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Keynote Presentation

**A Bigger Piece of the Puzzle:
The Restorative Experience and Outdoor Education**

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Since I cannot hope to encapsulate even a fraction of research on human/environment interaction, I am going to take a slightly different approach than the other speakers. I would like to focus on a theoretical perspective for thinking about that interaction and why outdoor education really matters ... more, perhaps than any of us ever fathomed.

Imagine for a moment that this conference is in Detroit, in a large hotel near the interstate and the hustle and bustle of downtown. We are guaranteed an exciting nightlife. The hotel has an exercise room, a sauna, and our meeting room is just two floors down from our rooms. We all have tvs and telephones in our rooms; a few of us even look out on an expanse of lawn.

Would your experience of this symposium be any different there, even though we would still be together, talking about the same things? I venture that few of us would leave the two settings feeling the same. Actually, some of you might not have been so interested in coming had you known this conference was at a Howard Johnson's just off the interstate. Many of us sort of "know" there would be a difference, but can only articulate that generally. It is more relaxing, quiet and serene here; there are fewer distractions. Bradford Woods is a getaway.

I also wouldn't be surprised if most of us will leave here feeling more rested, maybe even a little more ready to take on the world than if we had met in Detroit. And I suspect that those of you who find time to do some walking, quiet gazing out the window, or bird-watching may even find yourselves reflecting on some of life's "bigger issues."

The psychological perspective taken here argues that the natural environment can play an invaluable role in enhancing our everyday well-being, our receptiveness to other people and to learning, and, at the risk of sounding grandiose, our overall quality of life. The fact that your classroom is the outdoors has tremendous impacts on human welfare. As outdoor educators, you have a handle on something far more powerful and essential than you ever dreamed. That something is the "restorative" experience. First, I would like to talk about what the restorative notion is and how it came into being, then I will describe 4 components of that experience and, finally, suggest some research directions and implications.

Restore from What?

An understanding of the restorative experience requires first, an understanding of what it is we are being restored from. Just as our bodies become tired when we exert them, so do our minds. More accurately, our directed or voluntary attention fatigues. Think

of how you feel after working hard at a project, sitting hours in front of a computer screen, driving through a traffic jam, or being a caregiver. Whether it is enjoyable or not, anything we do that requires ignoring distractions in order to focus on something takes a toll on that mental resource. Our language is full of descriptors for the fatigue that we all experience -- "wiped out," "spacey," "zoned out," "brain-dead," and "fried." A restorative experience is an opportunity to rest and revive that directed attention mechanism. Again, our language is wonderfully evocative: we "chill out," "get away from it all," and "unwind."

The Costs of Mental Fatigue

While most of us manage day to day, the daily stresses, hassles and just living in a modern urban society, tax us tremendously. Think back to the end of the term or perhaps just that last push at work before the holidays. People seemed more irritable and impatient. I found myself making mistakes, more anxious, easily distracted, and having trouble keeping track of things -- mentally fatigued.

Studies have noted the impacts of fatigue on the reliability of air-traffic controllers, the decision-making of overworked physicians, the productivity of workers. As educators, many of you can appreciate the costs of having students who cannot focus on task, who are distracted and irascible. We can go back to our conference in Detroit. Urban settings are typically full of distractions, places where one needs to maintain vigilance and carefully monitor social interactions. Perhaps there is a connection between mental fatigue and the violence we see there. Mental fatigue is remarkably pervasive; many of us are not finding adequate opportunities to rejuvenate our psychic resources.

What Do We Do to Recover?

Rejuvenation for directed attention is a matter of allowing it to rest. Of course, we can sleep. Or, we can shift our attention to something else. Watching tv, going to a bar, walking in the woods, reading a book, painting, going to a football game: a quick assessment of these examples suggests that some settings and activities will do a better job than others of allowing us to rest our directed attention.

The most effective environments are those that engage another mechanism, involuntary attention. This attention is what keeps us staring at the fire, the cascade of the waterfall, or animals playing. William James' (1892) description for involuntary attention evokes the intuitive appeal of these things, and provides a good start on what in evolutionary terms probably really mattered to humans, "strange things, moving things, wild animals, bright things, pretty things, metallic things, words, blows, blood, etc., etc." So, when this involuntary attention is engaged by inherently fascinating, interesting stuff, our directed attention, the mechanism we use to monitor and function in the world, can rest.

For some, the normal rhythms of their life and their environment are such that sleep is enough to recoup from daily mental expenditures. Many of us today, however, are so far removed from potentially restorative settings and deal with enough distractions and pressures, that sleeping each night does not provide adequate recovery. If some settings are more capable of providing those kinds of opportunities than others, are there some systematic characteristics or factors that these restorative environments would have?

The Restorative Environment

Empirical research over the last 15 years has led to development of theory suggesting just these characteristics (Kaplan & Kaplan, 1982; Talbot & Kaplan, 1986;

Kaplan & Kaplan, 1987; Kaplan & Kaplan, 1989; Kaplan & Talbot, 1983). This research has shown that, while any number of environments can do the job, natural settings are incredibly effective at providing opportunities for mental recovery.

Although in hindsight, this seems intuitive, the restorative notion emerged as a surprise. The research program, called the Outdoor Challenge Program was fashioned after the Outward Bound experience, but eliminated some of the more strenuous, stressful aspects of the Outward Bound. Participants kept journals and filled out pre and post-test surveys. While the researchers were looking at the benefits of the outdoor experience, results showed some unexpectedly profound, long-lasting impacts. Very briefly, participants reported feelings of tranquility, sense of different priorities, a respect and awe for nature and of being a part of something bigger.

From the recognition of this impact, the Kaplans (1989) identified four components of settings that support a restorative experience:

1. **Being Away:** the setting is removed from the everyday environment
2. **Extent:** that setting is "big" enough to feel like a different environment
3. **Fascination:** the setting has inherently interesting stuff going on
4. **Compatibility:** one feels a sense of belonging. An Irish saying, "may the wind be at your back" characterizes such a setting -- it facilitates pursuing one's purposes.

No one factor is enough. Perhaps a useful way to understand their relationship is to look at each in more detail and see how it contributes to, but alone cannot ensure, a restorative experience.

Being away entails going into an environment removed from one's everyday life. This being away can be physical -- going to another place, or conceptual -- immersing oneself in another world. Is being away enough? Certainly, it captures the notion of escape as used in recreation literature. However, if all we needed was escape, it should be just as effective to lock oneself in a closet as to backpack in the mountains. There must be more....

The notion of extent (another world) is closely related to being away -- there needs to be enough of that environment that one feels somewhere else. Extent does not refer to physical size, per se; one can hike for miles only to find a paved road or be passed by a snowmobiler. Rather the setting needs to have enough coherence that it seems like another world, without inconsistencies that "break the spell." For example, I can remember biking along the Hudson River north of New York City. Even though there were major highways above and below me, I felt in another time and another world. With some help, one can see a whole world in a vacant lot or a telescope.

Extent also incorporates a time element. Some of the more profound restorative impacts take time. In the Outdoor Challenge research, participants did not report feeling "quiet" enough to reflect until several days into the experience. Likewise, the ride along the aqueduct or the exploration of a vacant lot are limited in terms of the amount of time one can spend within them before other aspects of the surrounding area begin to intrude.

While combining extent with being away may bring us closer, the two provide no assurance that an environment will not be boring, or noisy, or frightening -- all of which tax our directed attention. What happens if we add fascination?

Fascination brings in involuntary attention. Having some fascination in an environment means that while aspects of the setting engage us, at the same time they do not require that we use our directed attention. Some kinds of fascination are completely

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engrossing. We are drawn to them almost in spite of ourselves -- blood, violence, captivating vistas. This is only one facet of fascination, however.

Fascination relates to process, too. People like to learn things that help make sense or expand our understanding of our world. People enjoy puzzles or finding out what is just around the corner. From a mental attention perspective, it is important that this fascination be connected to what matters in one's environment. If not, we find ourselves fighting interesting distractions -- television, for example.

At this point, then, we have three characteristics: being away, extent and fascination. Are they enough to provide a restorative experience? Clearly we are getting close, but what about this conference....if it was in Detroit? There seems to be something still missing.

As mentioned above, it is important that what matters in one's environment is what one finds interesting and engaging. Compatibility applies this relationship to our actions and inclinations; we feel we are in a place where we belong, where the environment supports doing what we want and need to do. Contrast this with the frustration of an incompatible environment, like trying to read in a noisy library.

It becomes much easier to see the unique role nature plays in the restorative experience once compatibility is added to the picture. NATURE IS SPECIAL, in that it can provide this kind of experience for so many people. Restoration in nature speaks to the poetic. Mary Oliver (1983) ends her poem "Wild Geese":

Whoever you are, no matter how lonely
the world offers itself to your imagination
calls to you like the wild geese, harsh and exciting --
over and over announcing your place.

Note: This paper has focused on the attentional aspects of the restorative experience. As this poem suggests, another striking benefit of a restorative setting is the opportunity for self-reflection it offers.

The Restorative Experience and Outdoor Education

So, where are we? I have argued that it is critically important to humans to have settings in which they can rest their directed attention. While we manage or cope in settings that do not provide these opportunities, there are costs, both socially and personally. If we care about how people interact, think, and quality of lives they lead, it is essential that we address issues of mental fatigue.

Outdoor educators are in an ideal position to help people find and enjoy such environments. One of the most effective restorative environments is your area of expertise. The implications for you as educators are tremendous. It is hard to share information with some one who is already mentally fatigued, but if we can help learners to:
feel somewhere else -- conceptually or physically (being away),
such that it seems like a another world (extent),
and if we can engage their interest and curiosity about things that help build on what they want to know (fascination), and
and that matter to them...(compatibility),
we may find that we have offered an incredibly powerful educational experience as well.

Research Implications

Obviously, this framework presents any number of research directions. The following examples suggest some that are especially relevant to outdoor education:

1. Can we empirically demonstrate the relationship between a restorative outdoor experience and enhanced learning and retention?

2. How does one facilitate a restorative experience?

Such questions touch on several aspects of outdoor education. Compatibility has to do with being able to do what one wants to do. Having or developing skills that facilitate one's functioning in an environment play an important role in the restorative experience. Fear of the woods, a sense of helplessness or incompetence need to be allayed to allow for a restorative experience.

The Outdoor Challenge study underplayed physical hardship and a focus on social interactions. How do different activities and "goals" during the outdoor experience impact restorative benefits?

3) Does a restorative experience differ for different populations?

We could look at the impact of a variety of outdoor environmental activities on mental fatigue across different populations. Studies have already demonstrated the impact of restorative activities on those with life-threatening diseases. For example, breast cancer patients who engaged in outdoor restorative activities reported quality of life improvements and tended to initiate more projects, than those who did not (Cimprich, 1990).

In a study of burnout among AIDS caregivers, individuals were most benefited by quiet activities, especially nature activities which seemed particularly conducive to reflection. Those who passed time watching tv or playing or watching organized sports, on the other hand, appeared to have reduced competent functioning and resistance to burnout (Canin, 1990).

Does a nature experience or access to natural settings help inner-city youth handle the pressures of the ghetto? Are there certain kinds, time-frames, activities and settings that are more effective than others?

Conclusion

The importance of establishing a coherent research agenda for outdoor education cannot be underplayed. Being able to empirically support ways in which the outdoors provides a remarkably effective setting for restoration of mental attention provides a compelling argument for maintaining access to the outdoors – both near and far.

From this perspective, nature is no longer simply an amenity; it is one of the few resources we have that can offer so many benefits at so small a price. Yet, it is also a resource that will be extremely difficult to recover if we only recognize this when it is gone. We need to build a body of evidence that argues for access to natural outdoor areas and opportunities as central to promoting human well-being.

I'd like to leave you with a thought. Imagine again (I doubt it will be difficult for many of you because you do it all the time). Imagine taking a group -- perhaps of business people, stressed, looking for some release, some of them already counting the days before they need to be back. Or, perhaps it is a group of inner city kids, frightened by the prospect of the woods, angry street kids, but energetic and eager for a day's adventure.

How can we use this framework and the components of a restorative experience to inform and guide their experiences so that they leave us not only having had a good time, but also experiencing some of the longer lasting and more profound benefits that environment can offer?

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