

## BEING NEEDED, ADAPTIVE MUDDLING AND HUMAN-ENVIRONMENT RELATIONSHIPS

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### ABSTRACT

*It is argued that the psychological state of being needed provides a key for relating people in challenging and purposeful ways to environmental problems. This concept, in turn, depends upon three factors, namely a sense of one's own competence, a perceived niche, and a feeling of necessity with respect to one's potential contribution. The latter two factors are addressed by De Young and Kaplan's Adaptive Muddling concept. Such an approach could readily be incorporated into an environmental design research framework, thus strengthening EDRA's role as catalyst in enhancing human-environment relationships.*

### INTRODUCTION

As I recall early EDRA meetings and the early years of the environment and behavior area in general, there was a sense of challenge and excitement, a sense that we could make a difference and that there were important differences to be made. Now, at age 21, we find ourselves with many of the same problems and perhaps a bit less confidence and enthusiasm.

Naturally our early hopes revolved around the relation of people and environment. Even back then we suspected that a two-way relationship was involved. We were concerned about what environments were good for people, and, at the same time, how people could be convinced to take better care of the environment. We were thus concerned with both people's impact on the environment and the environment's impact on people. While there have been substantial gains in the understanding of human-environment relationships in the past 21 years, in many areas the progress has been disappointingly slow.

The purpose of this paper is to propose a way in which students of environmental design research could contribute more to both the quality of life of our species and to the solution of environmental problems. I shall argue that (1) these two issues are linked in important and not always obvious ways, (2) what I call the "small experiment" offers exceptional promise in dealing with these issues, and (3) environmental design researchers have long struggled with key pieces of the proposed ap-

proach, but have tended not to view these pieces as part of a coherent and potentially powerful whole.

I want to begin my analysis by pointing out the irony of current life-styles against the backdrop of the environmental problems that face us, and then address the centrality of motivation and challenge in correcting this unfortunate state of affairs. This then leads to the identification of the concept of being needed as a pivotal link between bored people and urgent problems. The postulated requirements for being needed — competence, niche and necessity — are examined in turn. Finally, I discuss the usefulness of this approach for enhancing the possible impact of environmental design research for both people and the environment.

### Current Realities: Fiddling While Rome Burns

Even the most superficial look at life in the United States today reveals a distorted relationship between people and the environment. At best this relationship is unproductive. There is little doubt that the scope and magnitude of environmental problems we are now aware of have reached enormous proportions. At the same time, while participation and responsible involvement have increased substantially, it must be acknowledged that inaction and nonparticipation are even more widespread.

One reason for this is undoubtedly the conviction that ordinary citizens could make no difference anyway. There is also a widely held belief that nothing anyone could do could reverse these destructive trends. In

addition to helplessness and hopelessness, another factor in nonparticipation is the feeling on many people's parts that they have no time for such pursuits. Given the multitude of labor saving devices now available, this lack of time might at first seem puzzling. But as the analysis of Mander (1978), Postman (1985) and others makes clear, large quantities of time (certainly far greater than in the past) are now devoted to entertainment. The ownership of TV sets is near universal, and the VCR is becoming an essential household appliance. The number of TV channels now available is awesome. It is difficult indeed to avoid the image of Nero fiddling while Rome burns.

To make matters worse, this flight from reality (including environmental reality) is not even particularly satisfying. Reports of alienation and emptiness abound, not to mention such rampant symptoms of things gone awry as drug use, person abuse, and so on.

There are obviously many forces that contribute to this unfortunate state of affairs. They involve a host of issues, many reaching far beyond the environment and behavior domain. Nonetheless, it is difficult to argue that the 21 years of environment and behavior research and practice have witnessed a marked improvement in human-environment relationships.

There are many ways to interpret this discouraging fact. One might decide that the task is hopeless or that the goals are inappropriate. Or one might decide, as one of my former students did, that research and teaching have no impact and that the courtroom is the only effective battleground. Alternatively it may be that the issues have been wrongly conceptualized. If knowledge is central to our enterprise, and our understanding of the situation is inadequate in important respects, then even great dedication and hard work may not be enough. In this paper I propose a slightly different conceptualization that addresses these issues as part of a larger whole rather than as separable or even unrelated issues. In this perspective, quality of life and environmentally responsible behavior are not independent issues (or, as some would suggest, antithetical concerns), but, when properly viewed, necessarily interlocking facets of a healthy, reality oriented perspective for modern humans.

### The "Moral Equivalent of War"

My central premise is that when people take on the problems of their times with a sense of challenge and purpose, both the quality of life and the problem-solving process are likely to benefit. What appears to be needed, given the present circumstances, is some way to capture people's commitment and involvement, to inspire them to use their talent toward solving some of our many problems. William James (1910) struggled with this issue in his famous essay, *The Moral Equivalent of War*. There are times when people function in committed and unselfish ways. What is more, people often find such activities exceptionally satisfying.

A major source of inspiration for my proposed reconceptualization is Barker and Gump's (1964) classic work, *Big School, Small School*. This work demonstrated the enormous power of scale in how people behave. While the scale issues they addressed were physical rather than conceptual, people seem to react no better to problems that are out of scale than they do to environments that are out of scale.

In simplest terms, Barker and Gump demonstrated that under a certain set of conditions (and scale is an important factor here), people will feel needed and will respond with "participation, involvement and a sense of responsibility." One could hardly ask for a better description of what rising to the challenge of environmental problems requires. Thus I propose to begin my discussion with an analysis of what "being needed" requires.

The factors involved in being needed seem to have received little attention. In particular, one facet of being needed that has not been addressed is the issue of the management of scale, of how to translate large problems into small scale, tangible activities. Since the "adaptive muddling" concept proposed by De Young and Kaplan (1988) provides a potential means of accomplishing such transformations, I shall also attempt to show how it contributes to this larger goal.

### **BEING NEEDED: A REEXAMINATION**

*Big School, Small School* played an important role in launching the environment and behavior area because it demonstrated so clearly that scale, a relatively straightforward environmental factor, was a powerful determi-

nant in human behavior and human experience. The advantages of a small school, in Barker and Gump's analysis, were many. Participation, involvement and a sense of responsibility were all enhanced by the dynamics of the smaller scale context. One way to characterize the underlying common denominator of these various components is to say that the student at the small school had a feeling of being needed. Reading Barker and Gump's perceptive account leaves little doubt that students in the small school setting were, in fact, far more likely to feel needed than were their large school counterparts.

Being needed is both a powerful motivator and a powerful source of satisfaction. In the ensuing years this concept has perhaps not received the attention it deserves as a means of involving people in the work that needs to be done and at the same time enhancing their quality of life. Clearly this concept deserves a closer look.

A beginning of an exploration of this concept was Archer's (1983) dissertation, *Feeling Needed and Worker Motivation*. Archer demonstrated that secretaries who felt needed were both more motivated on the job and experienced a higher quality of life. This preliminary work thus supports the suspicion that this is a powerful concept, particularly when one is concerned with a job to be done and with the life satisfaction of the people who might be available to do the job.

#### Implicit Requirements

Perceiving a niche. An essential component of feeling needed is the perception that there is something worthwhile that needs to be done. One might think that in terms of people caring for the environment, there are so many things that need to be done that this is no challenge at all. In reality, however, there are powerful forces that prevent this apparently simple connection from being made. Officials and experts of all sorts tend to treat problems as too complex and too technical for ordinary people to deal with. Rather than fostering a participatory attitude, the message is often one of "Don't call us, we'll call you."

A Sense of Necessity. Even if there is an evident niche, there is the possibility that there are many others who are available to do the job. Especially in a crowded world, it is easy to have the misperception that the

situation is "overmanned" (Barker and Gump, 1964; Wicker, 1979), that there are lots of others who are available and at least as appropriate. Here the issue of scale becomes critical. If the problem is seen as sufficiently small and sufficiently local, the perception of overmanning can be reduced.

A Sense of Competence. Often even an undermanned niche is not enough. Problems that are large and confusing readily lead people to the conclusion that they lack the competence to be helpful. A sense of helplessness is incompatible with responding to a call for help. One only feels needed if one can do what needs to be done.

The widespread feelings of hopelessness and helplessness with respect to environmental problems suggest that the issue of competence is of paramount importance. Given its centrality, and the fact that more concrete research has been addressed to this issue, I propose to take it on first. The other two issues, niche and necessity, can both be addressed from within the framework of Adaptive Muddling, and therefore will be considered together.

#### THE SENSE OF COMPETENCE

For many individuals today, the lack of a sense of competence undermines any meaningful connection between their behavior and the pressing environmental issues urgently requiring resolution. Many are convinced that the situation is hopeless; that there is nothing anyone can do to avert ultimate catastrophe. And even if the situation is not inherently hopeless, many believe that there is nothing they as individuals could do that would make any difference.

Both of these perceptions, while thoroughly understandable, are false. There are many ways in which the environmental situation has already been improved, and "ordinary people" have played important roles in many of these transformations. The problem is thus largely one of perception and cognition. For a variety of reasons people are lacking in functional, useful, believable (to themselves) knowledge. From a cognitive perspective one might be tempted to say that they lack concrete imagery concerning these vital issues.

### Hopelessness: The Role of Success Stories

One kind of needed imagery concerns the progress, improvements, and advances that have been achieved in addressing environmental problems. There are many of these; hopelessness is no longer a viable excuse for inaction. On theoretical grounds one might expect that stories providing concrete imagery about successes could have a powerful role in modifying cognitions. This possibility has not been lost on environmental organizations. Renew America, for example, has announced a national campaign called "Searching for Success." Their announcement of this program of "National Environmental Achievement Awards" includes innumerable examples of such success stories that their preliminary search has uncovered.

Lack of imagery concerning progress in this perilous domain may not be the only kind of information that people might find helpful. It has been argued that lack of clarity is itself threatening, and that lack of cognitive structure leads to lack of clarity (Kaplan, in press). From this perspective, having a better grasp of the issues and alternatives in general might well lead to a more constructive outlook. Bardwell (1989) has demonstrated that this is indeed the case. In the context of an introductory course in environmental studies, she found that a variety of different teaching foci all lead to increased knowledge, and that concomitant with that increased knowledge was a widespread decline in helplessness and related negative affect. Comparison of pre- and post-scores showed that by the end of the course students were "more concerned, more confident about the effectiveness of group and personal actions, and more willing to examine some of their lifestyle choices."

Clearly more research needs to be done on both the validity of the hypothesis and, if it is valid, the kind of procedures and materials that are most helpful in enhancing a sense of competence.

### Helplessness: Case Studies and Other Sources of Concrete Imagery

From a cognitive perspective, believing that one can do something useful depends, in addition to a sense of competence, upon having some idea of what it is that could be done that would be useful. One approach to having an idea of what could be done would be to engage students in class projects that are specifically

oriented to action. This is a popular approach in the area of environmental education. Considerable interest and effort has therefore been invested in the development of major class or school projects as a training grounds for environmentally responsible behavior.

However, the work of Monroe and Kaplan (1988) suggests that teachers who use case studies and who "discuss what others have done" are more effective in terms of the subsequent participation of their students in environmental activities. Apparently the imagery from multiple examples is remarkably helplessness reducing, or, to use a currently popular term, empowering. Here too considerably more work needs to be done. On the other hand, this finding is entirely consistent with numerous studies pointing to the avoidance of situations in which people feel they have no idea of what the right thing to do would be. (For a review of this literature and a discussion of the theoretical basis of this conclusion, see Kaplan, in press.)

### **MAKING NICHE AND NECESSITY PALPABLE**

Assuming it is possible to transcend the confidence hurdle, there remain two further aspects of neededness that must be addressed. The first is that there is something concrete and worthwhile that needs to be done. There must be, in other words, not only a niche, but a perceptually apparent niche. The second requirement is that there are not too many others who are available or appropriate to do the job. This means that there is, at least in some sense, a distinct contribution to be made.

Part of the solution to these challenges to creating a sense of being needed involves a shift in how one thinks of the scale concept. Although the original meaning concept (Barker and Gump, 1964) was quite literal with respect to scale, referring to the number of people belonging to a given institution, the concept readily lends itself to a more conceptual interpretation. Surely the number of people perceived as available to deal with a given task need not be identical to the number of people walking around in a given building.

Despite the shift to a conceptual emphasis, however, the function of scale remains essentially the same. A niche is inherently particular and concrete. "Doing something about pollution" is not a niche. On the other hand, "Doing something about the stuff they're dump-

ing into Plum Creek behind the paper mill" might be. Thus the difference in the perceived scale of the problem translates it from something remote, vague, and presumably intractable, to something ordinary people just might be able to do something about.

Likewise, the belief that one can make a distinct contribution, that there are not hundreds of others just as appropriate, requires that scale be constrained. Here too a problem of modest proportion (and presumably of primarily local interest) places claims on the individual that are likely to be more compelling than those arising from globally framed issues.

One way to manage scale with respect to environmental problems is to focus not on the large problems, but rather on small experiments that might speak to the large problems. "Adaptive Muddling," proposed by De Young and Kaplan (1988) can be thought of as a theory of small experiments. Some background on this theoretical position is necessary to understand the practical as well as the psychological value that such small experiments can have.

#### Adaptive Muddling

A popular view of environmental problems is that they are caused by human misbehavior; in essence, we know what we are supposed to do, and simply are resisting doing it. A contrasting point of view, and that taken in the Adaptive Muddling position, is that environmental problems are best viewed as having many different aspects. For each of these aspects there are many potential solutions, the majority of which have not even been thought of yet. There is much room for creativity and much need for experimenting. We need to find out what works, and under what conditions. There are probably not enough scientists available to do all the needed experiments, but fortunately scientists are not required (and perhaps not even desirable) for this enterprise. Rather Adaptive Muddling draws upon the insight, the enthusiasm, the curiosity, the dedication, the restlessness, and the diversity of ordinary people. As is evident from the success stories Renew America and other groups have started collecting, ordinary people suitably challenged can do quite extraordinary things.

Adaptive Muddling is a variant of the muddling concept first identified by Lindblom (1959) and thoughtfully applied to the environmental context by Johnson (1978).

The hallmark of traditional muddling is incrementalism, the taking of small steps in familiar directions rather than taking big, decisive steps (presumably based upon rational analysis). Traditional muddling is, in fact, notorious for its small step size; it has been characterized as a failure to plan rather than as a planning procedure. It necessarily involves choices with which people are already familiar, and hence, it is assumed, choices that are very close to what is currently going on. While there are advantages to moving to a future one already knows something about, many problems are too urgent to permit the luxury of many small steps. Adaptive Muddling argues, as we shall see, that there are ways to give people familiarity with alternatives that are quite far from their current position. This would correct a serious deficiency in traditional muddling.

Adaptive Muddling emphasizes not small steps, but small experiments. While muddling views the many groping, fumbling changes made by individuals and organizations as implicit experiments, in general the actors neither realize that what they are doing is experimenting, nor do they act accordingly. In Adaptive Muddling, experimenting is self-conscious. Such experimenting is different both psychologically and functionally.

People who are consciously experimenting will be more willing to venture forth, since they know the effort is tentative. Another expression of this tentativeness is a recognition that the experiment might not work; that the outcome cannot be taken for granted. This leads to a far greater sensitivity to feedback, since what happens next is contingent rather than automatic. Such self-conscious experiments will by their very nature be small, since they acknowledge the reality of uncertainty. Carrying out an experiment is an acknowledgment that one does not have all the answers, that one has to "dip a toe in" before one can know what to do next. And finally, an experiment can carry with it a sense of adventure and a sense of mission. Adventure is inherent in the acknowledged lack of certainty as to what will happen; mission derives from the realization that if it works, others might be moved to try it also.

Another interesting psychological advantage of small experiments is explored by Weick (1984), in his discussion of "small wins." He points out that small problems are more likely to be solvable, and hence reinforcing. At the same time a small effort allows one to avoid the sense of being overwhelmed.

These various psychological advantages of small experiments complement the problem solving and policy exploration implications of this approach. From the latter perspective the small experiment is an expression of the conviction that a small group of people with a fresh idea of how to deal with some problem should have the opportunity to try it. Given appropriate support, it should in principle be possible to learn a great deal in a relatively short time from a multitude of such parallel grass roots efforts.

### The EDRA Contribution

The need for leadership is implicit in Adaptive Muddling, albeit a broad-based leadership implying a sharing rather than a hoarding of this precious substance. This role fits perfectly with EDRA's longstanding interest in the participatory process and ways it can be enhanced.

I see EDRA members as having the skills, the insight, and the motivation to provide needed leadership for such activities. The issue of how to familiarize individuals with future alternatives is a topic that has been of concern in the EDRA context for many years. Likewise, as an organization committed to research in the real world, in settings that require creativity and flexibility, EDRA can call on a substantial body of expertise to assist in these modest but powerful experiments.

Many of the conceptual themes underlying Adaptive Muddling have been EDRA themes from the beginning. The issue of scale is certainly a familiar one, although here it is applied to problems as well as to environments. Interest in the territory concept is expressed here by the transformation of a bigger problem into one with a local focus. Further, the joining together of individuals, who may otherwise be isolated, into interacting, cooperating groups may be one of the more effective ways of fostering community in an increasingly individualistic society.

Many of the special user groups that EDRA has traditionally been concerned with are prime candidates for participating in the kinds of experiments proposed here. The elderly, the disabled, the homeless and many other groups could fruitfully use this approach as a means of exploring, with expert guidance, ways of making their environments more satisfying and satisfactory.

### CONCLUSION

The proposed approach would hopefully have two sorts of benefits. First, it could provide a vehicle for improving people's relationship to their environment. Helplessness leads to avoidance; avoiding something as central as the environment is unlikely to be healthy. A sense of being needed, by contrast, leads to purpose, to connectedness, and to community. If we agree that the current overwhelming investment in and commitment to entertainment leaves something to be desired, then the proposed approach would be an improvement independent of its effect on the environment per se.

At the same time, the effect on the environment should be substantial. Involving many minds, many talents, many efforts, should itself be a marked improvement. Involving them in small, feedback sensitive activities whose outcomes are widely shared constitutes nothing less than a powerfully adaptive approach to solving problems. With much variation and evaluation, not only will better solutions be found, but many better solutions will be found. And in the process our culture will no longer be ignoring difficult realities, or farming them out to experts, but confronting them in a way that is sensitive to local situations, motivationally satisfying and cognitively challenging.

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