, move away from them. The possibility of choice is as important as the exercise of it. If you know you can move if you want to, you feel more comfortable staying put. This is why, perhaps, people so often move a chair a



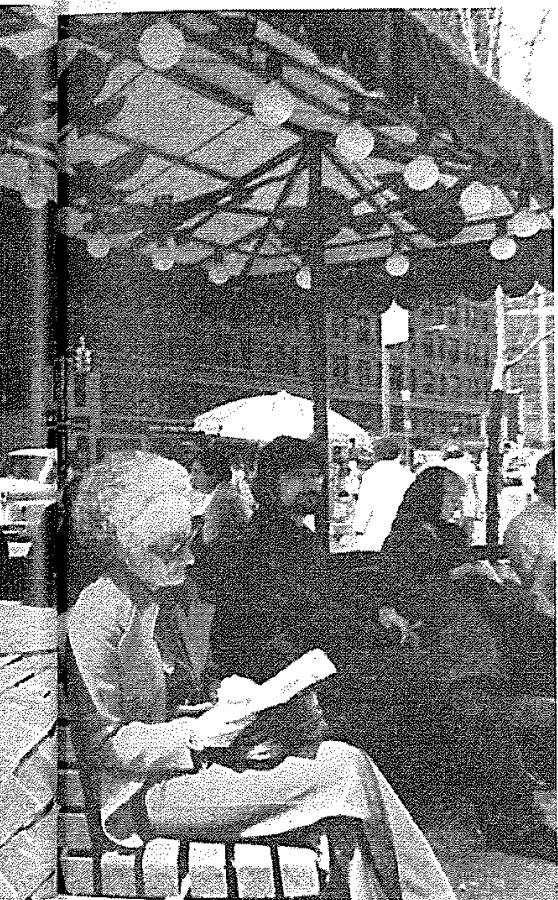
few inches this way and that before sitting in it, with the chair ending up about where it was in the first place. The moves are functional, however. They are a declaration of autonomy, to oneself, and rather satisfying.

Small moves say things to other people. If a newcomer chooses a chair next to a couple or a larger group, he may make some intricate moves. Again, he may not take the chair very far, but he conveys a message. Sorry about the closeness, but there's no room elsewhere, and I am going to respect your privacy, as you will mine. A reciprocal move by one of the others may follow. Watching these exercises in civility is itself one of the pleasures of a good place.

Fixed individual seats are not good.

They are a design conceit. Brightly painted and artfully grouped, they can make fine decorative elements: metal love-seats, revolving stools, squares of stone, sitting stumps. But they are set pieces. That is the trouble with them. Social distance is a subtle measure, ever changing, and the distances of fixed seats do not change, which is why they are rarely quite right for anybody. Loveseats may be all right for lovers, but they're too close for acquaintances, and much too close for strangers. Loners tend to take them over, placing their feet squarely on the other seat lest someone else sit on it.

Fixed seats are awkward in open spaces because there's so much space around them. In theaters, strangers sit next to each other without qualm; the closeness is



Above: Benches at Mechanics Plaza in San Francisco face the action of Market Street.

Left: Benches put right in the middle of the sidewalk outside 747 Third Avenue draw heavy use.

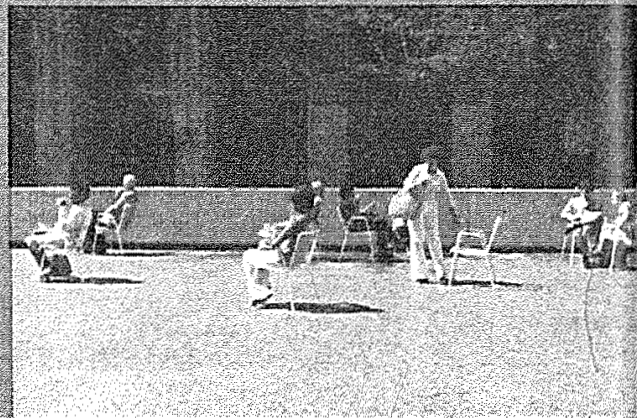
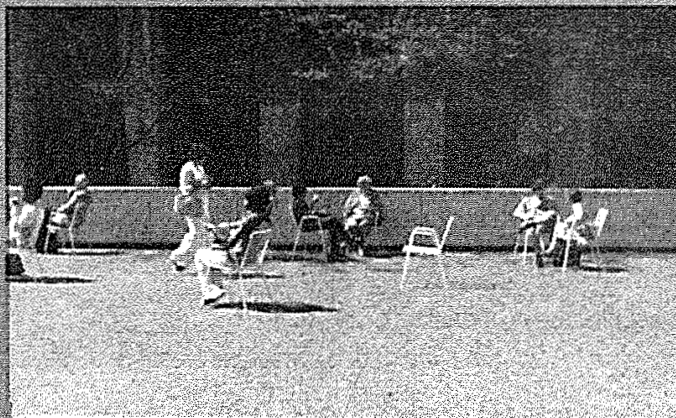


Forced choice is rarely chosen.

a necessity, and convention makes it quite tolerable. On plazas, the closeness is gratuitous. With so much space around, fixed-seat groupings have a manipulative cuteness to them. The designer is saying, now you sit right here and you sit there. People balk. In some instances, they wrench the seats from their moorings. Where there is a choice between fixed seats and other kinds of sitting, it is the other that people choose.

To encourage the use of movable chairs, we recommended that in the zoning amendment they be credited as 30 inches of sitting space, though most are only about 19 inches wide. The Building Department objected. It objected to the idea of movable chairs at all. The department had the responsibility of seeing that builders lived up to requirements. Suppose the chairs were stolen or broken and the builder didn't replace them? Whether the department would ever check up in any event was a moot point, but it was true that the fewer such amenities to monitor, the easier the monitoring would be.

Happily, there was a successful record at



The impulse to move chairs, whether only six or eight inches, is very strong. Even where there is no functional reason for it, the exercise of choice is satisfying. Perhaps this is why the woman above moved her chair a foot—neither into the sun nor out of it.

Paley and Greenacre parks to point to, and it was decisively persuasive. The chairs stayed in. They have become a standard amenity at new places, and the maintenance experience has been excellent. Managements have also been putting in chairs to liven up existing spaces, and, even without incentives, they have been adding more chairs. The most generous provider is the Metropolitan Museum of Art. Alongside its front steps, it puts out up to 200 movable chairs and it leaves them out, 24 hours a day, seven days a week. The Met figured that it might be less expensive to trust people and to buy replacements periodically rather than have guards gather the chairs in every night. That is the way it has worked out. There is little vandalism.

How Much Sitting Space?

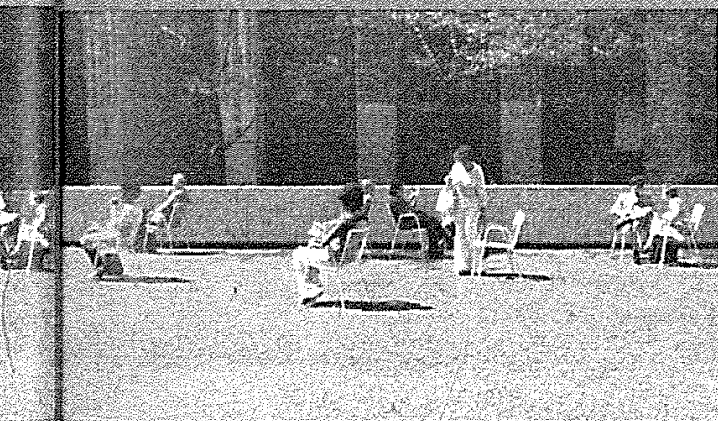
A key question we had to confront was how much sitting space should be required. We spent a lot of time on this—much too much, I now realize—and I'm tempted to recount our various calcula-



People outside the Metropolitan Museum of Art move their chairs close to the sidewalk to enjoy the passersby on Fifth Avenue.

tions to demonstrate how conscientious we were. The truth is that almost any reasonable yardstick would work as well as ours. It's the fact of one that is important.

This said, let me tell how conscientious we were. We measured and remeasured the sitting space on most of the plazas and small parks in midtown and downtown New York. As sitting space, we included





Exxon minipark.

all the spaces meant for people to sit on, such as benches, and the spaces they sat on whether meant to or not, such as ledges. Although architects' plans were helpful, we did most of the measuring with a tape, on the ground, in the process

stirring inordinate curiosity from passersby and guards.

Next, we related the amount of sitting space to the size of the plaza. As chart 3 shows, the square feet of sitting space on the best-used plazas ran between 6 and 10

percent of the total open space. As a ballpark figure, it looked like somewhere around 10 percent would be a reasonable minimum to require of builders.

For other comparisons we turned to linear feet. This is a more precise measure of sitting space than square feet, and a more revealing one. As long as there's some clearance for one's back, the additional square inches behind one don't matter very much. It is the edges of sitting surface that do the work, and it is the edges that should be made the most of.

For a basis of comparison, we took the number of linear feet around the total site. Since the perimeter includes the building, the distance is a measure of the bulk of the project and its impact on the surrounding environment. Amenities should therefore be in some proportion to it. On the most popular plazas, there were almost as many feet of sitting space as there were perimeter feet. This suggested that, as a minimum, builders could be asked to provide that amount of sitting space.

Even on the best plazas, the architects could have done better. To get an idea of how much better, we calculated the additional space that could have been provided on various plazas rather easily, while the original plans were being made. We did not posit any changes in basic layout, nor did we take the easy way of adding a lot of benches. We concentrated on spaces that would be integral to the basic design.

In most cases, it was possible to add as much as 50 percent more sitting space, and very good space at that. The Exxon plaza, for example, has a fine pool bordered by two side ledges that you can't sit on. You can sit on the front and back ledges, but only on the sides facing away from the pool. With a few simple changes, such as broadening the ledges, sitting capacity could have been doubled, providing some of the best poolside space anywhere. All in all, these examples indicated, build-



The maximum use of flat surfaces at 345 Park Avenue offers a tremendous choice of sitting combinations.

ers could easily furnish as many feet of sitting space as there are feet around the perimeter of the project.

The requirement finally settled on was a compromise: one linear foot of sitting space for every thirty square feet of plaza. This is reasonable, and builders have been meeting the requirement with no trouble. They could meet a stiffer one. The exact ratio is not as important, however, as the necessity of considering the matter. Once an architect has to start thinking of ways to make a place sittable, it is virtually impossible not to surpass any minimum. And other things follow. More thought must be given to probable pedestrian flows, placement of steps, trees, wind baffles, sun traps, and even wastebaskets. One felicity leads to another. Good places tend to be all of a piece—and the reason can almost always be traced to a human being.

Sun, Wind, Trees, and Water

3



Farragut Square, Washington, D.C.

Sun

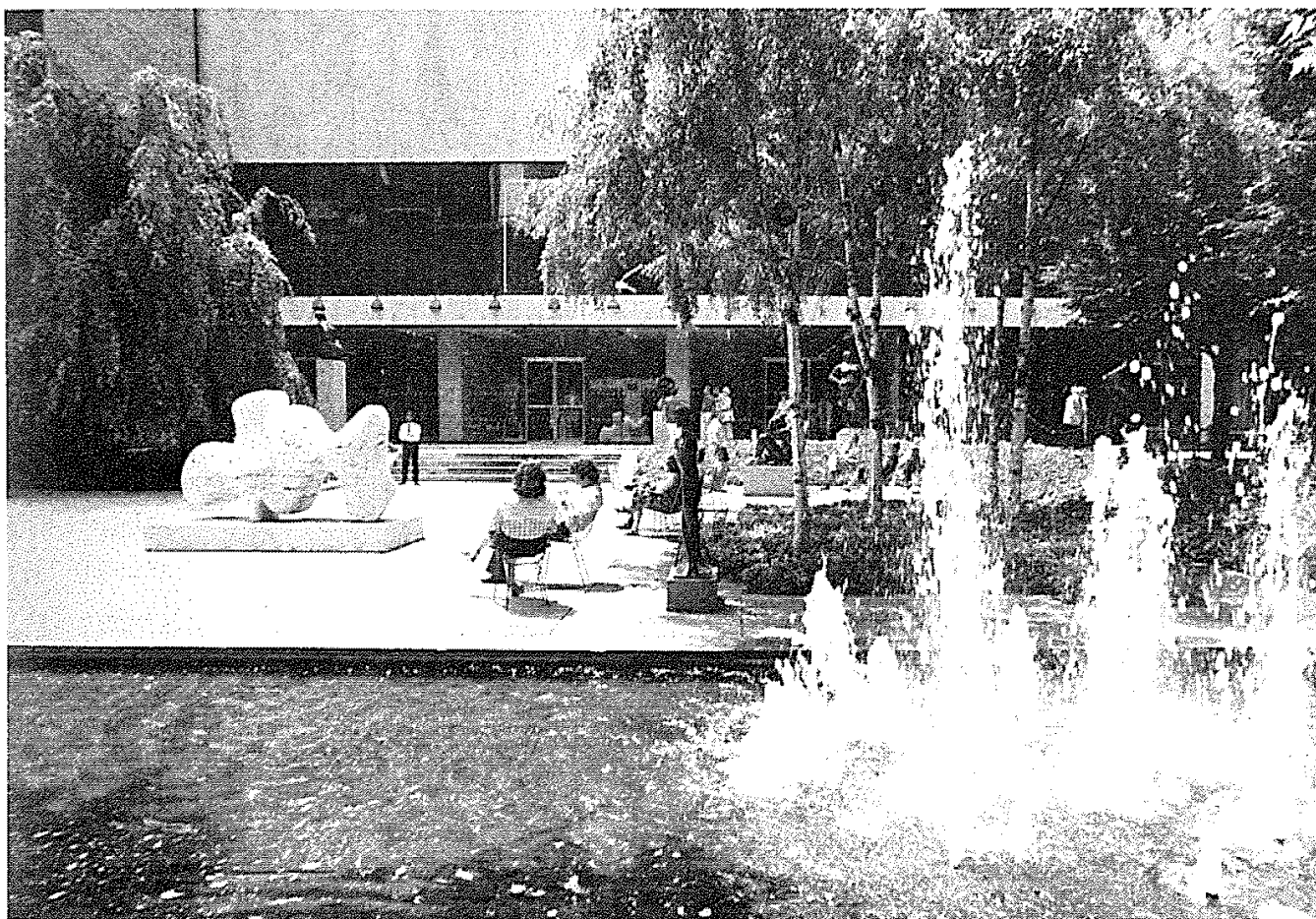
The most satisfying film I've ever seen is our first time-lapse record of the sun passing across the Seagram plaza. In late morning, the plaza was in shadow. Then, shortly before noon, a narrow wedge of sunlight began moving across the plaza and, as it did, so did the sitters. Where there was sun, they sat; where there was none, they didn't. It was a perfectly splendid correlation, and I cherished it. Like the urban designers, I believed a southern exposure of critical importance. Here was abundant proof.

Then something went wrong. The correlations vanished—not only at Seagram's but at other places we were studying. The sun still moved; the people didn't. The obvious at length dawned on us: May had been followed by June. While midday temperatures hadn't risen a great deal, the extra warmth was enough to make the sun no longer the critical factor.

It was about this time that much of Paley Park's sunlight began to be cut off by an office building going up across the street. From its scaffolding we focused time-lapse cameras on the park and recorded the effect of the new building. It was surprisingly little. Although the sunlight was curtailed, people used Paley as much as they had before. Perhaps they would have used it more had the sun remained; without an identical place as control, one can never be sure. The more



Left: People enjoy sun.
Below: Sculpture Garden at the Museum of Modern Art.





important point is that, unfortunate as the loss may have been, the park was able to sustain it.

What simple figures don't measure, however, is the quality of the experience, which can be much greater when there is sun. For then you have choice—of sun, or shade, or in-between. The best time to sit beneath a tree is when there is sunlight to be shaded from. The more access to sun, the better, and, if there is a southern exposure, it should be made the most of. New York's zoning now requires that new plazas and open spaces be so oriented.

Access to the sun should be protected. One way of doing so is by acquiring air rights to low buildings across the way, so they will stay low. This can be expensive, very much so if the speculative pressures in the area are rising. For the same reason, however, purchase can prove a good investment. The rights can have a high leverage over subsequent development, and there would be the possibility of selling part of the rights for construction designed to cast minimum shadow on the open space. At present, most air-rights

Above: Sun and grass in the middle of a city make for an enjoyable lunchtime break.

Right: Some new buildings reflect tremendous amounts of light, often into areas that never got it before.





transactions involve purchase of unused rights over one building so that another one can be built higher than normally permissible. It would not be a bad idea to apply the principle the other way around to keep bulk lower than permissible.

On the other hand, there is a good side to our seemingly negative findings about the importance of the sun: places that have little or no sun because of a northern exposure or intervening buildings are not a lost cause. With adroit design, they can be made to seem as if they had sun.

Why not borrow sun? The same new buildings that cast shadows also reflect light in considerable amounts. Along with mirror walls, glass and stainless steel, architects have been laying on travertine with a heavy hand, and their new buildings have sent the glare index of cities soaring. But light has also been bouncing into many places that didn't receive it before. In eight years of filming, I have found that several streets have become photographically a half-stop faster. A number of open spaces that otherwise would be dark much of the time are bathed in reflected light, sometimes on the second or third bounce. Grace plaza, for example, gets no direct sun at all but benefits most of the afternoon from light reflected by the southern exposure of the building to the north. Give travertine its due. It bounces light admirably, especially in the late afternoon, when it can give a benign glow to the streetscape.

So far such effects are wholly inadvertent. Sun studies made for big new buildings tend to be defensive in nature, so that planning boards can be shown the building won't cast an awful lot more shadow than is cast already by other buildings. Few studies try to determine the light a new building will cast, what benefits there might be from it, to whom and when.

Yet benefits of great potential value can be planned and negotiated in advance.

There could be, for example, sun easements, through which, in effect, the developer of a building sells reflected light to neighbors. On an incentive basis, the program could be administered by the city's planning commission, with the developer given bonus points for the benefits reflected. The complexities, of course, might be awesome, but they are the kind of complexities that lawyers and planners involved in urban design find stimulating.

Warmth is just as important as sunlight. The days that bring out the peak crowds on plazas are not the sparkling sunny days with temperatures in the seventies, good as this weather might be for walking. It is the hot, muggy days, sunny or overcast, the kind that could be expected to make people want to stay inside and be air conditioned, when you will find the peak numbers outside. People do like warmth. In summer, they will generally sit in the sun as well as in shade; only in very hot weather—90 degrees or more—will the sunny spots be vacant. Relative warmth is important, too. One of the peak sitting days is the first warm day in spring, even though the same temperature later would be felt too cool for sitting. Similarly, the first warm day after a stretch of cool or rainy days will be a peak day.

Cool weather can be good for sitting, too. It is then that a space open to the radiant heat of the sun's rays can make the difference between sitting comfortably and not sitting at all. People will actively seek the sun and, given the right spots, they will sit in surprising numbers in quite cold weather. The more northern the latitude, the more ardently will they do so.

Wind

What people seek are suntraps. And the absence of winds and drafts are as critical for these as sun. In this respect, small parks, especially those enclosed on three sides, function well. Physically and psycho-

logically, they feel comfortable, and this is one of the reasons why their relative carrying capacity is so high. New York's Greenacre Park has infrared heaters, but they are used only in extremely cold weather. With sun and protection from wind, the park is quite habitable even on nippy days.

Spaces around new buildings are quite another matter. In winter, many are cold and drafty, and even in moderate weather few people will tarry in such places. The errors are of omission. Wind-tunnel tests on models of new buildings are now customary, but they are not made with people much in mind. The tests for the World Trade Center largely determined stresses in the towers, and the structural steel necessary. What the towers themselves might generate in the way of wind, and the effects on people below, apparently were not a matter of much concern.

The effects are, however, quite measurable. It is now well established that very tall, free-standing towers can generate tremendous drafts down their sides. This has in no way inhibited the construction of such towers, with the result, predictably, that some spaces are frequently uninhabitable. At one bank plaza in Seattle the gusts are sometimes so fierce that safety lines must be strung across the plaza to give people something to hang on to. Chicago has the windiest places, not because of the local wind (which isn't really so very much stronger than in other cities), but because the drafts down the sides of the giant John Hancock and Sears towers are macro in force—often so strong as to prevent people from using the plazas, even if they had reason to.

James Marston Fitch, who has done more than any other architect to badger the profession to consider environmental effects, points out that the problem is conceptual, not technical. "Adverse effects are simply ignored, and the outdoor space designed as if for some ideal climate, ever

The steps of St. Thomas Church are a fine example of a suntrap.



sunny and pleasantly warm. Thus [the spaces] fail in their central pretension—that of eliminating gross differences between architectural and urbanistic spaces, of extending in time the areas in which urban life could freely flow back and forth between the two.”

Technically, as Fitch points out, we can greatly lengthen the effective season of

outdoor spaces. By asking the right questions in sun and wind studies, by experimentation, we can find better ways to hoard the sun, to double its light, or to obscure it, or to cut down breezes in winter and induce them in summer. We can learn lessons in the semiopen niches and crannies that people often seek. Most new urban spaces are either all outdoors or all

indoors; more could be done to encourage inbetweens. With the use of glass canopies or small pavilions, semioutdoor spaces could be created that would be usable in all but the worst weather. They would be particularly appropriate in rainy cities, like Seattle and Portland.

Trees

There are all sorts of good reasons for trees, but for climatic reasons alone we should press for many more of them, big ones too, along the sidewalks and open spaces of the city. New York's new open-space zoning has sharply stepped-up requirements: developers must provide a tree for every 25 feet of sidewalk. It must be at least 3.5 inches in diameter and planted flush with the ground. In plazas, trees must be provided in proportion to the space (for a plaza of 5,000 feet, a minimum of six trees).

Trees ought to be related much more closely to sitting spaces than they usually are. Of the spaces we have studied, by far the best liked are those affording a good look at the passing scene and the pleasure of being comfortably under a tree while doing so. This provides a satisfying enclosure; people feel cuddled, protected—very much as they do under the awning of a street cafe. As always, they'll be cooler, too.

Unfortunately, guy wires and planting beds often serve to rule out any sitting; even if they don't, the fussiness of design details works to the same effect. Everything is so wired and fenced you can neither get to the tree or sit on what surrounds it. Where large planters are used, they are generally too high and their rims too narrow for comfort.

Developers should be encouraged to combine trees and sitting spaces. They should also encourage planting trees in groves. As Paley Park has demonstrated, if trees are planted closely together, the





Left: This office-building plaza in Denver is a simple grassy park with a few trees. It is well liked and makes a nice complement to the plaza of the First of Denver across the street.

Below: A canopy of a few trees can make a high-traffic area feel very comfortable.



overlapping foliage provides a combination of shade and sunlight that is very pleasing. Arbors can do the same.

Water

Water is another fine element, and designers are doing rather well with it. New plazas and parks provide water in all sorts of forms: waterfalls, waterwalls, rapids, sluiceways, tranquil pools, water tunnels, meandering brooks, fountains of all kinds. In only one major respect is something lacking: access.

One of the best things about water is the look and feel of it. I have always thought that the water at Seagram's

looked unusually liquid, and I think it's because you know you can splash your hand in it if you are of a mind to. People do it all the time: they stick their hands in it, their toes, and feet, and, if they splash about, some security guard does not come rushing up to say them nay.

But in many places water is only for looking at. Let a foot touch it and a guard will be there in an instant. Not allowed. Chemicals in the water. Danger of contamination. If you let people start touching water, you are told, the next thing they'll start swimming in it. Sometimes they do. The new reflecting pool at the Christian Science Headquarters in Boston is only a few feet deep, but when it first opened many people started using it for wading and even swimming. It was with some difficulty that the pool was put off limits to such activity and reclaimed for its ornamental function.

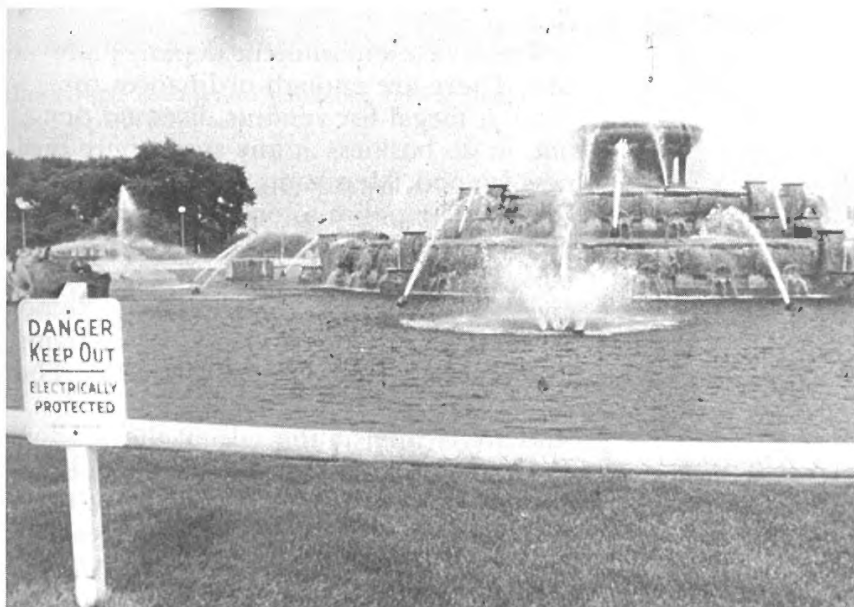
It's not right to put water before people and then keep them away from it. But this is what has been happening across the country. Pools and fountains are installed, then immediately posted with signs admonishing people not to touch. Equally egregious is the excessive zeal with which many pools are continually emptied, refilled, vacuumed, and cleaned, as though the primary function of them was their maintenance. Grand Old Buckingham Fountain in Chicago's Grant Park has been put off limits with an electrified fence.

Safety is the usual reason given for keeping people away. But there are better ways than electrocution to handle this problem. At the Auditorium Forecourt Fountain in Portland, Oregon, people have been climbing up and down a complex of sluiceways and falls for some six years. It looks dangerous—designer Lawrence Halprin designed it to look dangerous—and, since the day it opened, there have been no serious mishaps. This splendid fountain is an affirmation of trust in



people, and it says much about the good city of Portland.

Another great thing about water is the sound of it. When people explain why they find Paley Park so quiet and restful, one thing they always mention is the waterwall. In fact, the waterwall is quite loud: the noise level is about 75 decibels close by, measurably higher than the level out on the street. Taken by itself, furthermore, the sound is not especially pleasant. I have played tapes to people and asked them what they thought it was. Usually they grimace and say a subway train, trucks on a freeway, or something just as bad. In the park, however, the sound is perceived as quite pleasant. It is white sound and masks the intermittent honks and bangs that are the most annoying aspects of street noise. It also masks conversations. Even though there are many others nearby, you can talk quite loudly to a companion—sometimes you almost have to—and enjoy a feeling of privacy. On the occasions when the waterwall is turned off, a spell is broken, and the place seems nowhere as congenial. Or as quiet.



Water should be accessible, touchable, splashable. It is no longer so at Chicago's Buckingham Fountain (*left*), now protected from people by an electric fence. Shame.

Triangulation

11



We have gone over the principal factors that make a place work. But there is one more factor. I call it triangulation. By this I mean that process by which some external stimulus provides a linkage between people and prompts strangers to talk to each other as though they were not.

There are, say, two men standing at a street corner. A third man appears. He hoists a sign and begins a loud harangue on the single tax. This links the two men. Casually, they exchange comments on the human comedy before them, in a tone of voice usually reserved for close friends.

Street characters make a city more amicable. Mr. Magoo, who volunteers as a traffic director in midtown New York, will always draw a crowd, and his performance will draw its members together. The person standing next to you is likely to tell you all about his history, or ask you who in the world he is. The Witch, a raunchy woman who jeers at the dignified and spits at little children, is quite deplorable. Strangers exchange shocked glances. But they smile, too, as if they were on her side.

The stimulus can be a physical object or sight. At the small park at the Promenade in Brooklyn Heights there is a spectacular view of the towers of lower Manhattan across the East River. It is a great conversation opener and strangers normally remark to each other on it. When you come upon such a scene, it would be rude not to.



A street band draws people. So does sculpture, particularly the kind that people like to touch, such as Dubuffet's stainless-steel "Rag Lady" (*above*) and "Four Trees" (*left*).

Sculpture can have strong social effects. Before and after studies of the Chase Manhattan plaza showed that the installation of Dubuffet's "Four Trees" has had a beneficent impact on pedestrian activity. People are drawn to the sculpture, and drawn through it: they stand under it, beside it; they touch it; they talk about it. At the Federal Plaza in Chicago, Alexander Calder's huge stabile has had similar effects.

Musicians and entertainers draw people together. Rockefeller Plaza and the First National Bank of Chicago regularly schedule touring school bands, rock groups, and the like. As noted in the discussion of

the amphitheater effect, however, the real show is usually the audience. Many people will be looking as much at each other as at what's on the stage.

It is not the excellence of the act that is important. It is the fact that it is there that bonds people, and sometimes a really bad act will work even better than a good one. Street entertainers, for example, can be very, very bad. One of the best of the bad is a young magician whose pattern is so corny and predictable that you are virtually forced into conversation with your neighbor. With each of the magician's asides, the onlookers get increasingly jovial, delivering more of their own asides,





All kinds of activities will draw a crowd.



and engaging in much banter and exchange of opinions. Also, the magician collects a nice sum.

But good performers are best. Among them are the mimes. In a typical sequence, a mime walks up to two junior-executive types and draws a huge square in the air. The crowd laughs, and the junior executives laugh. Cops are a great foil. As one of them moves across a plaza, a mime will walk behind him aping his gait. The cop turns around, laughs, and shakes the mime's hand. The crowd laughs and whistles its approval.

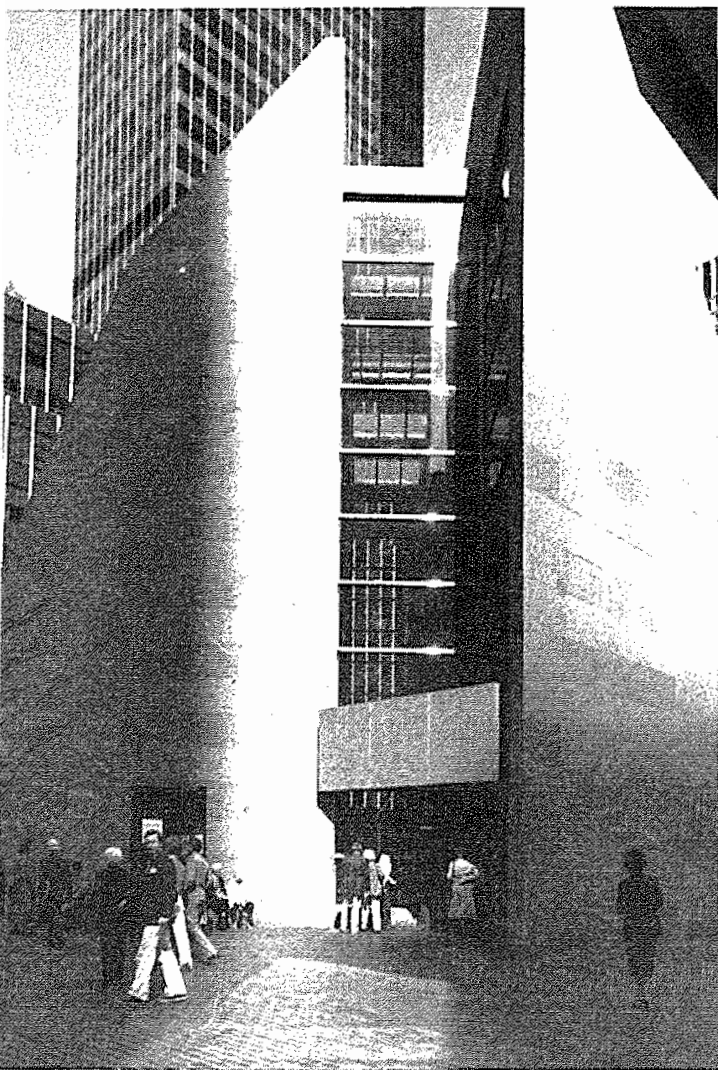
The most adroit routine is that of a young acrobat. As he is collecting money from the crowd, he tries to spot a policeman. If one is standing nearby, enjoying himself, the acrobat suddenly recoils and in a loud voice begs the cop not to hit him again. The crowd, furious at police brutality, gives more money.

A virtue of street acts is their unexpect-

edness. When people form a crowd around an entertainer—it happens very quickly, in 40 or 50 seconds—they look much like children who have come upon a treat; some will be smiling in simple delight. These moments are true recreation, though rarely thought of as such, certainly not by the retailers who try so hard to outlaw them. But there is something of great value here, and it should be fostered.

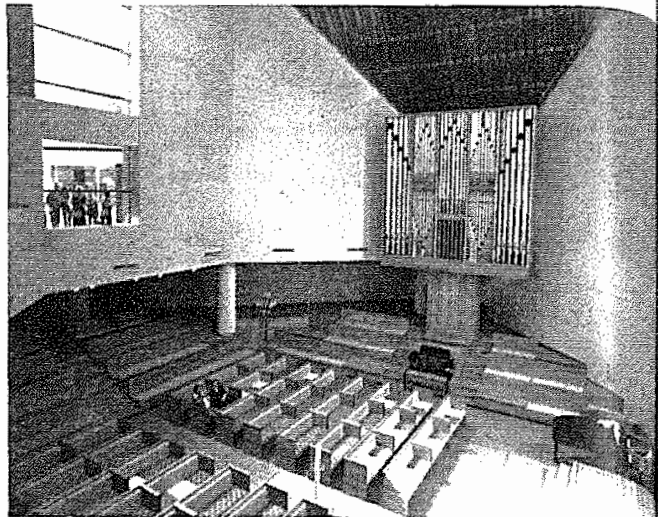
Why not invite entertainers onto a plaza instead of banning them? One corporation is considering a plan to welcome the best of the street entertainers to its new building. The entertainers would be given the equivalent of several good collections to do their act.

Most of the elements that have the triangulation effect are worthwhile in their own right. Simply on aesthetic grounds, Dubuffet's "Four Trees" much improves the scale and sense of place in the Chase



Manhattan plaza. But the social effects are important. By observing them, we can find how they can be anticipated and planned.

I am not, heaven forfend, going on to argue for places of maximum gregariousness, social directors for plazas. Anomie would be preferable. What I'm suggesting, simply, is that we make places friendlier. We know how. In both the design and management of spaces, there are many ways to make it much easier for people to mingle and meet. It would be no bad idea to move more in this direction.



The best show window on Lexington Avenue looks into the sanctuary of St. Peter's Church. Passersby stop to look and comment: "Wow!" "That's not my idea of a church!" "Isn't it gorgeous!"

In Praise of Odds and Ends

As I conclude, let me say a word about large spaces. The emphasis in this manual has been on small spaces. But this is not to scant the desirability of large ones. The question is sometimes raised whether it is better to have a Central Park or an equivalent amount of space in small parks. There is no comparability. Central Park is a magnificent space on a large scale, and it does something for New York that no aggregation of small spaces could. Thanks to the genius of Frederick Law Olmsted, it should be added, Central Park is also a host of small spaces, and people experience it as such.

The fact is, however, that for the foreseeable future the opportunities in the center city are going to be for small spaces. And there are great opportunities. True, costs are prodigious—even in the case of incentive zoning, expensive trade-offs are included. But the costs are high because so many people are to be served. A less costly place somewhere else can be a poor bargain.



Above: A temporary art gallery.

Below: One of the best spots in New York is a ledge at 57th Street and Madison Avenue. It usually has sun and is protected from the wind.

Some of the most felicitous spaces, furthermore, are leftovers, niches, odds and ends of space that by happy accident work very well for people. At 57th Street and Madison Avenue in New York there is a bank with two window ledges. They're low enough for sitting and are recessed enough to provide wind protection. There is sun all day, a parade of passersby, and at the corner a vendor squeezing fresh orange juice. It is a splendid urban place. There are other such places, most provided by inadvertence. Think what might be provided if someone planned it.

Bus stops are often amiable places and more could be. Observe the people there



and you will find that many are not waiting for the bus. They just like the activity. Usually the only amenities are a bench or two and a sign with the bus routes. If overhead shelter were provided and a bit more space, these places could be far more amenable. And why not bus-stop parklets? In Billings, Montana, they are fashioning a small one with groupings of benches and with trees overhead. It is likely to become the city's best meeting place.

The furniture of the street can make places work better but, again, customarily it's more by inadvertence than design. Trash receptacles are an example. New York City provided millions of dollars worth of heavy concrete objects with flat tops. As receptacles, they were terrible, the tops acting as trash dispensers. But they were excellent for some other purposes. People used them as small tables, sometimes sat on them, used them as ledges for re-sorting packages.

There would seem to be a lesson here. So with fire hydrants and standpipes. Both are useful for tying shoelaces, and the standpipes are good for sitting as well. And why not shelves? Just as an experiment it would be interesting to see what would happen if buildings provided an extra ledge about four to five feet high. The Japanese are more inventive than we at such matters. On the sidewalks at the entrances to some department stores, ledges are provided for sitting, for placing things: there are ashtrays, benches, phone booths. There's not much space, but it is very heavily and well used.

We do not have much sidewalk space either, but we are going to have more. We have given a disproportionate amount of our street space to vehicles, and the time has come to start giving some of it back to the pedestrians from whom it was taken. To meet federal air-quality standards, some cities may have to eliminate parking on downtown streets. This can free up



one or two lanes of space. Rather than have the space revert to traffic—and thus induce more of it—the space should be given back to the sidewalks. If it is, there will be enough room for many kinds of pedestrian amenities—such as bus-stop parklets, sitting places, and sidewalk cafes.

I am, in sum, bespeaking busy places. Too busy? Too crowded? I think not. As we have seen, people have a nice sense of the number that is right for a place, and it is they who determine how many is too many. They do not, furthermore, seek to get away from it all. If they did, they would go to the lonely empty places where there are few people. But they do not. They go to the lively places where there are many people. And they go there by choice—not to escape the city, but to partake of it.



It is wonderfully encouraging that places people like best of all, find least crowded, and most restful are small spaces marked by a high density of people and a very efficient use of space.

I end, then, in praise of small spaces. The multiplier effect is tremendous. It is not just the number of people using them, but the larger number who pass by and enjoy them vicariously, or the even larger

number who feel better about the city center for knowledge of them. For a city, such places are priceless, whatever the cost. They are built of a set of basics and they are right in front of our noses.

If we will look.

Introduction

Two basic works of observation are Edward T. Hall's *The Hidden Dimension* (New York: Doubleday & Co., 1966) and Robert Sommer's *Personal Space: the Behavioral Basis of Design* (Englewood Cliffs, N.J.: Prentice-Hall, 1969).

Of the design professions, landscape architects have been the most interested in the study of people, and the journal *Landscape Architecture* has published some excellent articles, among them: John T. Lyle, "People Watching in Parks" (October 1970); Sidney Brower, "Streetfront and Sidewalk" (July 1973); Nancy Lindsay, "It All Comes Down to a Place to Sit and Watch" (November 1978). Editor Grady Clay, himself an excellent observer, has recently written *Alleys: A Hidden Resource* (Louisville: Cross Section Publishers, 1979).

The Project for Public Spaces has used direct observation and time-lapse photography for a series of excellent studies of key public spaces, ranging from Harlem's 125th Street to visitors centers at the National Parks. Reports are available on all their studies; for a list, and a brochure on their techniques, write to Project for Public Spaces, Suite 201, 875 Avenue of the Americas, New York, New York 10001.

Chapter 1: The Life of Plazas

The frequency with which people form groups of various sizes is remarkably consistent—in particular, the proportion of people in threes. Over a two year-period, studies of the distribution of people in groups showed the following:

	12 Plazas	Seagram's Plaza
In twos	67%	60%
In threes	21%	21%
In fours or more	12%	19%

These are people sitting: for people standing the proportion in large groups is smaller, but the distributions are similarly consistent, and they don't vary much according to the setting. In his Australian study, Ciolek found 71.3 percent in twos; 19 percent in threes; 9.2 percent in fours or more. This tallies closely with distributions observed in similar studies in the U.S. and Europe. William H. Whyte, assisted by Margaret Bemiss, "New York and Tokyo: A Study in Crowding," in Hidetosh Kato, ed., in collaboration with William H. Whyte and Randolph David, *A Comparative Study of Street Life*. (Tokyo: The Research Institute for Oriental Cultures, Gakushuin University, 1978). Matthew T. Ciolek, "Location of Static Gatherings in Pedestrian Areas: An Explanatory Study," Australian National University, Canberra, December 1976. Jan Gehl, "Pedestrians," ARKITEKTEN (Denmark), 1968.

Chapter 2: Sitting Space

Architect Philip Johnson:

"We designed those blocks in front of the Seagram Building so people could not sit on them, but, you see, people want to so badly that they sit there anyhow. They like that place so much that they crawl, inch along that little narrow edge of the wall. We put the water near the marble ledge because we thought they'd fall over if they sat there. They don't fall over; they get there *anyhow*."

H.K.:

"Well it's the only place you *can* sit."

P.J.:

"I know it. It never crossed Mies's mind. Mies told me afterward, 'I never dreamt people would want to sit there.'"

John W. Cook and Heinrich Klotz, *Conversations with Architects* (New York: Praeger, 1973).

Chapter 3: Sun, Trees, Wind, and Water

Improved techniques and equipment should make sun studies easier and more often used. At Ball State University in Indiana, for example, a large-scale "heliodon" has been developed to project sun angles on architectural models of one-quarter-inch scale. It can be adjusted for latitude as well as for any hour, day, month, or year.

The best work on the relationship between architecture and the natural environment is James Marston Fitch, *American Building, The Environmental Forces That Shape It*, second edition (New York: Schocken Books, 1975).

A study with a strong emphasis on the climatic aspects of urban space is Don C. Miles, with Robert S. Cook, Jr., and Cameron B. Roberts, *Plazas for People* (New York: Project for Public Spaces, 1978). Based on an analysis of Seattle spaces, the study shows the shortcomings of the standard plaza format in places where there is a good bit of rain and wind: it proposes designs sensitively tailored to these realities.

Additional research further indicates that we hear what we think we ought to hear. In connection with the new Philip Morris building going up across 42nd Street near Grand Central Station, I was asked to get decibel counts, the place being regarded as one of the very noisiest in the city. It certainly looks noisy. But the meter, surprisingly, recorded very moderate noise

levels. Two years hence the place will look quite different. There will be an indoor park at the corner and the now grimy facade of Grand Central Station will be clean and white. The place will look much better, and for that reason it may sound much better. I would bet that people will perceive the area as much less noisy, whether it actually is or not.

Chapter 4: Food

One problem is that the outdoor cafe has come to be considered something of a cliché. Some years ago architectural renderings of ideal squares, plazas, and spaces almost always featured an outdoor cafe, Paris-style kiosk, a hurdy-gurdy man, and several children holding balloons. This is low fashion now. In a design competition for the redoing of the W.R. Grace plaza several years ago, some 260 proposals were submitted from architectural schools. Of these, only six included anything as rudimentary as chairs and tables, and only one of these made the finals. Several architects on the eminent jury commented favorably on the absence of such "banal" features. No proposal was adopted. What the plaza still lacks are chairs and tables for outdoor eating.

Chapter 5: The Street

I have a special reason for citing *The Exploding Metropolis* (Garden City, N.Y.: Doubleday & Co., 1958), for I edited the *Fortune* series on which it was based. I am hardly impartial, but I do think it was a bit ahead of its time, and one big reason was getting Jane Jacobs, then of *Architectural Forum*, to undertake a major piece on downtown. She came through with a slashing attack on current planning dogma, a spirited affirmation of the street that it scorned, and shortly thereafter went on to develop the themes in her clas-

sic *The Death and Life of Great American Cities* (New York: Random House, 1959).

An excellent book on the physical street is Bernard Rudovsky's *Streets for People* (New York: Doubleday & Co., 1964). The first part is a testy put-down of the U.S. pedestrian, but the main text on the functional pleasures of Italian streets is splendid.

A good exploration of the potentials for contemporary streets is Roberto G. Brambilla's *More Streets for People* (New York: Italian Art and Landscape Foundation, 1973). With Gianni Longo, he has followed through with reports on pedestrian malls, car-free zones, and similar approaches here and abroad, published by the GPO and the Whitney Library of Design.

The pioneering study on the pedestrian as a transportation unit is John J. Fruin's *Pedestrian Planning and Design*. It is, unfortunately, out of print. But Fruin has been continuing his research, and an expanded study is in the works.

A definitive work on the imbalance between pedestrian and vehicular space, and what should be done about it, is the Regional Plan Association study by Boris S. Pushkarev and Jeffrey M. Zupan, *Urban Space for Pedestrians* (Cambridge: M.I.T. Press, 1975). Methodologically, the study is interesting for its use of aerial photography to chart pedestrian volumes. Our group, The Street Life Project, was studying several of the same areas at the time, using a combination of streets counts and time-lapse photography. Results of both studies matched closely.

Frederick Law Olmsted had a very strong appreciation for the street. He saw the streets bordering Central Park as an "outer park" and insisted they not be cut off from the park itself. When the Commissioner of Central Park instructed him to erect some sort of barrier, he answered:

It is not desirable that this outer park should be separated by any barrier more than a common stone curb from the adjoining roadways. It is still more undesirable in the interest of those who are to use it that it should be separated more than is necessary from the interior park. . . . The trees which grow upon it are used in design as a part of the scenery of the main park, adding to its beauty, attractiveness and value. The scenery of the main park should much more be made to add to the beauty, attractiveness and value of the outer park. As far as it is practicable the two should be incorporated as one whole, each being part of the other.

As for the iron fences, he suggested:

I consider the iron fence to be unquestionably the ugliest that can be used. If on the score of utility, it must be used then the less the better, and certainly where used, it should not be elaborated and set up on high, and made large and striking as if it were something admirable in itself, and had better claims to be noticed than the scenery which it crosses and obscures.

Excerpt from a letter to the Board of Commissioners of Central Park, April 1860. Frederick Law Olmsted, *Forty Years of Landscape Architecture: Central Park*, edited by Frederick Law Olmsted and Theodora Kimball (Cambridge: M.I.T. Press, 1975, paperback).

Our studies show that wherever plazas have both sunken space and space at street level, the street-level space is much preferred. The J. C. Penney Building is typical: the sunken plaza accounts for 25 percent of the space, only 13 percent of the sitters. At the General Motors Building the disparity is even greater, even more so when the standees at the railings are counted.

The distribution of people at the First National Bank of Chicago plaza shows an amphitheater pattern similar to that of Rockefeller Plaza. At a time when there were approximately 800 people sitting, we found that 45 percent were in the lower plaza, 15 percent on the lower steps heading down, 40 percent on the upper steps and mezzanine level. Our findings meshed

with those of a study by Professor Albert Rutledge and a group of his students of the Department of Landscape Architecture, University of Illinois, Urbana. Using a basic "pad and pencil" methodology, in a relatively short period of time they came up with a fine evaluation of how the plaza works and a set of recommendations that could make it work better. ("First National Bank Plaza: A Pilot Study in Post Construction Evaluation," June 1975.)

At the Citicorp sunken plaza and surrounding steps and ledges, the amphitheater effect is quite marked. During a summer lunch-time concert staged in the plaza, the people were distributed as follows: about 80 were on the lowest level, another 80 or so on the first set of steps, about 90 on the next level and main steps, about 150 on the ledges at street level. Total: 400 people.

Chapter 6: The "Undesirables"

New York's proposed Madison Avenue mall was beaten down in part because of undesirables. There was a two-week trial period, which our cameras recorded. They showed clearly that the people using the street were the people who worked and shopped in the area. But some retailers saw undesirables—"hippies," in particular. While I was talking to one shop owner, she noted several young people in blue jeans who were out in the street taking notes. "There they are," she said, pointing to our observers. Mayor John Lindsay invited retailers to a meeting at which I showed our film of the trial period. Some retailers still saw undesirables. One accused me of doctoring the film to eliminate evidence.

There is a reason far more compelling than fear of undesirables for the outward moves of corporations. Several years ago I made a study of top executives' place of residence prior to their corporation's

move from the city. I found that the correlation between the place of residence and the new headquarters site was 90 percent. There was a particularly strong concentration of executives in a six-square-mile area bounded by three golf clubs in Fairfield County, Connecticut. Average distance from residence to new headquarters: seven miles. William H. Whyte, "End of the Exodus," *New York*, September 20, 1976.

The safety-accident records at both Paley and Greenacre Parks have been excellent. The only occurrences have been some scrapes and bruises. Neither park has ever had a claim made against it for injury or any other cause. This has had little reflection in insurance companies' liability rates, however. Greenacre carries insurance for top liability of \$6 million at a premium cost of \$2,200 a year. Paley carries coverage for \$10 million at a cost of \$2,800.

An observant account of how people self-police a place that's good to them is Amanda Burden's *Greenacre Park* (New York: Project for Public Spaces, 1978).

We have observed one beneficent use of surveillance cameras. One of the street people we've known is Harold, a troubled young man who carried a microphone and at corners staged broadcasts to the world. People jeered and laughed at him when he did. One day he saw a TV camera on a plaza. He was entranced; thereafter, from time to time, he would go and stage broadcasts to the unjeering camera.

For a perceptive study of teenage "undesirables," see Nancy Linday, "Drawing Socio-Economic Lines in Central Park: An Analysis of New York's Cultural Clashes," *Landscape Architecture*, November 1977. Back in 1973, we were asked by then Parks Commissioner Richard Clurman to undertake a study of the troubles at Bethesda Fountain. It had become the central rendezvous for Hispanic teenagers

and there were problems with dope and vandalism. One of our best observers, Nancy Linday, spent the summer there. She found that most of the time the teenagers were making a good use of the fountain area, however raucous they might seem to the tourists who came to gawk at them. Among her recommendations: work *with* the teenagers; involve them in maintenance projects; have more "mayors."

Some Supreme Court cases on public rights in private places, namely, shopping centers, are: (1) *Amalgamated Food Employees Union Local 590 et. al. v. Logan Valley Plaza, Inc. et. al.*, 391 vs. 308 (1977); (2) *Marsh v. Alabama*, 326 vs. 501 (1946); (3) *Lloyd Corp. Ltd. v. Tanner et. al.*, 407 vs. 551 (1971). I am indebted to Mark Shuster of the Massachusetts Institute of Technology for his monograph on these decisions. As a useful summary of the legal points involved, he cites the *Harvard Law Review's* article on the Supreme Court 1971 Term (HLR86: 122 N 1972). It emphasizes the changing socioeconomics, noting: "Expression of a general political or social nature, though it may well be unrelated to any use or purpose of the property sought as a forum, nonetheless needs as much protection from threatened displacement of traditional first amendment forums caused by socioeconomic developments as does speech related to the functions of property."

Chapter 7: Effective Capacity

See City of New York, Department of City Planning, Urban Design Group, *New Life for Plazas* (April 1975), the complete text, illustrated, of the zoning provisions adopted in 1975 for office-building spaces; *Plazas for People* (May 1977), the illustrated text of the provisions adopted in 1977 for residential construction.

Cities that are contemplating incentives

for small parks would do well to make requirements a bit more flexible than we did. With the benefit of hindsight, it is now apparent that the specifications were a bit too stiff—in particular, the requirements that small parks be accessible at all times. Paley and Greenacre are not. Both have gates that are closed at night. Managements that provide comparable amenities should be able to do the same, or, alternatively, to store away the movable chairs and tables at closing time. Such a course has been approved by New York City for the plaza and outdoor cafe of the office building at 1166 Avenue of the Americas.

Chapter 8: Indoor Spaces

For a minority report on indoor spaces, see Suzanne Stephens, "The Market at Citicorp, New York City," *Progressive Architecture*, December 1978.

Chapter 9: Concourses and Megastructures

In a trenchant critique of megastructures, William G. Conway, a former associate of architect John Portman, noted the effect they have on the spaces between them. In "The Case Against Urban Dinosaurs" (*Saturday Review*, May 14, 1977), he holds that these visions of a controlled environment reveal the designer's hostility to the cities he professes to save. In Atlanta, he writes, "the five huge architectural jewels in the South's queen city are transforming her crown into fool's gold. This reverse alchemy is laying waste the downtown *between* the megastructures. In so doing it obeys the laws of economics now ignored by the project sponsors and by the city officials who clamor for more megastructures without first knowing the effects of those already constructed."

For a discussion of the street as a market,

see Barbara Petrocci (York University, Toronto), "The New Urban Marketplace: Street Fairs and Farmers' Markets Revisited," a paper presented at the annual meeting of the American Sociological Association, September 1978.

Chapter 10: Smaller Cities and Places

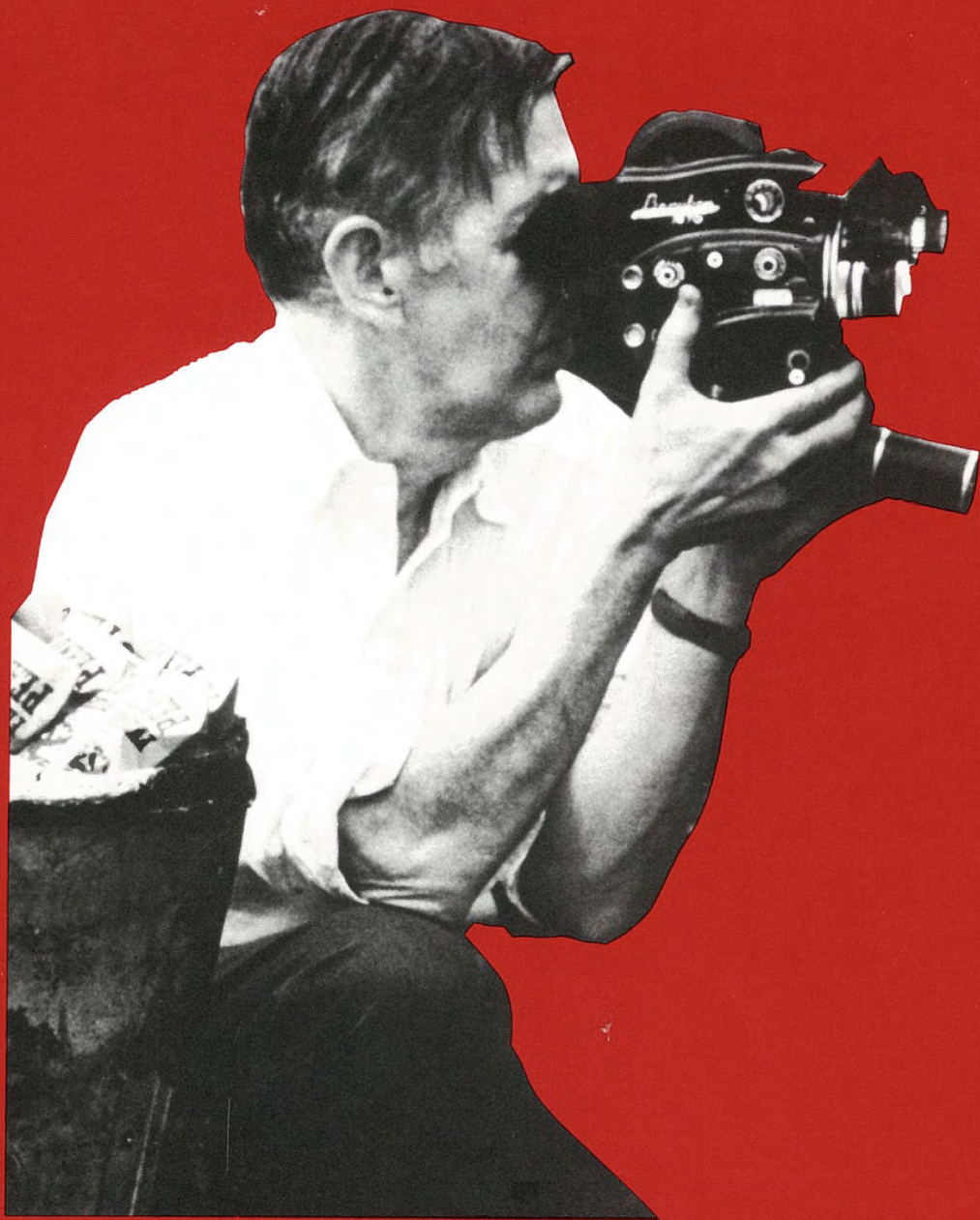
An excellent evaluation of urban spaces across the country has been provided by August Heckscher, with Phyllis Robinson, *Open Spaces: the Life of American Cities* (New York: Harper & Row, 1977). A former New York City park commissioner, Mr. Heckscher has an especially keen eye for the troubles and pleasures of center-city parks.

A fine critical analysis of downtown development, and zoning's role in it, is planner Kenneth Halpern's *Downtown USA: Urban Design in Nine American Cities* (New York: Whitney Library of Design, 1978).

In a forthcoming book, lawyer Robert S. Cook, Jr., will look at downtown development; the effects, good and otherwise, of incentive zoning and design controls; the lessons to be heeded.

Chapter 11: Triangulation

I am indebted to Hans-Bernd Zimmerman for his perceptive study of the social patterns of Brooklyn's Esplanade, done as part of the doctoral program in environmental psychology at the Graduate Center of The City University of New York.



Margaret Bemiss

William H. Whyte was born in West Chester, Pennsylvania in 1917. He joined the staff of *Fortune* in 1946, after graduating from Princeton University and serving in the Marine Corps. His book *The Organization Man* (1956), based on his articles about corporate culture and the suburban middle class, sold more than two million copies. Whyte then turned to the topics of sprawl and urban revitalization, and began a distinguished career as a sage of sane development and an advocate of cities. Along with numerous articles and studies, Whyte edited and co-wrote *The Exploding Metropolis* (1957), and wrote *Cluster Development* (1964), *The Last Landscape* (1968), *The Social Life of Small Urban Spaces* (1980), *City: Rediscovering the Center* (1988), and *A Time of War: Remembering Guadalcanal, a Battle Without Maps* (2000). He died in 1999.