

Human Nature and Environmentally Responsible Behavior

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This article constitutes a search for a people-oriented approach to encouraging environmentally responsible behavior. It attempts to provide a source of motivations, reduce the corrosive sense of helplessness, and generate solutions to environmental problems that do not undermine the quality of life of the people who are affected. The altruism-centered approach currently popular in the academic literature, by contrast, is seen as contributing to helplessness and focusing on sacrifice rather than quality-of-life-enhancing solutions. An alternative, the Reasonable Person Model, offers an evolutionary/cognitive/motivational approach to understanding human nature.

Facilitating the adoption of environmentally responsible behavior (ERB) is a major challenge for the behavioral sciences. As with any problem, how one approaches it and whether or not it can be solved depend to a large degree on how the problem is conceptualized (Bardwell, 1989; Posner, 1973). In the research literature a prominent approach to this difficult issue has cast the problem as essentially motivational, focusing on altruism as a crucial motive to study (De Young, this issue). The altruism-centered approach is seen as having several inadvertent consequences, including contributing to helplessness and stressing sacrifice rather than quality-of-life-enhancing solutions.

The purpose of this article is to propose an alternative approach that avoids some of the limitations inherent in the altruism-centered approach. This alternative approach has three goals: to provide a durable source of motivation, to reduce the corrosive sense of helplessness, and to generate innovative solutions that people do

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not perceive as threatening their quality of life. Achieving these goals requires more than ad hoc proposals or patchwork solutions. Rather, the approach must be based on a coherent conception of human nature that speaks to the relationship between how people approach new information, how information relates to motivation, and how information and motivation relate to behavior change. Although such a conception may well be beyond what is currently possible, the Reasonable Person Model is proposed as a first approximation to such a conception of human nature. Before describing this framework and proposing the alternative approach, I begin by explaining my reservations about altruism and explore some hypotheses concerning why altruism is so popular and why this popularity may be ill-placed.

Altruism in Perspective

Although efforts to encourage ERB have called upon a wide range of motivations, a substantial portion of the scholarly literature on this topic has focused on altruism. Informal observation suggests that the tendency to focus on altruism is also characteristic among students concerned about environmental problems. In their view there is an inherent linkage between “good” motives and “good” behavior. In addition to the implicit moral issue (i.e., behavior motivated by altruism is seen as morally superior), there appears to be an assumption that there should be a symmetry between the moral value of the motive and the moral value of the action.

One way to cast some light on this widely held assumption that there is a close relationship between the goodness of a motive and the goodness of the behavior that it motivates is to see how difficult it is to find counterexamples. There are three distinct ways to approach such a search. One could look at psychological analyses of evil behavior to determine if the antecedent motivations are commensurately “bad.” Alternatively, one could reverse the order, looking at instances of “good” motives in search of instances in which the resulting behavior could be considered “bad.” Finally one could search for instances in which less well regarded motives have led to desirable outcomes. Let us examine each in turn.

Some Failures of the “Good Motives Lead to Good Behavior” Assumption

Becker’s (1975) *Escape From Evil* provides a potent introduction to the topic of antecedents of bad outcomes. It is a brilliant and moving little book that takes on the challenge of explaining the existence of evil on a large, societal scale. Taking the Holocaust as his paradigmatic example, Becker bases his explanation on three interacting motives. The first is the need to belong to a group, and the second is the need to rise above the group. Given the ubiquity and innocence of these familiar human motivations, one looks expectantly toward the third motive for something more powerful and more unacceptable. His third proposed motive thus comes as something of a surprise; it is to stamp out evil. In the context of Becker’s examples

it becomes clear that chaos or disorder serve as prime examples of the evil that people feel a need to stamp out. Taken as a whole, these three motives could as well describe the efforts of any of us who have tried to have our clarifying insights both accepted by the group and recognized as memorable accomplishments.

The question of whether good things follow from well-intended motives can be viewed from several perspectives. Among the motives widely acknowledged as “good,” altruism must be considered one of the most frequently mentioned. As it turns out, counterexamples of the assumed linkage between altruism and positive behavior are by no means difficult to find. Koestler (1970) identified loyalty to a cause as one of the most distinctive capabilities of the human species—and also as cause of more suffering than any other single factor. Baumeister’s (1997) analysis of a vast empirical literature in *Evil: Inside Human Cruelty and Violence* offers a conclusion that closely parallels Koestler’s analysis. Baumeister identifies idealism as one of the primary causes of cruelty and violence.

Helping others for its own sake also falls under the larger heading of altruism. Langer (1989), among others, has commented on the great, albeit unintentional damage done by such help, as when an elderly individual receives unneeded help, subtly fostering helplessness. At a quite different scale, Scott (1998) has documented heroic efforts to help humanity at the level of the state. He describes revolutionary efforts to improve the human condition through what were believed to be scientific principles. Among his examples are the institution of collective farming in the Soviet Union. Pol Pot’s Cambodia and Mao Tse-tung’s China provide other chilling examples.

Holmes (1990, p. 271) provides a trenchant summary of arguments against the idea that selfless motives guarantee desirable outcomes: “If our concepts precommit us to the idea that whenever people overcome selfishness they necessarily act in a morally admirable matter, then our vision of political behavior is bound to be blurred. A moralized selfish/selfless scheme blinds in precisely this manner. Thus, any vocabulary lacking the category ‘selfless cruelty’ is historically impoverished. It also provides an inadequate guide to the thought of the keenest observers of early modern Europe.”

The third type of search in the examination of the assumed motivation-behavior symmetry concerns “bad” motives leading to “good” behavior. Although it is difficult to define a “bad” motive, there are clearly certain motives widely regarded as less desirable. One of these is expressed by the NIMBY (not in my backyard) phenomenon. People unhappy with locally undesirable land uses (LULUs) located near them are often considered to be motivated by selfishness and are seen as quite willing for the same LULUs to be located in someone else’s backyard. Yet the vast grassroots movement concerning the siting and management of toxic waste facilities started in the backyards of people living near the infamous Love Canal. Lois Marie Gibbs wrote of becoming transformed by this experience from being a housewife to being a leader of the first citizens’ organization to fight hazardous

waste in the Foreword to *Not in Our Backyards* (Freudenberg, 1984), the book that chronicled the national movement that grew out of this initial organizing effort.

Another demonstration of the positive power of less well regarded motives occurred in the aftermath of the Detroit race riots of 1943. The discovery that the Detroit police actively participated in the riots prompted the police force to bring in psychologists to teach tolerance. This intervention, however, was found to have no effect on the behavior of the police. Subsequently a different strategy was explored. Police were informed that any of them found practicing racial discrimination would be fired. This alternative approach is reported to have been remarkably successful.

Some people regard the acquisitive motive, leading to the amassing of large amounts of money and property, as undesirable. Nonetheless, such acquisitiveness has in a number of instances resulted in the preservation of valuable natural landscapes. A final example involves the provision of window boxes to residents of an inner-city neighborhood (Lewis, 1996). Pride, a sometimes-shunned motive, appears in this case to have led to a widespread cleanup effort and a resulting increase in the quality of life of the residents.

Altruism in the Environmental Context

Most of the evidence undermining the assumed linkage between alternative motives and “good” behavior is not directly related to ERB. Does this mean that the altruistic focus might be harmless—or even beneficial—in this context? As it turns out this is not the case; altruism has a serious limitation in this role. The reason for this limitation is embedded in the peculiarities arising from the traditional definition of altruism, which is strikingly different from the way other motives are defined. Altruism is defined as feeling or acting on behalf of the welfare of others in cases where self-interest could not be involved (Jencks, 1990). Thus, to the extent that altruistic action involves any cost or effort, it necessarily entails sacrifice, since there cannot be a compensating benefit to the self. In fact, research in this area typically focuses on “situations in which [people] are demonstrably acting against their self-interest” (Mansbridge, 1990, p. 133) and in several studies, the willingness to sacrifice is what defines ERB. The centrality of such a negative payoff as essential to the definition of altruism creates serious motivational issues that bring into question the strategic usefulness of the concept.

Must virtue be unpleasant? The requirement of receiving no benefit from one’s action and the inclination to enshrine sacrifice as a paradigmatic environmental virtue (for example, Gigliotti, 1992) communicate a powerful, if unintended, message, namely that ERB inherently leads to a reduction in the quality of life. As De Young (1990–91, p. 216) points out, “While frugality may be accepted as a necessary feature of the future it is usually portrayed as an onerous

undertaking, one requiring personal sacrifice of the highest order. People, it is argued, are being asked to give up a modern, high-technology existence for an austere, bleak but needed substitute.”

This “dour environmentalist” stereotype to which the altruism concept unintentionally contributes is far from helpful. The hope for a better future is a characteristic of the human makeup that has been found across a wide range of cultures (Cantril, 1966). Casting a negative pall on this hope is unlikely to be an effective motivational strategy. In addition to this unfortunate side effect, the focus on sacrifice embodies a key assumption that may not be well grounded. It assumes that we know what has to be given up. This creates an image of future deprivation that may be unnecessary and inaccurate. Asking people how willing they are to give up x implies that x will be one of the activities that will no longer fit in an environmentally correct future. The impression created is particularly negative because the “giving up” is not placed in the context of environmentally preferable alternatives.

Thus the focus on altruism brings with it the implicit message that living with less will result in an impoverished and joyless future. Ironically, this perspective buys into the establishment view that the way we do things now is the most satisfying, that there is a positive relationship between resource use and happiness, and that materialism and waste are more fun. Perhaps not surprisingly, this presumed linkage between consumption and happiness does not stand up to a careful psychological analysis (Myers & Diener, 1995).

Not only does the dour, negative view of the future put the worst possible face on appeals for ERB, it also undermines potentially powerful linkages with critiques of materialism as unhealthy and unsatisfying as well as environmentally unsustainable. These critiques offer the opportunity to reverse the “sacrifice” perspective, thus making ERB not a regressive activity, but a possible route to a better life. There are some potentially exciting alliances here. Miller’s (1995) *How to Want What You Have* is a thoughtful psychological analysis, blending an Eastern perspective with the rich experience of an insightful clinical psychologist. The “use less stuff” approach to happiness is powerfully presented in Dominguez and Robin’s (1992) *Your Money or Your Life*. And the general issue of lifestyles that are at the same time less destructive and more satisfying is addressed in Johnson’s (1985) *The Future Is Not What It Used to Be*.

Motivational reality. Are appeals to sacrifice, to behaving counter to one’s self-interest, a realistic approach to motivating behavior? Is such purity an appropriate characterization of people deeply committed to ERB? Mansbridge (1990, p. 133) puts the issue succinctly: “We normally see self-interest and altruism as being at opposite poles. Indeed, conceptually we know what we mean by altruism only by contrasting it with self-interest. In practice, however, altruism must coincide with self-interest sufficiently to prevent the extinction of either the altruistic motivation or the altruist.”

But is such a dichotomy necessary? Does it, in fact, characterize committed environmentalists, past and present? Henry David Thoreau is regarded by many as one of the great environmentalists of all time. However, he fails the test of altruism: He obtained great satisfaction from nature and did not wish to see his country adopt materialism, for his own sake as well as theirs. Most environmentalists of my acquaintance are no different. They love nature and they treasure the benefits they experience from it. They fear the impact its destruction would have, for their own lives and the lives of their descendants, as well as for humanity as a whole.

Research a colleague and I carried out in the context of a wilderness program provides further support for the coexistence of the strong concern for preserving the natural environment and the desire to have such settings available for one's own joy and peace of mind (R. Kaplan & S. Kaplan, 1989). Program participants were asked to keep diaries for the first week after their return from the 10-day program. The powerful and far-reaching effects of the program were evident in these reflections as participants wrote of their feelings of "wholeness" and "oneness"; they considered the wilderness experience to have been transforming, to have revealed aspects of their personalities that they had not known before and that they now valued highly. Their clear concern with protection of the natural environment was deeply personal and closely tied to their hopes for the availability of such transforming experiences in the future. At the same time, however, their concern for preserving the resource closely matched Gagnon Thompson and Barton's (1994) discussion of "ecocentric" values as stemming from "a spiritual dimension and intrinsic value in [the] experiences in nature and feelings about natural settings" (p. 150).

An Alternative Approach

It may be helpful to take stock of the nature of the beast and the nature of the problems it faces.

Reconceptualizing Human Nature: The Reasonable Person Model

At an intuitive level it is not surprising that people resist making changes that they perceive as reducing their quality of life. It is also not surprising that people are concerned about the future of the environment. Perhaps a broader view of human nature, one that encompasses more than material gain, could provide a way out of this impasse.

A central failing of the altruistic position is that it attempts to put aside the issue of gain, of self-interest, in human behavior. The "economic man" position, by contrast, argues that gain is all that matters. Neither position is satisfactory; there is need for a position that is neither so extreme with respect to the issue of gain nor so narrow in its focus.

Even though people are often not rational in terms of the formal (economic man) meaning of the concept, they are clearly capable of being reasonable in the sense of behaving as one would hope people would behave. At the same time it is abundantly evident that people have an enormous capacity to be unreasonable as well. And the very same individual can be reasonable at some times and unreasonable at others. This suggests that it is the circumstances in which people find themselves that may well play a central role in their behavior.

What is it about the circumstances in which people find themselves that could make so radical a difference? Some useful insights can be found in two largely unrelated fields, namely cognitive science and human evolution. The interdisciplinary field of cognitive science has made many important contributions. One of these, perhaps too readily overlooked, is the repeated demonstration that people are exceptionally adept at processing information. In many information-processing areas, such as language understanding and object recognition, human competence still vastly exceeds the capacity of high-speed computers, despite the large investments of time and money over many years.

According to students of evolution this remarkable capability is no accident. Rather, it is due to the niche that humans occupied at a critical point in the evolutionary process (Berrill, 1955; Lachman & Lachman, 1979; Laughlin, 1968; Pfeiffer, 1972; and Washburn, 1972). When our primate ancestors came down from the trees to live in a savanna environment, they found a terrain already inhabited by well-adapted competitors. Although no comfortable niche was uninhabited, quick and skillful information processing made it possible to survive on the margin, utilizing foresight and flexibility, supplemented with considerable knowledge of the environment, of potential predators, and of possible prey. If indeed early humans depended for their very survival on information processing, they would be expected to have strong feelings about it. Finding oneself in a confusing environment, for example, could not have been a situation to take lightly. Those early humans who survived must have had an inclination to behave quite differently in circumstances supportive of their information-processing capability as opposed to circumstances that made that activity difficult or impossible.

In this perspective, humans can be seen as active, curious, problem-solving animals. Given survival pressures, processing information had to occur with speed and solving problems with ingenuity. Further, early humans who took delight in these adaptive activities had a decided advantage, since they would have been inclined to practice them in their free time, an activity sometimes referred to as "play." It would also have been adaptive to avoid environments and situations in which such activities were difficult or ineffective. Here again motivation played an important role. Early humans with a strong distaste for such environments would have had an adaptive advantage.

The Reasonable Person Model draws on these cognitive and affective themes. By recognizing human inclinations and the circumstances that are supportive of

human motivations, it may be easier to get people to behave in environmentally responsible ways without calling on guilt or sacrifice. As a first, rough step in that direction, I have identified, with a colleague, three aspects of information processing that on evolutionary grounds would be expected to have strong behavioral and motivational implications (S. Kaplan & R. Kaplan, 1989):

- People are motivated to know, to understand what is going on; they hate being confused or disoriented.
- People also are motivated to learn, to discover, to explore; they prefer acquiring information at their own pace and in answer to their own questions.
- People want to participate, to play a role, in what is going on around them; they hate being incompetent or helpless.

The final principle is particularly important in the present context. A situation in which people cannot act effectively, in which they cannot solve the problems they face or cannot implement the solutions they come up with, is likely to be extremely distasteful. In other words, people would be expected to avoid contexts that they consider conducive to helplessness. And since this is a cognitive animal, one would expect an avoidance of even thinking about realms that evoke feelings of helplessness. Thus, in this perspective, helplessness would be one of the most important motivational issues to consider in the context of behavior change.

Research suggests that helplessness is not only an important issue in the context of ERB, it is perhaps *the* pivotal issue. Levin (1993) reports a cross-cultural study of reaction to the increasing quantity of information available concerning environmental problems. The study, by London-based Research International, found that more information led not only to greater concern but also a greater sense of helplessness. More recently, a study by the nonprofit group Public Agenda found substantial declines in concern about environmental issues. (This decline is attributed not to apathy but to a sense of futility and helplessness (Donn, 1999). This suggests that many who appear uninterested in environmental issues may distance themselves to avoid pain, not because environmental issues are of no concern to them. Although people may vary in what they consider to be an “environmental” issue, few favor sprawl, few prefer polluted air, or unsafe water, or decline in fish stocks, or news of people starving because of population explosion and environmental disaster.

Additional support for the corrosive effect of helplessness on ERB comes from a surprising source. A recent test of Geller’s “actively caring” hypothesis by Allen and Ferrand (1999) looked at the impact on self-reported ERB of three of Geller’s factors predicting actively caring (self-esteem, personal control, and belonging). Only one of these predictor variables, personal control, showed a significant relationship. In relating this research to the present context it is essential to





take a close look at Allen and Ferrand's measurement of personal control. The authors state that this construct "was assessed in terms of the extent to which participants felt their action could benefit the environment" (p. 342). This is not control in any usual sense of the word. A far more accurate characterization would be "the opposite of helplessness." Thus the core finding of the study could be described as showing that people who feel helpless, who feel that their behavior would not make a difference, are less likely to participate in ERB. Taking this result along with the striking parallel findings of the two surveys leads one to conclude that any psychological approach to ERB that does not directly address the helplessness issue may have limited practical value.

Elements of Solutions

If altruism and sacrifice are unlikely to achieve the desired results, we need to consider the goals for a viable alternative. These would seem to entail finding ways to motivate people to be environmentally responsible in a way that also reduces their sense of helplessness and, at the same time, is sensitive to their needs and inclinations.

The general format of the proposed solution is participatory problem solving. "Participatory" implies that many people could be engaged in such activity. The expression "problem solving" constitutes a reminder that the purpose of the participatory activity is not to implement plans that someone else has already drawn up but to find innovative solutions to environmental problems while meeting the needs of the participants.

The elements of solutions offered here have all been used in many situations, as some of the examples testify. Despite their relatively widespread use, however, they have not been examined in terms of their motivational implications. This is particularly true of their relationship to the principles of the Reasonable Person Model. These principles play an important role in understanding the effectiveness of the various elements of the solution discussed here.

A focused task that needs problem solving. Rather than telling people what they must do or do without, the proposed approach provides people with an opportunity to figure out for themselves how various broadly defined goals can be met. In order to achieve this, they must have a specific focus, a particular problem that they are trying to solve. Such task-oriented groups could arise in many contexts: in business, in government at many levels, in various agencies and organizations, and as grassroots efforts.

Even at a larger scale of federal decision making, such an approach is not without precedent. The Netherlands has undertaken to achieve sustainability in one generation. This "Dutch Green Plan" is based on a public-private partnership that is particularly striking for the way it allocates responsibility. The government

identifies environmental problems according to themes, and then sets targets and objectives within each. Target groups are then identified (such as industry or consumers) that are responsible for achieving these objectives. In this way innovation is encouraged and participation is widespread (AtKisson, 1995).

The challenge to find a solution that is both satisfying and responsible. Whereas altruism calls upon the heroic (or perhaps the saintly), the proposed approach looks to what is reasonable. Counting on prolonged and generalized sacrifice may work in some circumstances (William James [1910/1971] struggled to discover the “moral equivalent of war”), but the current challenge is unlikely to be one of them. People are generally more comfortable with activities that represent a confluence of self-interest and altruism than activities that pit one against other (Mansbridge, 1990). Thus the emphasis here is on both the sustainable and the satisfying.

If one is to avoid asking people to make choices that run counter to their perceived self-interest, choices must be available that are not only good for the environment but multiply desirable. Thus one of the goals of the proposed approach is to generate what one might call “multiply desirable choices.”

A major benefit of the focus on multiply desirable choices is the avoidance of situations in which people, feeling guilty about their resistance to adopting alternatives they feel are unacceptable, resolve the conflict by tuning out the message and avoiding such messages in the future. It is for similar reasons that Roberts and Bacon (1997, p. 89) argue for alternatives to the individual behavior change strategy: “Other strategies outside the individual awareness and action should be considered. Environmental campaigns must avoid ‘blaming the victim’ strategies. Individual behavior change strategies are inappropriate if macro conditions exist which can be blamed for contributing to the problem or constraining the effectiveness of individual efforts (e.g., companies that do not provide ecologically friendly products, government inactivity).”

An interesting example of such an “other strategy” is provided by an alternative to single-occupancy-vehicle trips, a shuttle service, in Boulder, Colorado. This shuttle, called SKIP, was designed with considerable input from a citizen advisory board, which made sure that the plan was sensitive to the need for “friendly drivers, comfortable seats, and a cozy interior to create a safe and comfortable public space” (Renew America, 1998). People using this environmentally preferable alternative (projected to reach 1.47 million annually) may well feel good about the virtue of their actions, but they are not suffering in the process and in fact are likely to have improved their quality of life in the process. With the help of group problem solving, a multiply desirable choice has been created.

Effective participatory problem solving. On the face of it, it might seem unrealistic to put decisions in the hands of the very same people who are currently

behaving so inappropriately with respect to environmental issues. This concern is based on an assumption that, although completely understandable, does not stand up to closer examination. To understand the issues involved, it may be helpful to consider the differences among the following: (1) telling people what to do, (2) asking people what they want to do, and (3) helping people understand the issues and inviting them to explore possible solutions. The first is the procedure most often employed. The second, although involving participation in a limited sense, is not the kind of participation envisioned here. The third, which describes the proposed approach, is not participation in the sense of an opinion survey. Rather, it incorporates understanding, exploration, and problem solving as essential components of participation.

Although surveys can yield useful information, it is essential to realize that they often do not tap informed opinions; informed opinions, even on the part of ordinary people, can be very different from uninformed responses. Feinsilber (1994) carried out a “deliberative poll” among a group of 200 citizens concerning the often politically inflammatory issue of term limitations. Before expressing their opinions the group read a neutral position paper and discussed the issues extensively. Although term limitations are generally believed to be highly popular, the results were characterized by moderation and by uncertainty as to whether the benefits outweighed the liabilities. As in Hansen’s context, a wide range of information would need to be available to participants in the proposed approach.

It is also important to realize that people in participatory groups prefer to work with experts, rather than on their own (Wandersman, 1979). Thus the appropriately structured group would provide a context of new input, increasing the likelihood of a more measured and thoughtful outcome. In the context of the proposed approach, various kinds of expertise would need to be available. Governmental, corporate, nonprofit, and other groups each have many kinds of expertise to contribute, depending on the nature of the problem. Further, many so-called private citizens have important areas of expertise as well, including knowledge about local conditions and environmentally related ways of life (like farming) as well as information about how similar problems have been solved in places where they might have traveled or lived previously.

A thoughtful context and the availability of a wider range of information can have profound effects on the perspective of participants. An example familiar to members of the academic community is the behavior of student representatives on a faculty committee. As they come to understand the constraints and realities of the situation, they start sounding more and more like the faculty members, much to the dismay of the students they represent.

And finally, the observed environmental irresponsibility of many people cannot be interpreted as a simple example of disinterest or inappropriate attitude or sloth. Often there is a lack of appropriate infrastructure, or of multiply desirable choices, or of cultural support. People have many reasons to resist making

sacrifices for the common good, among them the concern that others will cheat, and that they will look like fools. When one adds to this the sense of inadequacy and helplessness as an individual tries to compensate for the inappropriate behavior of huge corporations and governments, it is hardly surprising that the behavior of ordinary people often falls short of being exemplary (Bardwell & Kaplan, 1992).

Perhaps an example would be helpful (Renew America, 1999). Every day for many years thousands of people commuted from New Jersey to New York City by way of a dark, traffic-congested tunnel. This pattern wasted large quantities of fuel and created substantial pollution; it was not environmentally friendly. It should be noted that the 30-to-40-minute drive was not people-friendly either. But for many years there was no multiply desirable choice. Then the Port Authority of New York and New Jersey, in collaboration with a private firm, New York Waterway, reinstated the ferry service that had in earlier times made the trip from Hoboken to Battery Park. The trip takes a scenic 5 minutes. The ferry is not for automobiles; it serves people and bicycles only. But it runs frequently and connects to transit routes at both ends. Annual ridership is over 2.3 million people. Here behavior changed radically in an environmentally responsible direction. Not surprisingly, people prefer making the environmentally responsible choice when they are not seriously disadvantaged by doing so. Judging people's behavior in the absence of multiply desirable choices has limited usefulness as an indication of these inclinations to behave responsibly.

Thus a reasonably cogent case can be made for the argument that people's participation in a problem-solving context need not reflect their apparently uncaring overt behavior. Nonetheless it would be more reassuring if one could point to concrete examples of such activities that have already taken place.

On first blush, this appears to be a difficult undertaking. There is a literature on this topic, but it is modest and scattered. Examples also appear from time to time in the popular press, but they are hard to access and not described in a consistent way. The community effort that led to the remarkable resurgence of the desolate South Bronx provides a pertinent example (Breslin, 1995). More directly related to ERB, environmental activists and Dow Chemical Corporation in Midland, Michigan, recently collaborated on a far-reaching program that will both reduce the level of toxic wastes and save the company millions of dollars (Feder, 1999). To feel convinced that the proposed approach can work in any reliable way, a more substantial database would be helpful. Fortunately for the last 9 years a far more systematic source of information has become available. Renew America, a nongovernmental organization, has been holding an annual competition for what it calls "success stories." Its Web-searchable database contains the essential information for 1,800 of these success stories. It is now clear that participatory activities with positive environmental impact have been occurring in a wide variety of contexts and on a relatively substantial scale.

Relationship of "Elements of a Solution" to the Reasonable Person Model

Attempts to convince the public of the importance of ERB have often yielded disappointingly modest impact. Many of these efforts have unwittingly also violated the principles of the Reasonable Person Model. For example, eagerness to be convincing can lead to presenting too much information, with the result that the recipients of the information are overwhelmed and their understanding of the issues is compromised. Frequently, the context in which information is presented leaves no opportunity for exploration. A sense of urgency on the part of the generator of the appeal may lead to painting a dire picture that contributes to a sense of hopelessness and helplessness.

The proposed approach addresses each of these issues directly. Understanding is enhanced by providing the opportunity to ask questions, to work with experts in the area, and to study pertinent material. Exploration is basic to the process, since playing with innovative solutions is built into the nature of the task.

The way the proposed approach deals with helplessness is a bit more complicated. Part of the complication is conceptual. There is an inclination in the psychological literature to treat control as the opposite of helplessness. For many reasons, this is an inappropriate contrast (Antonovsky, 1987; S. Kaplan & R. Kaplan, 1982; Little, 1987). A far more appropriate counter to helplessness is participation. Although we all want many things to be *under* control, the effort and responsibility involved in control is often seen as decidedly unattractive. By contrast, people often find genuine participation (as opposed to the pro forma variety) satisfying and empowering (S. Kaplan & R. Kaplan, 1989; Wandersman, 1979). Further, the proposed approach allows people to discover that they are not alone, that there are indeed other concerned people. They also benefit from doing something that could make a difference. And finally, to the extent that the proposed process generates multiply desirable choices, the individual may feel both that it is possible to behave responsibly without worrying about the implications of making a sacrifice in the process and that under these conditions others are more likely to join as well. The realization that other groups in other places are also generating multiply desirable choices may also reduce feelings of helplessness, as fear that nothing can be done is replaced by discovery that a great deal is, in fact, being done.

Research Opportunities

Although there has been growing awareness of the importance of participation in environmental design (Hester, 1996; Wandersman, 1979), environmental justice (Ervin, 1992), and community development (Perkins, Brown, & Taylor, 1996), there has been relatively little recognition of its potential in the context of ERB. This potential is, in fact, considerable; participation has the potential to play multiple roles in fostering ERB. Not only can it strengthen positive motivations; participation can also be a powerful factor in reducing the negative motivation of

helplessness. In addition, and closely related to its motivational effects, participation can play a pivotal role in finding innovative solutions to environmental problems. Thus the potential usefulness of participation is inextricably linked to the major reframing proposed here. As we have seen, given how the problem of ERB is frequently framed, the necessary actions are assumed to be known; the problem is only to get people to carry them out, acknowledging that some sacrifices may be necessary for the common good. By contrast, if one acknowledges that there may be solutions that do not necessarily involve sacrifice and may even enhance quality of life, then discovering these solutions is as important as motivating responsible behavior.

The availability of a great many examples, such as those provided by the Renew America (1999) Web-searchable database of success stories, is a source of encouragement and reassurance. But it is also much more than that. In conjunction with the proposed framework, both this material and the implicit link it provides to other ongoing or about-to-start participatory problem-solving efforts lend themselves to a wide variety of research approaches, including small experiments (R. Kaplan, 1996) and comparative case analyses, as well as more traditional research designs.

Research issues concerning motivation. There are several kinds of motivations one might expect to be enhanced by the participatory problem-solving experience. One hypothesized cluster involves engagement, connection, a sense of commitment (Brickman et al., 1982), and a sense of ownership (Kearney & Kaplan, 1997). A second cluster might include clarity enhancement, reduced helplessness or empowerment, having a chance to play a meaningful role (Antonovsky, 1987), and being needed (S. Kaplan, 1990). Any of these motivations could have a powerful influence, both on behavior and on interest in communicating with others about the project and its implications.

Since a downside of the sacrifice perspective is the fear of a reduced quality of life, it would be worth exploring whether participation in a problem-solving-oriented project increases an individual's quality of life, both in the present and as anticipated in the future.

The many dimensions of motivation such as reliability, durability, and generalizability (De Young, this issue) could also be assessed in the context of this sort of research. A related issue worthy of study is the diversity of motivations that might be involved among the individuals participating in any specific project. It would be useful to know if motivations for participating are relatively uniform within a given group, or if some participants are motivated by civic pride, others by competition with other places, or by aesthetics, or being needed, and so on. An indication of this sort of differentiation has been obtained in research on the motivations of volunteers (Clary et al., 1998).

Issues related to the solutions obtained. The proposed approach represents a change in emphasis from “known necessary sacrifices” to discovery of multiply desirable choices, of patterns that are satisfying and responsible. Thus these participatory problem-solving efforts have not only psychological consequences but also concrete products as well. Such concrete products might include programs, opportunities, partnerships, and innovative approaches of all kinds. It might be fruitful to compare these solutions with the old way of doing things. For example, one might expect superior creativity and diversity of solutions. It would also be likely that the degree of local match would be superior. Less clear-cut is the issue of transferability. Would the solutions only apply locally, or would corresponding groups and agencies elsewhere rate the solutions as potentially pertinent to their own settings?

Conclusion

Over the years the passive organism envisioned by the behaviorists has begun to give way to a radically different understanding of the human animal. This animal is seen as attempting to comprehend, to make sense of its world. It is addicted to exploring, to discovering, to finding out. Although it is capable of falling into passivity, it is often at its best, and its happiest, when it feels needed, when it can participate in what is going on around it.

A central purpose of this article has been to consider how one would motivate such an animal to be environmentally responsible, to behave in an ecologically sustainable fashion—or more appropriately given the nature of the organism, how one would assist such an animal in discovering ways of relating to the world that would best promote its welfare and that of its children and grandchildren.

Presumably this would not be accomplished by telling it what to do. There are several reasons to avoid this approach: People are likely to resist doing what they are told to do and may even attempt to undermine the entire effort; furthermore, such an approach would be a waste of talent and ingenuity. Telling people what to do ignores the possibility that there may be significant local variants in how best to achieve a particular goal. Being responsive to such local variation might lead to a diversity of solutions, providing the basis for a culture of exploration, innovation, and involvement that will be both satisfying and responsible.

If telling people what to do is a poor approach, then what? Perhaps these three suggestions will prove more effective:

1. Be sensitive to going with the grain, to recognizing and working with the motivations and inclinations characteristic of this species.
2. Treat the human cognitive capacity as a resource.
3. Engage the powerful motivations for competence, being needed, making a difference, and forging a better life.

These should all serve to counter the pervasive malaise of helplessness. By providing opportunities for understanding, exploration, and participation, effective group problem solving can lead to new multiply desirable choices. In such cases the motivations to behave responsibly and to satisfy self-interested needs are no longer in conflict, but mutually supportive.

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STEPHEN KAPLAN is a Professor of Psychology and of Computer Science and Engineering at the University of Michigan. He has written on numerous topics in environmental psychology, including his most recent book (with Rachel Kaplan and Robert Ryan), *With People in Mind: Design and Management of Everyday Nature* (Island Press). He has chaired or cochaired many doctoral committees in a

wide range of fields including psychology, computer science, nursing, natural resources, architecture, and geography. His research takes an evolutionary and environmental approach to such basic processes as perception, cognition, and affect and such applied concerns as participation, expertise, and mental fatigue.

To understand environmentally responsible behavior, scholarship must acknowledge that humans are reflexively engaged with the material world, and engaging in alternative practices means engaging in alternative bodily habits, routines, and rituals. Empirical research that focuses on the corporeal elements of environmental practice may offer fruitful insight for enhanced scholarship in environmental social science and the promotion of environmental engagement. Keywords: alternative technology adoption, corporeal sociology, environmentally responsible behavior, practice theory, social practice. I... The environmentally responsible personality is regarded as a person able to live in harmony with the natural world, himself/herself and other people (Popova, 2016). The system of environmental education has a positive impact on the development of environmental knowledge and skills (Khazykova, 2009), namely

New ways to promote proenvironmental behavior: Human nature and environmentally responsible behavior. *Journal of social issues*, 56(3), 491-508. Karopa, G. N. (1995). The nature-nurture debate is concerned with the relative contribution that both influences human behavior [1]. Different branches of psychology often take a one versus the other approach. For example, biological psychology tends to stress the importance of genetics and biological influences while behaviorism, on the other hand, focuses on the impact that the environment has on behavior [2]. The nature versus nurture debate is one of the oldest issues in psychology. The debate centers on the relative contributions of genetic inheritance and environmental factors to human development. Some philosophers such as Plato and Descartes suggested that certain things are inborn, or that they occur naturally regardless of environmental influences. The interactions between the environment and human health raise complex ethical questions related to environmental regulations and health policy decisions. These ethical questions are bound to intensify with the emergence of environmental effects of climate change, and new technologies that can impact the environment, such as nanotechnology, genetically modified organisms, and biofuels. Framing the Issue. Many of the most challenging ethical questions of our time address interactions between human health and the environment. How should we regulate pesticides, industrial chemicals, and pollutants? Should we develop genetically modified organisms for use in agriculture, medicine, and energy production? Facilitating the adoption of environmentally responsible behavior (ERB) is a major challenge for the behavioral sciences. As with any problem, how one approaches it and whether or not it can be solved depend to a large degree on how the problem is conceptualized (Bardwell, 1989; Posner, 1973). Rather, the approach must be based on a coherent conception of human nature that speaks to the relationship between how people approach new information, how information relates to motivation, and how information and motivation relate to behavior change. Although such a conception may well be beyond what is currently possible, the Reasonable Person Model is proposed as a first approximation to such a conception of human nature.