

# PARKS FOR THE FUTURE

This report contains six papers from a symposium held at the Department of Landscape Planning, Swedish University of Agricultural Sciences, division Alnarp, Sweden, in August 1989.

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\* The papers are ranged in the same order as they were presented at the symposium.

Parks for the Future: A Psychological Perspective

Stephen Kaplan

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In trying to think about the park of the future, as an environmental psychologist, my first reaction was to think about the kinds of pressures people are likely to be facing, and how parks could play a role in helping people deal with these pressures. Many of the pressures people face today are the results of three interacting forces. These are advances in technology, the knowledge explosion, and the increasing world population. Since these trends are more likely to get worse than better, they provide a useful working hypothesis as to what the pressures facing future populations might look like.

Although each of these trends has distinct manifestations, they also have some common consequences. In particular, they all contribute to the experience of mental fatigue, which can lead people to be less happy, less effective, and less pleasant. And, as it turns out, parks can play a central role in reducing these unfortunate effects.

Thus the thrust of my argument can be summarized in terms of three basic themes:

1. Increasing pressures will lead to problems of mental fatigue.
2. Restorative experiences are an important means of reducing mental fatigue.
3. Parks and other natural environment opportunities offer these deeply needed restorative experiences.

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These themes, in turn, lead to three groups of questions that I shall attempt to address:

1. The first set of questions concerns the pressures members of modern society face: Why are these pressures increasing? What impact do they have?
2. The second set concerns what Rachel Kaplan and I have come to call "Restorative experiences," that is, experiences that help people recover from mental fatigue. What is the nature of these experiences? And how do they achieve their substantial benefits?
3. And finally, I should devote a bit of attention to what all this has to do with parks.

#### Increasing Pressures and Their Impacts

In order to understand the pressures facing an individual in the modern world, it is essential to understand something about the psychological process of attention, since it turns out that this is the aspect of human functioning that seems to suffer most.

For much of human history information was scarce and the information available was highly selected (Postman, 1985). For a variety of reasons, the situation has changed dramatically in a relatively short time. Information is no longer scarce; in fact, as information proliferates, what is now scarce, as Herbert Simon (1978) has pointed out, is attention.

To appreciate what it means to say that attention is a scarce resource, it may be helpful to examine a distinction that the great psychologist-philosopher William James made nearly 100 years ago. James (1892) identified a kind of attention, which he called

"involuntary," that is evoked by something interesting or exciting in the environment. Such attention has the advantage of being effortless; attending to something of great interest is not hard work. At the same time, involuntary attention has two limitations. It is dependent upon an interesting environment, and sometimes one has to function in an environment that is not interesting. It also ties one to the environment; as such, it favors simple and direct responses rather than those that take advantage of one's higher mental processes.

The second kind of attention, which has come to be called "directed attention" (Stuss & Benson, 1986) does require effort. On the other hand, it permits one to focus selectively upon the environment, and to engage in such higher mental processes as problem solving and planning. Unlike involuntary attention, directed attention is under voluntary control; when one instructs a child to "pay attention," it is directed attention one is referring to. The major limitation of directed attention is that it requires effort and that one's capacity to put forth that effort is finite. In other words, directed attention is susceptible to fatigue.

Given this brief sketch of the two kinds of attention, it is possible to begin to examine the pressures on attention that are characteristic of living in the modern world. Some of these pressures are the result of active competition for our attention. The mass media in general, and advertising in particular, are deeply committed to this informational struggle. High technology is employed to make these forms of informational competition ever more seductive. Thanks to marketing research and well honed intuition there is now considerable knowledge of what people find inherently interesting. This knowledge

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is effectively used against us, deflecting us toward stimuli that are hard to ignore but unsatisfying and unhelpful. Mander (1978) argues that in American television this coercive technology has been elevated to a highly refined art.

Some of the pressures on directed attention are not the outcome of an active struggle, but take their toll nonetheless. It has become increasingly difficult to find the information one needs, embedded as it is in vast quantities of information that one does not need. Information retrieval has become so difficult that some corporations now favor doing a study on their own rather than searching the literature to determine if it has been done before.

As the information explosion increases unabated and as media and advertisers fight over our scarce attention, the need for rest becomes increasingly important. Unfortunately the trend has been in the opposite direction. The emphasis on efficiency and productivity, coupled with recent technological advances, has tended to reduce or eliminate the moments of rest that were at one time a natural part of everyday life.

The shift in the relationship of humans and computers that has occurred in the past 30 years provides a vivid illustration. When I arrived in graduate school the analysis of variance (a statistical technique) had recently been developed. With the aid of an electric calculator such a statistic could be computed by a graduate student in about one year of work. This heroic effort then became the core of the student's dissertation. By the time I completed my graduate work the computer had not only arrived on the scene, but became an accepted part of the institution's functioning. It was available to compute one's

statistics, and one had only to wait 24 hours for the results. Now waiting 24 hours for results would seem like an eternity; one expects to obtain them on line, and many users are unhappy if their personal computers are not capable of multi-tasking, i.e., of doing several things at once. The rests one takes inbetween events are rapidly disappearing.

A story told by an Amish farmer provides a useful contrast (Kline, 1989). He was discussing the advantages of a horse over a tractor as a source of locomotive power on the farm. "God in his wisdom did not see fit to supply horses with headlights," he commented. The result of this oversight is that he rests in the evening; had he owned a tractor he would be tempted to plow after dark. He also pointed out that the horses need to rest after a morning of work. As a result the family could assemble for lunch and a rest. Again owning a tractor would have made it tempting to eliminate this important midday respite.

The increased pressure on directed attention forces one to expend more effort in order to retain focus on what is important. One thus calls on directed attention with increasing frequency. At the same time, the decline in opportunities for rest leaves one less able to deal with the growing fatigue. It is perhaps important to emphasize at this point that the fatigue that results from these multiple assaults on one's attention is not physical, but mental. Indeed, physical activity is often welcomed by individuals suffering from mental fatigue.

Everyone has experienced mental fatigue at one time or another; certainly everyone who has ever been a student remembers what one feels like after one has completed one's final examinations. But despite this widespread experience, the implications and the seriousness of this

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mentally depleted state are not widely recognized. Putting together results of studies from a variety of areas leads to the following description of individuals suffering from this all-too-common condition:

- They have difficulty concentrating and are highly susceptible to distraction.
- They find it difficult to make decisions.
- They are impatient and inclined to make risky choices
- They are irritable and less likely than usual to help someone in distress.
- They have difficulty either planning, or carrying out previously made plans.

This is hardly a desirable state of affairs either for oneself or for someone with whom one is to associate. In extreme form it could lead to excessive alcohol consumption or other drug abuse and/or to violent behavior. Even in milder form it is unlikely to be conducive to creativity and effectiveness. Certainly if there were a way to reduce the overall level of mental fatigue in the population, it would be worth a substantial investment to do so. Fortunately, there is such a way.

#### The Restorative Experience

The concept of restorative experiences arose in the context of a research program in the wilderness context (R. Kaplan & S. Kaplan, 1989, chapter 4). The U. S. Forest Service had asked us to study the benefits of an ongoing wilderness program that was being carried out in Michigan's Upper Penninsula. Wilderness was not a primary research interest of ours, and the project was certainly not one we would have initiated on our own. What we learned from the research, however, was



well worth the effort, and turned out to have far broader applications than we would have expected.

The participants in the wilderness program we studied found the experience to be a profoundly restful and even healing one. In addition to recovery from mental fatigue, many of them found themselves in a reflective mode, stepping back to consider their lives and their priorities. They found nature more powerful, and at the same time more comforting, than they had ever imagined; they left the wilderness at the end of the trip worrying about how they could maintain their contact with this unexpectedly significant environment. An experience such as theirs, which leads to a recovery from mental fatigue as well as a variety of associated benefits, we have come to call a restorative experience.

Of particular interest for our present purposes are the four components of the restorative experience that we identified in the course of this research program. In order to understand these components and how they fit together, it might be helpful to pause for a moment to look at the thought process that occurs in restorative settings, and to see how it differs from the kind of thinking that occurs everyday. In this way it may be easier to understand the aspects of the environment that support this rather special pattern of thinking.

Let us return to the most basic aspect of the restorative experience, namely that it facilitates the recovery from mental fatigue. Our present task is to consider what goes on in the mind that accounts for this recovery process. This can be understood in terms of two basic themes:

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1. People's behavior depends upon the models of the world that they carry around in their heads.

2. When one can run that model effortlessly, one can rest that part of the mind that readily becomes fatigued.

Perhaps a little explanation is in order. What does it mean to say that one has a model of the world in one's head? Let us start with the assumption that under normal circumstances people know something about what they are doing. Even if one is in a setting one has never been in before, it may be sufficiently like other settings with which one is familiar that one has some idea what to do. In such cases one has a model of the environment in one's head, and this model helps guide behavior (S. Kaplan & R. Kaplan, 1982).

Having a model is half the battle. In order to be able to run the model effortlessly one also needs cooperation from the environment. Each of the four components of the restorative experience we identified in the wilderness research offers an essential aspect of this environmental support.

Being away. This refers to being in some other setting which makes it more likely that one can think of other things. People often talk of having to get away, of needing a change, when they are exasperated by the accumulation of mental fatigue (although they may not put it in those terms).

Extent. Being away, however, does not guarantee a restorative experience. Many settings may provide a change, but they are limited in scope. By contrast, restorative settings are often described as being "in a whole different world." Two properties are important to this experience: connectedness and scope; together they define what I mean by extent.

Scope requires that the environment is experienced as large enough that one can move around in it without having to be careful about going beyond the limits of the model that one is running. To have *connectedness*, the various parts of the environment must be perceived as belonging to a larger whole. Without that one must repeatedly expend effort to find the model that is appropriate to the current momentary situation. In a situation where a model can be left to run on "automatic pilot," as it were, far less effort is required.

While the notion of extent is pertinent to a physical setting, it applies as well in a more conceptual, or imagined, sense as well. Thus the experience of being in some distant "place," can also be realized when one is absorbed in a novel or by a performance.

Fascination. In addition to the need for extent, restorative experiences depend upon interest or fascination. A fascinating stimulus is one that calls forth involuntary attention. Thus fascination is important to the restorative experience not only because of its intrinsic attraction, but also because fascination allows one to function without using directed attention. Here too the ease with which one can run one's mental model of the world is directly affected. Without fascination there is always the danger that the model one should be running will give way to distraction or to daydreaming. Effort is required to keep the appropriate model in focus. One of the great benefits of fascination is that it frees one from the need for effort of this kind.

Just as extent can be based on the physical environment or on one's perceptions and thoughts, so too fascination can be derived from objects in the environment as well as from ways of doing things.

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People are fascinated by figuring things out, by predicting uncertain events, by challenges... Thus restorative experiences can draw on a great variety of circumstances, as long as there is sufficient extent and enough to keep one absorbed by it.

Compatibility. Even with fascination and extent, an environment can still fall short as a setting for restorative experiences. The final component of the restorative concept calls upon the compatibility among the environmental patterns, the individual's inclinations, and the actions required by the environment (S. Kaplan, 1983).

The importance of compatibility is easiest to see in its absence. There is no lack of settings where the environment undermines what one is trying to accomplish, where one's goals and actions are obstructed by the demands made by the environment. Such situations require considerable mental effort. In a compatible environment, by contrast, what one wants to do and is inclined to do are what is needed in and supported by the environment. When what intuitively feels right is what the situation requires, one's model is thoroughly supported by what is happening in the environment. In such cases one's relationship to the environment takes on an effortless quality that can be deeply restorative.

Although these properties of a restorative experience emerged in the context of the wilderness experience, it quickly became evident that they were by no means unique to such settings. In particular, the garden experience (R. Kaplan, 1973), which is different in so many ways, turned out, on a deeper level, to have striking similarities.

Applying the Restorative Concept to the Park Environment

While the restorative environment is by no means restricted to natural settings, natural environments seem to be particularly effective in this respect. It is thus appropriate to keep in mind that a park is, among other things, an important example of "accessible nature." This role and function of parks should become increasingly clear as we examine each of the properties of the restorative experience discussed in the previous section. The emphasis in this section, therefore, will be on the relevance of these concepts to natural settings, with a particular focus on the park environment.

Being away. Natural settings are often the preferred destinations for extended restorative opportunities. The seaside, the mountains, lakes and streams, forests and meadows are all idyllic places for "getting away." Yet for many people in the urban context opportunities for getting away to nature spots in their nearby environment are minimal. Parks that are easily accessible thus offer an important resource for resting one's directed attention.

Extent. In the distant wilderness, extent comes easily. But extent need not entail large tracts of land. Even in a relatively small area it is possible to provide a feeling of extent. Trails and paths can be arranged so that a small area seems much greater. Miniaturization provides another device for being in a whole different world that is in itself not extensive. Japanese gardens sometimes combine both of these devices in giving the sense of scope as well as connectedness.

Extent, as already mentioned, also functions at a more conceptual level. For example, parks that include historic artifacts can promote

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Fascination. Nature is certainly well endowed with fascinating objects as well as offering many processes that people find engrossing. Many of the fascinations afforded by the natural setting might be called "soft fascination." Clouds, sunsets, snow patterns, the motion of the leaves in a breeze -- these readily hold the attention, but in an undramatic fashion. While attending to these patterns is effortless, they leave ample room in the head for thinking about other things.

The park setting is excellent for providing such soft fascinations. While sitting, or strolling, or meeting with friends, the time in the park is "filled" with opportunities to watch and see, to listen and notice. It is remarkable how fast the time goes by as one is absorbed by the passing scene and one's mind wanders in many directions.

Compatibility. The natural environment is experienced as particularly high in compatibility. It is as if there were a special resonance between the natural setting and human inclinations. For many people, functioning in the natural setting seems to be less effortful than functioning in more "civilized" settings, even though they have much greater familiarity with the latter.

It is interesting to consider the many patterns of relating to the natural setting. There is the predator role (such as hunting and fishing), the locomotion role (hiking, boating), the domestication of the wild role (gardening, caring for pets), the observation of other animals (bird watching, visiting zoos), survival skills (fire building, constructing shelter), and so on. The result of all this is that

people often approach natural areas with the purposes that these areas readily fulfill already in mind, thus increasing compatibility.

A nearby, highly accessible park cannot provide the context for all of these goals and purposes. Yet even such a setting is likely to be supportive of the inclinations of those who seek a respite there. It is amusing to think of the factory worker who races off during the lunch period, fighting traffic and distractions, to find a spot in the shade of a tree for a peaceful break. If the peaceful effect would have been totally worn off by the time the return trip is made at the end of the hour, would one repeat this ritual tomorrow again?

#### Images for the Future

Sometimes it is wise to keep one's challenges small and manageable. Small experiments (DeYoung and Kaplan, 1988) leading to "small wins" (Weick, 1984) can help people focus on difficult problems without being overwhelmed by their size. There are other times, however, when one is tempted to reach for the "bigger picture," to put aside the constraints of reality in order to contemplate the ideal. Not knowing which is the better strategy for this occasion, I propose to try some of each.

#### Some Modest Proposals

Research on outdoor recreation often involves counting users and classifying what they are doing as either active or passive. If their primary (although unstated, and perhaps even unconscious) goal is to have a restorative experience, these research strategies are of limited usefulness. People may be passing by the park on their way to work, or even viewing it from a window rather than "using" it in the traditional

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meaning of the term. Their "use" may be considered passive, but their exploration and appreciation be for them far more active than the classification implies.

Beyond these linguistic issues and research conventions is a still deeper issue. Park designers and managers are typically experts. Experts characteristically see the world differently than do other people. Experts are often horrified at how little the users or visitors notice, how little they comprehend of the subtle forces at work, and how simplistic and value-laden their reactions are. There is the tremendous temptation to educate or otherwise "improve" the visitor or user.

I do not know if this has any relevance to park experts in Sweden. I have, however, been amazed at how widespread this feeling is, not just among park and arboretum experts, but among zoo experts and museum experts as well. So let us assume that a few readers, while perhaps not harboring such feelings themselves, have noticed traces of these reactions in some of their colleagues. How can such a problem be dealt with?

My first Modest Proposal is indeed modest, and, at least on the surface, simple as well. Experts must come to recognize, accept, and even appreciate the search for restorative experiences on the part of the public. Such a search is not only a legitimate expression of a deeply felt human need, but a healthful way to relate to the natural environment as well. It is not incompatible with the education experts so frequently wish to provide, but it calls for more restraint -- and more respect -- than is sometimes evident.

My second Modest Proposal is that parks be designed with the restorative function in mind. Designers may have no trouble doing this



once they are aware of the concern. On the other hand, there is no substitute for effective public participation (S.Kaplan & R. Kaplan, 1989) in meeting real as opposed to hypothesized needs.

#### Some Proposals of the Other Kind

Alternatively one might want to think about parks in the context of what an ideal future world might look like. This might involve parks in new places, or even a whole new concept of what a park is. In terms of restorative experiences, park experts may want to think in terms of three simple issues and their availability to every citizen:

- Being able to see some nature from the window
- An opportunity to garden
- A place to walk

In terms of traditional accounting systems, such an ideal approach might appear rather expensive. But in terms of the growing body of evidence that relates access to nature to enhanced health, improved neighborhood quality, and reduced pressure at work (R. Kaplan & S. Kaplan, 1989), this approach might constitute an opportunity to invest in human effectiveness that is too good to ignore.

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