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WALKING INTO THE NIGHT:
AN EXERCISE IN INTEGRATED PEDESTRIAN-ORIENTED FACILITIES DESIGN

Several of the ideas and approaches outlined in the sections above were implemented as exercises in a joint, graduate-level community planning/landscape architecture design seminar at Iowa State University during the 1980/81 winter academic quarter. Students were challenged to approach the environments utilized by pedestrians in an integrated, holistic manner. A specific focus was required for the course, however, and the co-instructors chose to concentrate on the character of the pedestrian environment as it is experienced when walking at night.

A review of the literature would lead the planner/designer to conclude that the pedestrian environment largely disappears after dark. With the exception of a few studies on the "visibility" of pedestrians to car drivers after dark (e.g., Hazlett and Allen, 1968), the "visibility" of signs such as those which might alert car drivers to pedestrian crossings or changes in route (e.g., Hills, 1972), or concern with the interactions of lighting and safety (e.g., Lam and Ripman, 1977; and Tien et al., 1979), the pedestrian environment after sundown has received amazingly little design or planning consideration.

This bias which ignores the pedestrian at night runs very deep. Even a casual review of planning and design proposals reviewed in the top journals reveals that the graphics which illustrate the proposals are daytime graphics. Consider the many beautiful layouts of newly design pedestrian districts. They are always shown graphically as though the environment would exist only during daylight hours, probably during the late spring, summer, or early autumn. In fact, the co-instructors of the seminar could find no good instructional references for their students on how to draw or graphically represent environ-

ments at night. Thus a considerable portion of the early part of the seminar was devoted to experimentation with various techniques for illustrating the darkened qualities of pedestrian environments at night. This focus was also expanded to include training in night photography so that students could document existing conditions for walkers after dark in urban areas. Finally, there was discussion and review of techniques for photographing scale models of proposed environments so that the planner/designer could compare the effect of various proposals under simulated conditions of night.

The actual timing of the seminar also coincided with the depths of the winter season in Iowa. Not only are pedestrian environments not shown at night in planning proposals, they are also rarely shown under conditions of adverse weather conditions. Thus, the students in the seminar (which always met at night so that field trips and design demonstrations could take place under actual night-time conditions) were exposed to extreme winter weather conditions as well as darkness. It is worth noting that many individuals who reviewed the proposed course remarked, "Who would want to go for a walk at night in January?" This is precisely the point, the pedestrian's night-time environment during extreme (but recurrent and normal) climatic periods simply lies outside the consciousness of many planners and designers. The purpose of the seminar, therefore, became one of exploring the potentials for design which exist under such conditions. Due to time constraints, almost all the seminar's attention was devoted to the issue of night-time rather than winter weather, but there is still much to be done in both areas. This seminar was primarily an investigatory experience rather than a process for proposing design guidelines.

Only a handful of articles and other materials were found which related to the night-time experiences of pedestrians. A recent paper by Kate Bolton

(1979) describes the evolution of street lighting systems in America. The relative recentness of the "bright lights" of the city is underscored in a note on the intrusiveness of mercury-vapor lights in rural areas written by Justin Isherwood (n.d.), a farmer in Wisconsin. It was Isherwood's short essay which sparked the imagination for several students, for he portrayed the darkness not as something to be feared, but as an invitation to forgotten experiences:

Night is a time to be held by the dark. Night is a time to wear thin leather moccasins or go barefoot so as to better feel your way with toes. Night is the time to join the other workers on the dusk-to-dawn shift: owls, racoons, mice, coyotes, skunks and bats.

Mercury-vapor lights trespass on the goodness of the night. Lost, now, is the chance to dive into evening's dark pool and sense the embrace of it. The night is a lovely place of fragile construction. The ceiling and walls of it are so quickly undone, so easily destroyed. (p. 19).

And, if the wildlife images were too remote for students in a course on urban design, others found similar inspiration in Zerner's (1974) observations on city streets as the hearth of children's play. Walking along the streets at night, Zerner had many images, including:

At night, lit by neon light, the trolley-car yards of South of Market resembled vast gray-green grazing fields of luminous mechanical insects sucking their electric paper wires and glowing in the nighttime's green haze with antennae of steel uplifted.

These two experiences of night come from very different perspectives. Neither is necessarily held superior to the other, but both point to the richness of imagery which the night contains for those who seek it out. Due to the lack of relevant literature, students were left with these essays and several poems

as the primary literature on pedestrian experiences at night. Since there were no textbooks on the topic, other sources of design guidance had to be generated.

Design Generating Methodologies

Planners and designers are often tempted to rely heavily on their own, unreflective intuition when there is a lack of specific design guidelines or quantitative data. In this seminar, however, students were encouraged to temper their intuition with disciplined exploration of the personal experiences from which design insight frequently emerges. Three of these exercises are reported here: systems-oriented observation, unstructured experiences, and qualitative interviewing.

Systems-Oriented Observation

The systems-oriented, theoretical framework for this exercise is presented in Hill (1979) and was outlined above in the section on Crossing Streets. In brief, it holds that given a particular definition of an environment (in this case a "functional" definition) it is possible to outline the general categories of design elements which should be relevant and deserving of planning consideration. The observation exercise required students to observe a night-time, pedestrian-oriented event and to then place each of their observations within the appropriate design category so that the functioning of the system and its constituent parts could then be examined and discussed.

Following considerable study of the concepts and procedures to be used, students were assigned to observe a relatively "simple" pedestrian event and to describe it in system-element terms. The specific event selected was

the annual Christmas Tree Lighting Ceremony on the central campus of Iowa State University. This event takes place in a pedestrian environment from which cars are banned about one-hour prior to the event. Further, all street lights are turned off as are most of the lights in offices and classrooms in the surrounding buildings. The event attracts a large crowd which braves some occasionally very cold weather to attend. Thus, here was a large-scale pedestrian event at night during extreme cold. The students were to discuss how this event "happened" in systems terms.

This pedestrian-oriented event was replete with sign vehicles (such as the lighting of the tree itself, with its Christmas imagery), rule-sets (such as not pushing people aside although the scene was quite crowded), and many physically-behaviorally contingent patterns (such as the shape of the crowd as it was forced within the confines of a fenced area). Finally, and most easily described, there were many examples of actors whose roles or positions were defined by the use of physical supports (such as podiums, candles, song books, tv cameras, etc.).

When the student reports were read, however, it became painfully obvious that this "simple exercise" was actually fairly complex and sophisticated. Few students were able to utilize the system-elements framework to describe what they had both witnessed and participated in. Part of the failure of this approach may have been due to the students' not being particularly familiar with the sociological and psychological background needed to fully implement an holistic approach. Trained primarily as physical planners and designers, the students were able to describe objects individually but were not particularly adept at describing or hypothesizing relationships between objects. Despite the rhetoric of "comprehensive

planning", this physically-oriented approach is not so "comprehensive" that it recognizes that sociological and psychological aspects of experience and environment require as much attention as the physical aspects.

Discussion of the systems-element approach brought to light another difficulty with the framework of the approach as a whole. Despite the systems theoretic language in which the approach is couched, the interpretation, definition, and articulation of each system is largely idiosyncratic in character. In other words, it has the "feel" of "exact science", but is, in reality, rather on the "mushy" side. It is important to realize that this is true of any social systems analysis, however. It was concluded that the systems-oriented element articulation approach is still useful to both planners and researchers but that only more experienced people who have been sensitized to the social and psychological dimensions of the environment will find it particularly profitable.

During the early days of preparation for the seminar it had been hoped that the results of a massive literature survey on pedestrians could be framed in systems-element terms. Thus, each article reviewed could be identified with a given system-element category. Beyond the idiosyncrasy problem in defining system-element categories, it was quickly discovered that some elements were covered reasonably well in the literature while others (such as the night-time environment, sign-vehicles, rule-sets, etc.) were largely ignored or posed very tentative conclusions and findings. The "logic" of this approach to a state-of-the-art literature review remains reasonably valid, but the body of literature to which it was applied was found woefully inadequate.

Unstructured Experiences

When the relatively structured character of the systems-oriented obser-

vation exercise failed to produce many usable design insights, the co-instructors invited the students to pursue the opposite course. Two field trips were planned: one to an urban area at night and one to a rural area at night. In both cases the students were given only minimal instructions as to what to observe.

Observing an Urban Area: In this exercise, students were given maps of a route through a central business district and were instructed to follow the route and to simply write down everything that they noticed. The students worked in groups of three. One student was selected within each group as a "recorder" who kept notes on what the others reported seeing. This was first done at night on a very cold evening. Following this exercise, students were instructed to return during the day, to follow the same route, and to make a second list of everything they noticed during the daylight hours.

This exercise had two major benefits. First, it allowed the students to realize that even working in small groups their lists of "things noticed" varied considerably between groups. This helped the students to begin to see their own perceptual biases at work. Second, it allowed the students to note that they picked up on quite different elements at night than they did during the day time. Composite lists of "things noticed" were compiled and these served as discussion aids and as "idea pools" for some very early design projects.

Observing the Night in a Rural Area: In discussions with students in the seminar, the co-instructors realized that most of the students had never experienced a "pure" night-time scene, that is, a scene in which there are no artificial lights whatsoever. It was first thought that it should be reasonably easy to find such an experience in rural Iowa. Surprisingly, this was not the

case. Even in the most remote country areas, the glare of car headlights and yard lights were visible on the horizon. Eventually, a nearby state park with a large ravine was discovered. By walking approximately a half mile into the ravine, which then opened into a wide valley about two to three blocks across, it was possible to have a 360⁰ view which contained no artificial illumination. It was interesting that the students on the field trip which visited this spot had to be continually reminded to extinguish their flashlights. There was a brilliant moon so that the flashlights were not required in order to walk safely. It soon became apparent that many of the students were simply enjoying an opportunity to "play" with the light from their flashlights. This led to a spontaneous decision to "write" with the flashlights using time-lapse photography. Using one of the canyon walls as a backdrop, students "wrote" their names on the exposed stone surfaces. When the film was eventually developed, each student's name was clearly reproduced and, interestingly, the names of previous vandals who had actually carved their names in the soft rock of the canyon walls could also be seen. This led, during discussion, to a proposal to call the light writing a form of non-destructive graffiti. The students subsequently presented this idea during a workshop of the Environmental Design Research Association and it was warmly received as an idea with interesting merit and potential, particularly by a representative of Parks Canada. In sum, the field trip to this special "night spot" helped students to realize how rare such environments are and also resulted in an innovative design concept which merits further attention and experimentation in places where pedestrians sometimes seem compelled to engrave their names in stone.

Qualitative Interviews

Following the "sensitization" exercises in both urban and rural environments, the seminar students were given a short-course in qualitative interviewing techniques. With the traditional Christmas recess fast approaching, the students were instructed to complete at least three unstructured interviews with their friends and/or families while they were visiting home during the holidays. Questions were to be specifically directed to cover experiences the respondents had had as pedestrians, especially at night.

The co-instructors had several preconceived notions concerning the kind of interview material that the students would bring back to the seminar room. What happened, in fact, was quite unexpected. The reports were very rich, filled with vivid imagery, and were replete with many more positive than negative stories. Each story or interview was presented in the seminar and the group then decided on a "key word" or phrase that caught the essence of the report or noted some key event or object in the report. The following three quotes illustrate the type of interview material obtained by the students:

Subject: Female, age 22: My favorite night-time experiences come immediately after a new blanket of snow has just fallen on the ground. Late at night, with the only light coming artificially from overhead street lights, I love to walk through the virgin snow. The whole environment seems so very peaceful, and all sounds are muffled to a temporary silence. My insides flutter and I feel like a pioneer of sorts, with the only tracks in view my own, or an occasional animal on the loose. The night is the only true time I feel this way because during the day all of the scary adventuresome aspects are taken away, and there are always too many people outdoors.

Subject: Male, age 12: I enjoy just going outside at night and laying on our soft grass, and staring at the stars, and pretending I'm an astronaut. When I feel silly, I stand in place and put my arms out and just spin in circles until I fall to the ground.

Subject: Female, age not reported: When my mom was in her late teens/early twenties, before she married, she used to work at a downtown department store at the tearoom as a waitress. On nights when there were parties at the tearoom, the help had to work and did not get off until 9:30 or 10:00 p.m. Back then, almost everyone walked. The town wasn't as spread out and most people did not have cars. My mom's house was about three miles from where she worked. Her sister worked there too and Mom would either walk home with her sister and some of the other young women who worked there or her boyfriend would come by and walk her home. She said she always walked home with someone, she did not walk alone at night. My mom's feelings about this experience are positive--it was nice walking home at night but it was not unusual like it is today; everyone walked at night, it was commonplace.

Only a handful of the interviews reported fearful events at night. This does not negate the fact of many unsavory night-time experiences, but it does serve to underscore the potential for favorable, enjoyable experiences. A key word list was compiled which contained a descriptor for each interview. This list is presented below:

| | | |
|---|---------------------------|---------------------------------------|
| Luminosity | Self-illumination | Glowing |
| Size changes | Scale changes | Projections |
| Patterns | Shadows | Shape changes |
| Moonlight quality | Tranquillity | Stardust quality |
| Flame without known source, always moving | Complete darkness | Misidentification of sounds |
| Light patterns as in a carnival | Moon/stars as landmarks | Blind, stumble |
| Dancing shadows | Uninhabited | Moonlight on water |
| Safe feeling within circle of light | 180° differences in views | Campfire flickers |
| Illuminated paths | Warmth of fire | Clouds illuminated |
| Glowing triangle hangs in air and disappears. | Sparkle of starlight | Brightness when snow is on the ground |
| | Glowing clouds | White, glowing figure disappears |
| | Miner's hat | Playing in shadows, hiding in shadows |
| | Sudden appearance | |
| | Sudden disappearance | |
| | Exaggerated qualities | |

| | | |
|---|--|--|
| Disappearing in the darkness, can't be seen by others | Group sense of power at night | Glistens in moonlight |
| Looking up into street light when snow falls | Fire that won't go out | Snow falling at night |
| Less sharp images | Luminaries, flickering in rows in the snow | Noises at night |
| Focus | Peaceful, moonlight on snow | Edge of water at beach |
| Becoming aware of other senses besides sight | Electric storms | Softness |
| Disjointed objects | Walking off into space | Mystical quality |
| | Depending on other senses | Hustle and bustle, a safe street feeling |
| | Floating things | Movement |

The above list was then sorted and re-sorted in attempts to group all of the descriptions within a few, descriptive categories. These categories then became design categories which guided subsequent design projects. The five selected were:

- (1) Scale changes: An apparent shift in the scale of an object as a result of shifts in depth perception facilitated by lighting techniques.
- (2) Disjointedness: The quality of having what should be a "solid" object appear to have parts which are disconnected from itself or when the lower part of a building is in shadow so that the upper stories appear to "float" with no visible means of support.
- (3) Increased sensory experiences: Capitalizing on the fact of reduced visual input during darkness to increase awareness of other sensory channels.
- (4) Magic and mystery: Creation of environments which delight and mystify the pedestrian.
- (5) Movement: Designs which, for example, create illusions of movement in the environments traversed by pedestrians.

Using each of these design category objectives, students were instructed to create environments for pedestrians which emphasized each one in a *positive* manner. The results were often delightful and innovative. When the proposals

were costed as part of original construction costs, they were found to be relatively inexpensive ideas to incorporate.

Several points should be made at this point. First, the qualitative interview process used in a setting of group discussion and review very quickly generated a set of design goals which students responded to with eagerness and creativity. Second, it appears that there are very positive aspects of night-time pedestrian experiences which can be tapped and utilized to create inviting night-time environments. Finally, it should also be pointed out that the seminar's experiment was just that, an experiment, an exploration in generating design ideas for pedestrian environments at nights. In no sense is the above offered as design guidelines or even strong suggestions. At best, they are presented as an example of the kind of rich, sensitizing methodologies which other planners/designers should consider utilizing in their own practices.

The seminar members concluded that these exercises helped get the horse back before the cart. The data collected were not "scientific" in the usual sense of the word. Yet, the seminar members agreed that when the goal is design-idea generation (i.e., the process of knocking loose a bit of creativity here and there), the usual scientific accuracy in sampling design and so forth is not particularly relevant. The difficult thing is to get new ideas flowing and to maintain openness to new perspectives and views which may go against our personal biases. Once this process is in full gear, then one can introduce traditional constraints and requirements (e.g., safety, handicap access, peak level flow accommodation, signage, zoning, etc.). By starting with these constraints at the outset, the creative intellect is dulled, resulting in the barren pedestrian environment we have today in city after city.

Conclusion

The co-instructors of the pedestrian-oriented design seminar were very pleased with the end results. It was concluded that as planners and designers we need to do a lot of looking, asking questions, and just plain talking to people. Although the qualitative approach is gaining rapid ground in some segments of the social sciences, we have yet to see very much in the available literature on planning and facilities design for pedestrians. The vitality of the student work in this design seminar convinced the instructors that this situation should change dramatically in years to come. The social sciences may not have provided us with much that is particularly useful or creative in the form of universally applicable "guidelines", but they have brought a large number of "clues" or "insights" and the qualitative methodologies through which to pursue them in the generation of locally relevant insights for inclusion within specific design projects in local contexts.

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