3.
Streets as Playgrounds

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Great differences exist between adults and children in their perception and use of the outdoor environment. One of the greatest relates to residential streets. To adults, streets are functional resources: the quickest way from A to B or a good place to park the car. Sometimes, if lined with trees, they are valued as an aesthetic enhancement. Children see streets differently, as play opportunities discovered in lampposts, curbstones, gutters, inspection chamber covers, overhead wires, parked cars, trees, piles of leaves, flights of steps, gates, bollards, hedges, retaining walls, driveways, building entrances, bus stops, mailboxes, street signs, and benches. Children measure the environmental quality of streets by the presence or absence of these mundane objects, not by the ease of traffic flow and parking. Nonetheless, traffic has a critical effect on street playability (fig. 3-1).

STREET PLAY IS HERE TO STAY

Think back to your own childhood for a moment and recall what your favorite play places were. I guarantee that street-related spaces will come to the minds of most readers. Self-reflection is a worthwhile source of understanding, but we do not have to stop there. A clutch of scientific studies conducted in the past fifteen years back up personal recollections and reinforce what any good pair of eyes can still witness: in any present-day residential area inhabited by children, children make substantial use of streets and street-related spaces.

Cooper Marcus (1974: 202), who studied children's activity in St. Francis Square, a multifamily housing

3-1. In Stoke-on-Trent, England, two children chat on the flight of steps leading up to their house, while keeping an eye open for friends in the street below.
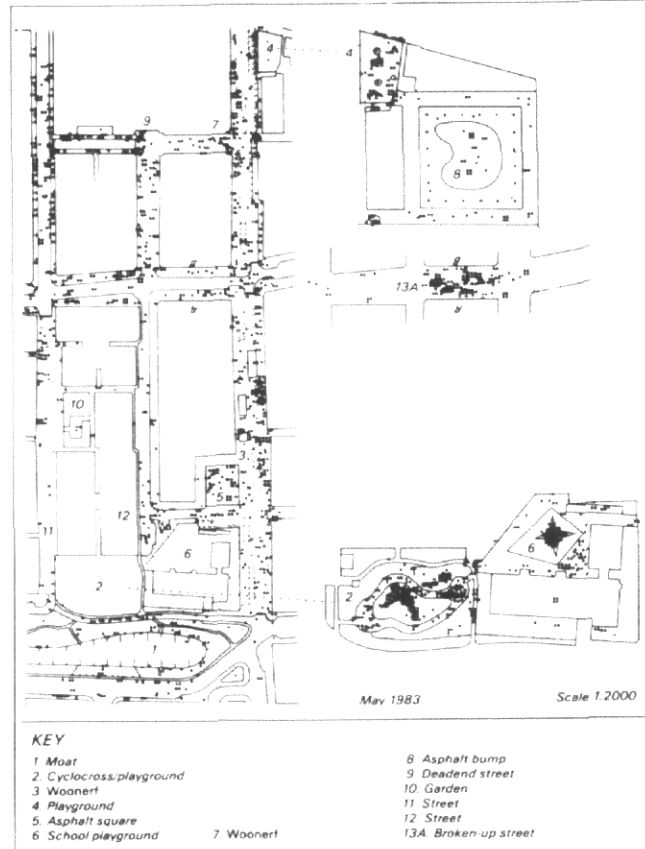
district in San Francisco, mapped 44 percent of play occurring on paved areas and 12 percent on perimeter sidewalks. Francis (1985: 36–38) noted 20 percent of

All photographs are by the author unless otherwise noted.

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Observations made May 3 10, 1981, at two-hour intervals between 10.00 hrs and 18.00 hrs

a.

3-2. Consistently high levels of children's use of streets, sidewalks, and pedestrian paths are illustrated by behavior maps of contrasting neighborhood settings in a. Davis, a low-density Californian suburban town, and b. Leiden, a high-density Netherlands town. (Source a. Francis 1985: 37; source b.: van Andel 1985: 49)

children's activity happening on streets and a further 24 percent on bicycle/pedestrian paths in Village Homes, a suburban neighborhood in Davis, California (fig. 3-2a). A study by van Andel (1985: 46–54) of the effects of environmental improvements on the use of open space in a neighborhood in Leiden, the Netherlands, dramatically illustrates the persistence of street and sidewalk play. Sidewalk play remained the same (44 percent) before and after changes were made, even though some of the pavements were substantially upgraded. Street play, which was initially 22 percent, decreased to 17 percent after the changes, primarily because two newly installed play areas attracted activity (fig 3-2b). We can conclude that, even though faced with many attractive alternatives, a substantial number of children still make the street their playground.

Further results suggest that streets and sidewalks are but two of the most popular items within a broader category of hard-topped circulation spaces woven in-

May 1983   Scale 1.2000

KEY

1 Moat		8 Asphalt bump
2 Cyclocross/playground		9 Deadend street
3 Woonerf		10 Garden
4 Playground		11 Street
5 Asphalt square		12 Street
6 School playground	7 Woonerf	13A Broken-up street

b.

to the fabric of residential areas. Traffic-segregated pathways, parking areas, and garage courts also represent appealing places for play. For example, the well-known study by the British Department of the Environment, *Children at Play* (1973: 18,20), showed that 23 percent to 41 percent of observed activity occurred in garage courts and miscellaneous paved areas in five out of six housing sites of varying density. Becker (1976), in a study of four multifamily housing developments, found 22 percent to 38 percent of child activity on pathways. Björklid, in her analysis of two Stockholm housing estates, found that in one estate, Tanto, 63 percent of all children's play took place on asphalt and concrete surfaces, 10 percent occurred on paths, and 8 percent in entrance spaces related to parking (1982: 140–41). In the other estate, Plankan, Björklid mapped 20 percent activity on paths. Gibbons and Stirling's study of Stevenage New Town (n.d.) showed a whopping 48 percent of children's play on streets in the older, nontraffic-separated neighborhoods. Equally dramatic was the evidence that even in the highly segregated neighborhoods, 17 percent to 18 percent activity still occurred on streets. Moore and Young's review (1978), which included the results of a number of smaller studies from both sides of the Atlantic as well as those just cited, concluded that between one-quarter and one-half of observed neighborhood outdoor activity occurred on streets, pathways, and associated hard-surfaced circulation areas.

The foregoing data relate to "actual use," but this is not the only method of assessing children's relationship to the physical environment. Vital information comes from children's own responses—how they perceive their behavior and how they feel about their surroundings.

One out of five children interviewed in a study of three British neighborhoods said streets and associated spaces were their preferred after-school play areas (Moore 1986). When asked where they went to meet other children, 23 percent of the ninety-six children in the study referred to the same spaces. One in three of their drawings of favorite places included streets—the sixth most frequently mentioned element of a total list of sixty (figs. 3-3 and 3-4). Finally, Holme and Massie (1970: 140) reported that among mothers interviewed, 21 percent from Stevenage and 64 percent from Southwork (London) said their children usually played on the street. (However wary we must be of the accuracy with which parents can report activity on behalf of their children, the figures are suggestive.)

## Why Streets Are So Attractive

Kids *do* play in streets—all kinds of streets—and nothing that planners, parents, or city officials can do will stop it. Indeed, there is every reason for celebration, for streets are the social hub of the neighborhood, where children meet, learn about each other and their adult neighbors, and investigate their surroundings.

The high levels of use and positive values replicated in these studies in a number of countries can be explained by two phenomena: children's close proximity or ease of access to such spaces and the hard, linear

3-3. Life in a dead-end street: a. eleven-year-old girl playing catch with her sister in a Stoke-on-Trent, England, cul-de-sac; b. the girl's drawing beautifully illustrates the many activities and traditional games possible in such a street, where traffic speeds are low and passage intervals long. (Source b.: Moore 1986: 105)
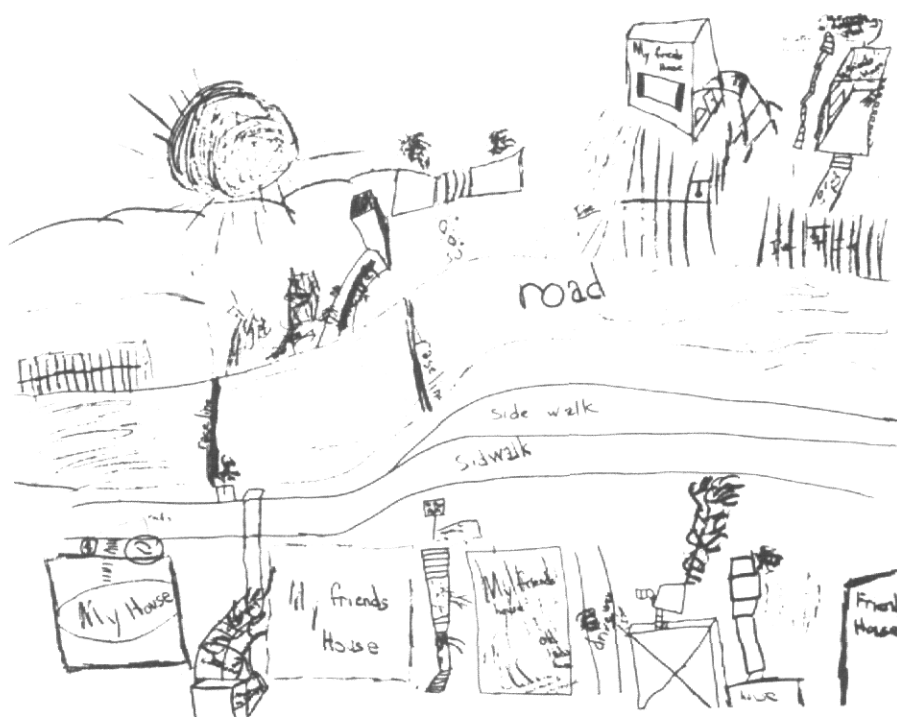

a

b

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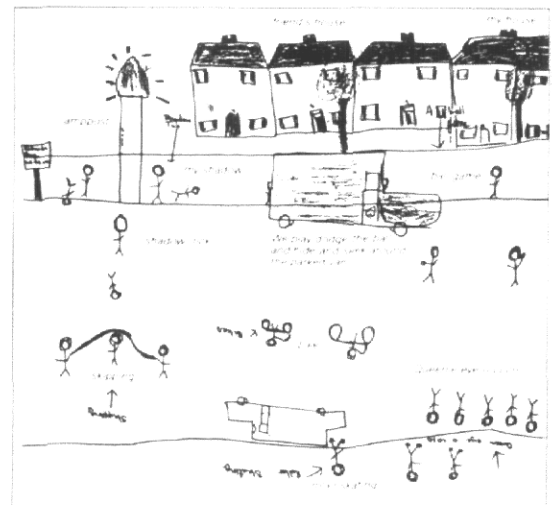
3-4. Indicators of street playability:
a. "race line" painted by a girl and
her friends on a street in moderate-
density Berkeley, California; b.
drawing by the same girl shows the
street race lines, sidewalks, and
adjacent friends' houses as favorite
places to play. (Source: Childhood
Use of the Urbanizing Landscape
Project 1979)

b.

play surfaces that children prefer for many everyday games and play activity. Asphalt and concrete do not get muddy; they make a smooth surface for wheeled toys, bikes, and roller skates; and they have excellent ball-bouncing characteristics (fig. 3-5). What makes streets especially attractive, however, is their high degree of accessibility to children of both sexes and all ages. Streets fall within the *habitual* range of childhood territory; that is, they are close enough to home to be used every day within the severe time con-

straints under which most children live. Streets are available during the cherished intervals between school and the evening meal, between the completion of homework and darkness, between wet weather and domestic chores, between waking and a family outing (fig. 3-6).

When friends have to synchronize their free time, opportunities for play can become severely limited indeed. Realistic choices boil down to staying indoors, playing in adjacent streets, or (depending on the type

a.

b.

3-5. Hard surfaces in the traffic
environment attract children's play:
a. ball games in a garage court in
Stevenage New Town, England; b.
wheeled-vehicle play on a
sidewalk in Berkeley, California.
(Photo b.: Bruce Levin)

a.

3-6. Street play is especially
important to girls, as illustrated by
these San Francisco sidewalk
scenes: a. skipping in a warm patch
of sunlight—the rope tied to a
handy drain pipe; b. ball play
cornered between front steps and
garage doors—a universal
childhood activity with very modest
spatial requirements.

b.

of housing) finding niches in private yards and gardens or in the shared open space of apartment buildings.

In private yards and gardens, however, parents often do not tolerate anything except quiet, nonphysical play for fear of unacceptable noise levels or damage to fragile plants. Such spaces are often too small to accommodate more than one or two children, and neighboring children may feel too intimidated to enter the private territory of another family. Private yards and gardens may not be available to apartment-dwelling children altogether; if they are, the amount and, particularly, the quality of space are notoriously variable. Sometimes this reflects inherent site constraints and opportunities, a point well illustrated by Björklid's 1982 study. One of the estates (Tanto) was sited on steep terrain where many natural features (trees, rocky topography, wild vegetation, slopes) were retained and used by children; the other (Plankan) was built on level ground with no such natural advantages. In Plankan, the onus fell on those responsible for site planning and design to understand the play needs of future residents and to find creative ways to support them physically. But the product of their imaginations was no match for what nature had provided in Tanto. The resulting large, flat, barren, hard-surfaced areas were a good deal less interesting than the surrounding streets.

Finally, it is important to stress another very pragmatic reason why streets and sidewalks are so important in the lives of children. They are the means by which children, for whom walking is the almost uni-

a.

3-7. Well-differentiated street environments enable children to "play along the way" as they move around neighborhood and city: a. walking on walls in San Francisco; b. leapfrogging bollards in Stoke-on-Trent; c. twirling around railings in Stoke-on-Trent; d. the varied street interactions of a Berkeley, California, child on her way home from school, as illustrated by this behavior map. (Source d.: Hara and Levin 1973)

b

c.

versal mode of transportation, travel around the neighborhood and city. In the Department of the Environment's study of British neighborhoods (1973: 18, 20), 93 percent of the children said they got to their favorite after-school places by foot; but this does not mean they *walked* in the adult sense of the word. Out on the street, children hop, skip, jump, climb, crawl, leapfrog, balance, skate, slide, run, chase, hide, pounce, sit, lean, and twirl. They play along the way to any destination as they investigate with mind and body every opportunity presented by the street-as-gymnasium (fig. 3-7).

Streets fill an especially important role in children's loose-knit social structure by providing a locus for peer contact a few steps from home. Streets and street corners are important meeting places. When traffic density is low and streetscape diversity high, children are drawn to an environment that is extremely well adapted to their needs. Seen in this light, the notion of "keeping the kids off the streets" seems highly unrealistic, not to mention undesirable. Street play is a universal cultural phenomenon that will occur even if traffic levels are high and space differentiation low.
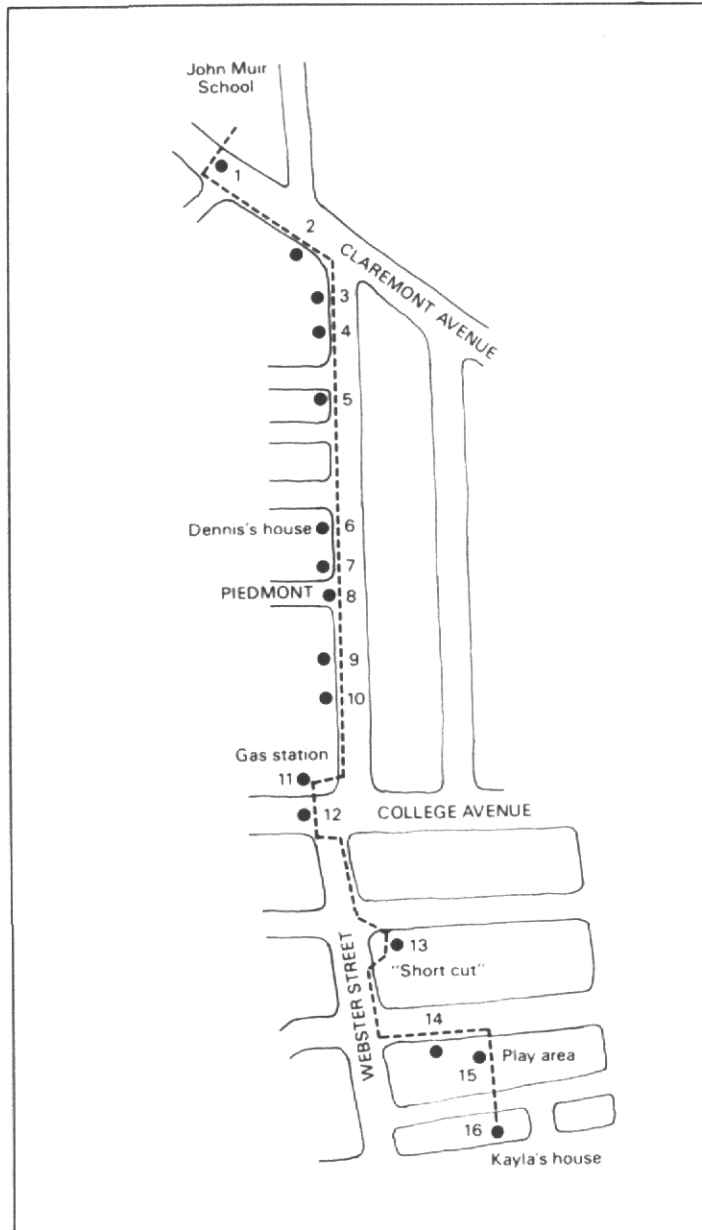
KAYLA'S TRIP HOME FROM SCHOOL
At the time these observations were made by Tod Hara, a landscape architecture student at the University of California, Berkeley, Kayla was a seven-year-old attending John Muir School. With her consent, the trip was made on November 2, 1972 (Election Day). It covered approximately 0.6 miles and took forty-five minutes (the observer alone took twenty minutes).

1 Kayla and her friend Simon crossed Claremont Avenue, helped by the traffic monitor.
2 Picked up garbage and said, "People throw a lot of garbage on the street."
3 Stopped by a water puddle and found a half-drowned butterfly.
4 Splashed along the water lying against the curb (from the rain that had fallen earlier).
5 Picked some leaves off a tree.
6 Stopped at Dennis's house and dropped the garbage there (from 2, above).
7 Saw a flag of the United States on the street and asked a passerby why it was there.
8 Crossed Piedmont Avenue without looking around.
9 Noticed that the stream of water on the street was getting smaller. Climbed on a truck parked on the street.
10 Both children picked a leaf out of the stream, wrote their names on it with mud, washed their hands in the stream, and walked through the mud.
11 Found Simon's parents' car parked in the gas station, on which Kayla had written "let me be washed" on her way to school that morning. Kayla took a drink of water at the fountain.
12 Crossed College Avenue (a major four-lane arterial) very carefully and continued down Webster Street.
13 Took a "short cut" that involved going into the entrance courtyard of an apartment building on the corner; going under a stairway; and crawling through a hedge of bamboo to re-emerge on Webster Street (hardly a short cut!).
14 Stopped by a car with a McGovern bumper sticker on it; talked about the mock election they had had in the classroom, then drew signs on the wet car.
15 Walked between two houses and went into the small play area of a private day-care house. Played on the swings and seesaw.
16 Kayla arrived home.

d.

Designated playgrounds can add important play opportunities and attract activity but they cannot substitute for the immediacy of the street. Streets have always been used for close-to-home play and will surely continue to be so in the future.

Banning Play Is No Answer

General play is frequently banned in housing projects, or specific activities are prohibited, such as ball play and bike riding. Even tobogganing was not permitted on the Tanto slopes (Björklid 1982), which seems unimaginable for a Swedish child living through long northern winters. Moreover, a full 20 percent of activities recorded by Björklid (1985) were officially forbidden—an extraordinary state of affairs that, at best, must have produced much petty friction between housing managers, parents, and children; at worst, it represented an ongoing situation of repression and victimization. Contrary to the popular notion that children get a kick out of breaking the law, most are far more likely to feel guilty when doing forbidden things—even games, like ball play, that should legitimately be considered part of the child's developmental *right to play*. As Verkerk and Rijpma (1984) argue, banning play is no answer. When anti-play attitudes are built into law and promulgated by housing managers, they reinforce a pervasive, authoritarian control over children's lives and can greatly diminish the many opportunities for creative self-learning available outdoors.

Streets are not the only places suitable for play. Many, in fact, are unsuitable because of traffic and social dangers or because they are too far from home. Some residential areas and housing projects provide attractive park and playground facilities and occasionally offer excellent community activity programs. These are choices that can equal and often surpass the attraction of the street, but, sadly, they are few and far between. In all too many instances, either playgrounds are not available or they are so poorly sited or limited in what they provide that they are no match for local streets.

Well-intentioned adults designate playgrounds as spaces where children "ought" to go, but children do not necessarily follow these implicit (or explicit) directives. Indeed, many of the sources cited earlier, illustrating the generally heavy use of streets, also demonstrate the light use commonly made of designated play areas. At best, they fulfill only part of the full range of children's play needs. At worst, they are an irrelevant waste of money. The term *playground* covers an enormous range of facilities, from fully staffed "adventure playgrounds" and "playparks," providing young people with a multitude of opportunities for creative engagement with each other and their physical surroundings, to barren wastelands of asphalt, most commonly found (ironically) in urban schools.[1] Given the choice, few children play there, except to pursue specific activities suited to large hard-surfaced areas, such as bike riding and ball games.

Most children I have worked with are in favor of conventional playgrounds and use them as a place to meet new kids or to rendezvous or socialize with friends. Standard equipment like swings, slides, roundabouts, and climbing structures often are a pretext, or an enjoyable backdrop. Their main purpose for being there is social. Unfortunately, most conventional playgrounds are too far away from children's homes to make everyday use feasible. Streets, on the other hand, are invariably present (fig. 3-8).

The Street Playground

Some children are "pushed" toward streets because of the lack of play opportunities elsewhere. Others are "pulled," even if other play spaces are available, by the special attractions of the street not duplicated

3-8. Low-trafficked suburban "courts," as opposed to playgrounds, offer an attractive, secure play environment, as expressed in this favorite-places map drawn by a girl in suburban Walnut Creek, California. (Source: Childhood Use of the Urbanizing Landscape Project 1979)
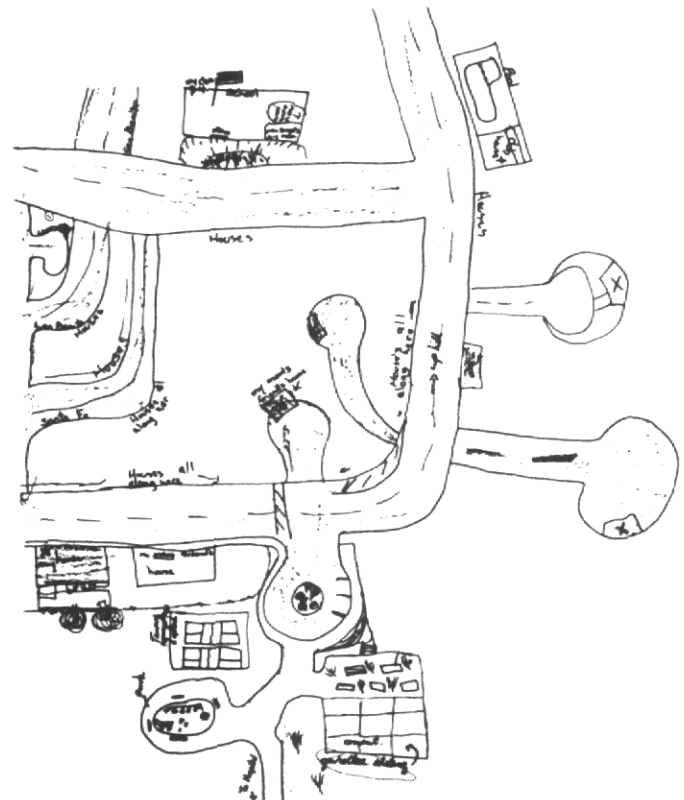
elsewhere. Streets are especially important to girls because their families do not allow them to wander far from home alone in most, if not all, countries where research has been done. All children like to be where the action is, where the life of the community takes place—where trees get trimmed, fire engines come clanging, and dogs wander.

The street is a world as exotic as it is familiar. There, children play in the interstices between parked cars, along the curbside ecotone of gutter rivers, down "bottomless" storm drains, among insect life of sidewalk verges, in jungles of front fence vegetation, and on grandstand stoops. Among the myriad and inexhaustible supply of toys are maple and sycamore seed "helicopters," mayflower peashooters, horse chestnut "conkers," and wonderful rubbish put out for pickup. Children who play on the street witness the comings and goings of tradespeople, mailpersons' surprises, tree trimming crews, hole diggers unearthing mysterious pipes, and the quotidian details of their neighbors' domestic lives. The street playground offers leaves for shuffling, railings and boarded fences to run sticks along, patches of dirt for constructing imaginary landscapes, and occasional building materials, such as sand piles (fig. 3-9).

The minutiae of neighborhood life exist in the narrows between flowing traffic and private homes. Here vital meetings occur between resident children and children just moved in, perhaps from a foreign culture or nationality. More and more children are migrating with their families from rural regions to the world's cities. Some are the children of parents relocated by our increasingly mobile society or moved to a strange place to study. In each case, streets will be the spaces where first steps toward new friendship, socialization, and multicultural integration take place through play (fig. 3-10).

MAKING STREETS LIVABLE FOR CHILDREN

Conserving and Enhancing Fronts

Front is a traditional British working-class term used to describe the space between the boundary of the private home environment (such as the front door or frontyard fence) and roadway (fig. 3-11). Fronts include all those oddball, leftover spaces where the larger community environment intersects with the private domain of the family. They are people-environment ecosystems that provide an essential ingredient of all other healthy ecosystems: *diversity*. Because of their physical diversity, fronts support the varied quality of children's social life; their attributes and opportunities need to be recognized and conserved in old residential streets and carefully designed into new ones to maximize use by children. The number and variety of physical differentiations, such as those listed in the opening paragraph of this chapter, enhance play opportunities on individual streets. Hilly topography is an added influence because it results in more banks, steps, and retaining walls around streets and adjacent buildings. This further increases children's play repertoires, including games with roller skates, go-carts, and toboggans, and helps perpetuate local street-play traditions (fig. 3-12). Furthermore, streets that work best are connected to a subsidiary network of "side," "back," and "front" spaces of many kinds that greatly extend the variety of children's behavior. As argued by Ward and Fyson (1973) and by Hirst (1983), improved streetscapes need to be integrated into neighborhood networks of pathways, greenways, and urban trails for educational as well as recreational purposes.[2]

### Reducing Vehicle Speed and Increasing Passage Interval

Traffic density is the severest constraint on the use of the roadway by children. In fact, use becomes unfeasible above a very low level of traffic density. Zerner's 1977 study contains examples of street-stringing games that could occur only when traffic was slow and the passage interval more than twenty minutes or so (amounting to, in other words, less than three vehicles per hour). The criteria of slow speed and long interval are likely to be met only in narrow alleyways or dead-end streets (fig. 3-13). Provided traffic speed remains slow (at a walking pace of three to four miles per hour), children can play chasing and hiding games across the full width of the street, even with shorter vehicle passage intervals. Bike riding and ball play can continue under even more adverse conditions. But at passage intervals of less than five minutes and speeds in excess of ten miles per hour, play can no longer span the full right-of-way and has to remain on either side.

For the most part, children are mindful of traffic constraints on their street behavior. Even so, danger always lurks in the form of unexpected events and exceptions to the normal pattern of traffic flow. For this reason, we need a street management policy that favors children in order to reduce these and other risks by appropriate measures. The greatest danger, of course, is faced by children who live on streets where traffic is so bad that even the minimum levels of playability are not met, yet who play there nonetheless because they have nowhere else to go. Those streets
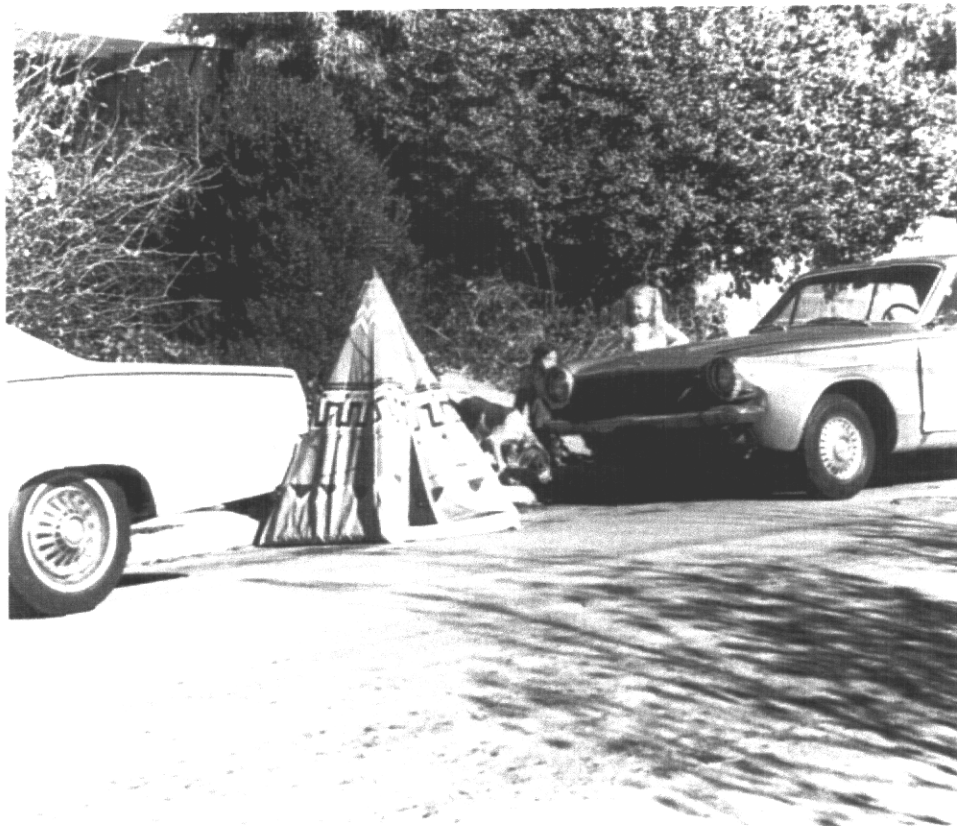
3-9. Street environments function as children's social centers—exemplified by these scenes from Berkeley, California: <u>a</u>. a temporary campground between two parked cars; <u>b</u>. a girl's map illustrates the diverse stimulations of the street; <u>c</u>. map author, swinging on the street tree in front of her house with a friend; <u>d</u>. a street sign becomes a challenging climbing object and rallying point on the street. (Photo <u>a</u>.: Bruce Levin; source <u>b</u>.: Childhood Use of the Urbanizing Landscape Project 1979; photo <u>d</u>.: Barbara O'Mahoney)

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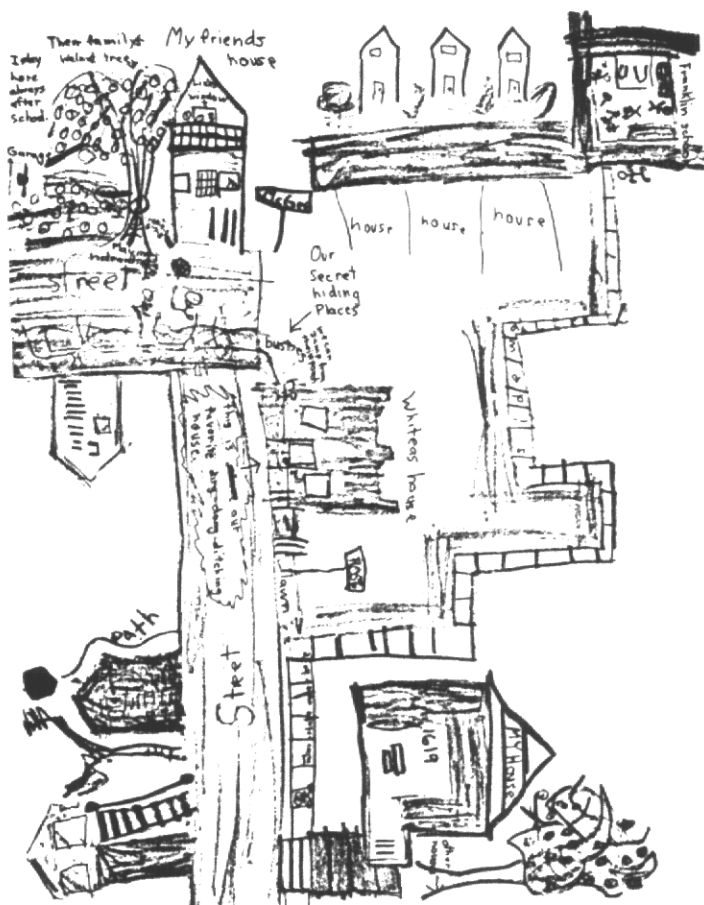
b.

c.

d.

3-10. A multi-ethnic group perched in a San Francisco street meets to blow bubbles.

a

b

c

3-11 Street "fronts" offer children opportunities to interact with their environment. a sweeping autumn leaves, b sandplay in the gutter, c hunting wildlife in an overgrown front garden.

3-12. The effect of topography on street play: go-cart and Big Wheel race each other on a hilly street in San Francisco.

3-13. A narrow, dead-end alley in San Francisco's Chinatown helps support traditional games (notice the "stringing" behind the children, possible only at very low traffic levels).

may require drastic intervention to improve conditions, but all streets where children play and move through the city must be made safer to reduce the number of young lives lost or young bodies maimed. It is an issue no less important than seatbelt and impaired-driving laws.

Improving Street Performance for Children's Play

Woonerven and similar measures also enhance the use of streets by children (see chaps. 2, 4, and 27 and Eubank-Ahrens 1985). Donald Appleyard's *Livable Streets* (1981), which incorporates his own pioneering research together with that of Stina Sandels (1968) and Charles Zerner (1977), contains examples from several countries of successful attempts by local communities to make residential streets more habitable. The examples show how vehicle speed and passage interval can be controlled by appropriate measures combining "necks," "sleeping policemen" (bumps), "jogged" lines of travel, and varied surface treatments. Improvement is achieved by measures such as limiting the flow of through traffic, reducing speed limits, and changing roadway alignments. Of critical importance is the legal priority accorded to pedestrians.

Narrowed streets and cul-de-sacs reduce traffic speed and increase the security of children who fear being hit from behind. These measures also keep through traffic on through streets and off internal neighborhood streets. The assumption is that residents and tradespeople conversant with the street and its users will keep a sharper lookout for playing children than will fast-moving strangers seeking a shortcut.

Principal objectives of these efforts are to control the noise, pollution, and visual impact of neighborhood traffic and to reinstate some of the social functions that local streets once enjoyed before automobiles took over. Obviously, children stand to benefit greatly from such actions. The study by Eubank-Ahrens of two *Woonerven* in West Germany (1985, and see chap. 4), supports this claim. Her results clearly indicate how street improvements led to more and more diverse street use by children. Opportunities for street improvement are especially obvious in older housing areas where traffic levels are moderate and where streets are generously laid out and have interesting configurations that already stimulate imaginative play.

Community Participation: The Key to Success

Once we accept that children *will* use neighborhood streets as playgrounds, we confront the inevitable policy issue of how to upgrade street quality. Wherever possible, the community of users—above all children—needs to participate in replanning and redesigning street environments, especially given the number of examples of constructive participation methods throughout the world (fig. 3-14): Appleyard (1981) offers detailed guidance; the Norwegians have instituted a model of youth involvement in planning (Hongrö 1983); Berkeley, California, has set a precedent for cities in the United States with a similar program (Moore Iacofano Goltsman 1985); and the Livable


3-14. Children need to participate in a genuine manner in the replanning and redesign of residential street environments. An example is the McKinley Commons community design workshop conducted in Berkeley, California, as an environmental education project by a class of elementary school children (the street, McKinley Avenue, was adjacent to their school): a getting a feel for the size of the street compared to the size of the human body; b. the results of a traffic survey conducted by the children; c. reviewing a map of the neighborhood, after a trip to the planning department at city hall, to see how McKinley Avenue related to other streets; d. children working on a model showing changes they
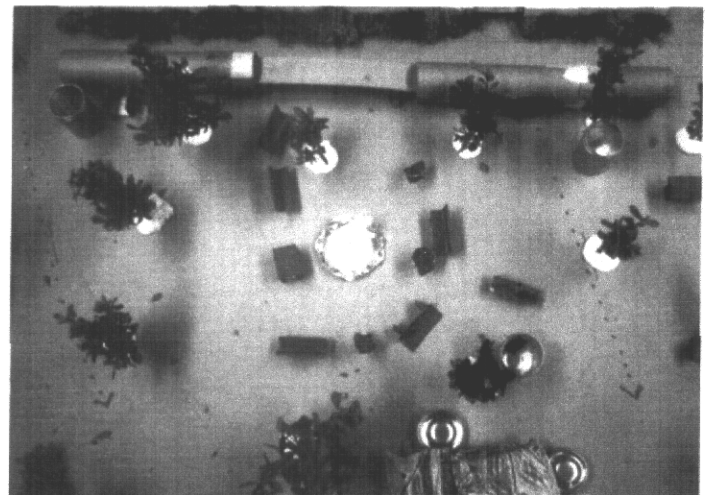
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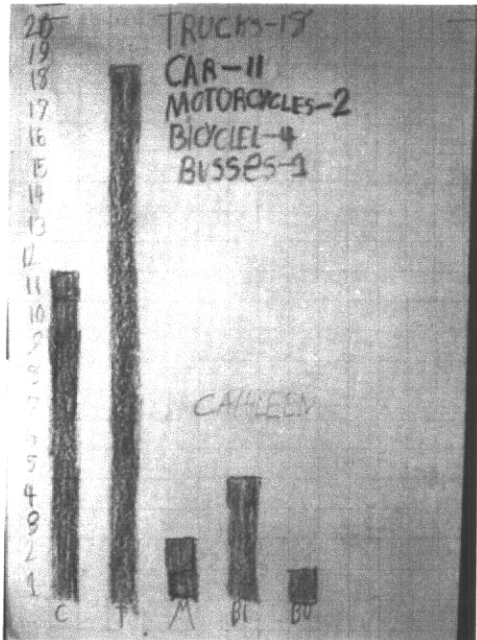
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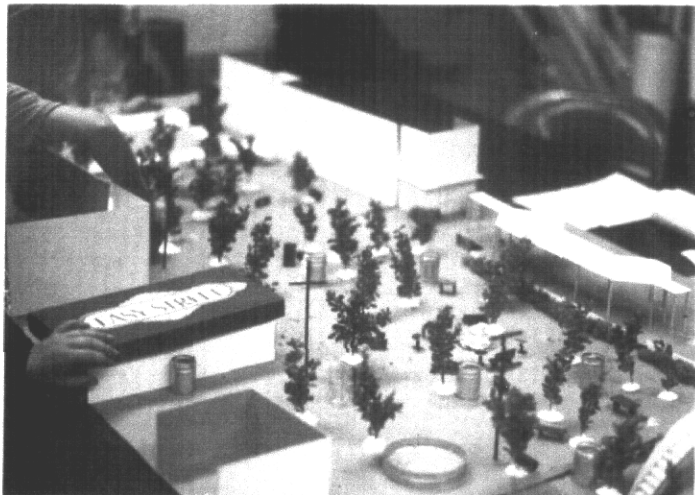
d.

e.

wanted to see in the street; e. detail of the model, showing many additional trees, trash cans, a play tunnel *(top)*, a barbeque gazebo *(bottom)*, and benches and a central fountain *(white circle)*; f. mock-up of the fountain—part of a full-size simulation of the proposed changes to see how they would work. At the time of writing, the community was still waiting for the changes to be implemented on the ground—a situation difficult for children to influence directly, since they have no political power.

f.

Streets Project, conducted by Jeff Oberdorfer in Santa Cruz, California (1982), provides a useful case study of an effective participatory approach involving business interests and other groups in the community.

An extensive array of participation techniques have been developed and documented in recent years (Hart and Moore 1982–83). One of the most creative ways of achieving participation, and helping all age groups break away from stereotype images of the street, is "animation." In Europe, animation is practiced by local artists and other specially trained professionals who instruct communities in the social, economic, and political processes that shaped their environment and who help them to control their surroundings. Although the methods and contexts used in animation vary from community to community, the process essentially develops a local culture that is alive and relevant to the present yet grows out of the past and is oriented toward the future.[3]

In the long run, collaborative approaches toward environmental problem solving will be far more effective than holding on to the unrealistic notion that children can be banned from any part of their local surroundings. Children are very resourceful when they want something badly enough (fig. 3-15). Educating children about road safety—in other words, teaching them to accommodate themselves to traffic —is certainly worthwhile, but it is a very limited strategy. For one thing, as Stina Sandels's 1968 research showed, children's acuity does not fully develop until the age of twelve or so. Only then, in the final years of childhood, are they fully equipped biologically to judge the speed and distance of oncoming traffic.

The ever-rising costs of running a car and the resurgence of interest in the quality of life in urban neighborhoods will mean, as Appleyard suggests, the renaissance of street space as a significant social resource for all ages. Urban streets *can* be humanized; the balance between the needs of people and the needs of motor vehicles *can* be redressed. Many successful examples already exist. We must make a greater effort to ensure that children's needs are not only recognized but thrust in the forefront and represented by children themselves.

NOTES

1. *Adventure playgrounds* were developed in Europe after World War II. Typically, they are fenced-in areas where indoor and outdoor activities of a challenging, adventurous, and exploratory nature for children of all ages are supervised by one or more play leaders. The construction

of "huts" and "camps" in children's self-planned communities and the presence of animals are two main components. Lately, the term has been misapplied to playgrounds that do not fit this description.

Playparks originated in Sweden, particularly Stockholm, and later developed in London and other European cities. Normally sited in a public park, housing estate, or schoolyard, a typical playpark provides a park-like setting for children's informal play along with a variety of equipment and animation programs designed to fulfill the broad spectrum of child development needs. The social needs of accompanying adults are also recognized in the provision of comfortable sitting areas and adequate shelter.

2. *Urban trails* (along with *urban study centers*) were developed in the United Kingdom during the 1970s as part of the British environmental education movement. They consist of defined pathways along routes that were chosen for the way they expose users to significant historical, cultural, social, economic, visual, artistic, and architectural aspects of the city or neighborhood. Thus, they represent an educational potential of street environments (see chap. 1, by M. Francis)

3. See Westland and Knight's *Playing Living Learning* (1982) for details regarding animation groups.

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a.

b.

3-15. Children can be very resourceful in changing the traffic environment to suit their needs, especially when adults collaborate: a. a "clubhouse" built by a group of children in a garage court behind an apartment building (surrounded by four-lane arterial highways) in Oakland, California. b. researchers (off camera), parents, and children sit around one of the favorite-places map, while parents (in their role as animators) explain how they helped the children collect clubhouse building material and negotiate permission with the apartment building manager to allow the clubhouse to be constructed.

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