



Environmental crisis and human well-being: A review

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Abstract

Environmentalism in the context of psychological science is a behavioral toned proclivity to take actions with pre-environmental intent. The preliminary footstep towards understanding the intricacies between human psyche and environmental consequence is to examine on the axiom that behavior is predominantly a function of the organism and its environment. Change of psyche which is in the form of actionable behavior often entails breaking old habits and becomes established by creating new ones. This emerging field of interface between psychology and environmental science is presently looking for robust models that can integrate variables from more than one of the above broad domains. They should be able to propose interactions from both the disciplines, and channelize its scope for explaining one or more types of environmentally significant behavior so as to foster sustainability and social wellness. This scholastic work has visited the psychological aspect focusing on individual's belief, drives, and so forth in order to understand and change the target behavior that stands detrimental to the living environment. The conceptual review has also tried to state a broad frame-work that can increase theoretical rationale of both psychology and environmental economics domain in humanities and social science.

Keywords: Human psyche, Psychological disorder, Environmental consequence, Environmental well-being

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1. Introduction

Environmental influence has fundamentally been a by-product of materialistic desire for deriving personal security, power and status and above all relishing the physical comfort throughout the course of human civilization. It has been observed that human being significantly distresses the environment through influencing the actions of organizations for their benefits. The much sought after “Environmentalism” in the context of psychological science is a behavioral toned proclivity to take actions with pro-environmental intent. However, the bizarre mentality of human being on destroying and conserving slogans warrants understanding the fundamental link between human psyche and our physical environment. Basically, psyche over here which is in the form of actionable behavior entails breaking old habits and becomes established by creating new ones for self and societal betterment (Dahlstrand and Biel, 1997).

The emerging field of interface between psychological and environmental science is presently looking for robust models which can integrate variables from more than one of the above broad domains. This is because both the domains are expected to interact between them for explaining one or more types of environmentally significant human behavior that can enable sustainable well-being in the long run. Therefore, the researchers have attempted in this paper to review the psychological aspect that focuses on individual’s belief and drives in order to understand and bring out the target behavior that stands detrimental to the living environment. The conceptual review has also tried to state a broad frame-work for promoting environmentalism and ultimately increasing the theoretical rationality of both the domain under the domain of humanities and social science.

2. Behavioral issues concerning environmental problems

In 21st century it is pertinent for understanding the human-causes of climate change by everyone; because it is the collective impact of human behaviors that are contributing for climate change and environmental deterioration (Clayton and Brook, 2005). The research findings of Agyeman, Devine-Wright and Prange, (2009) has supported the fact that communities are already being forced to relocate because of current or anticipated climate changes and such forced relocations can involve a severing of emotional ties to place, as well as disrupting existing social networks. Therefore, not only the environmental sustainability stands as an ecological crisis, but also it includes the viability of socially shaped relationship between people and nature (Becker et al., 1999).

The inter-relationship between people and nature has been conceived as a subject of study during late 1960s with the recognition that the physical context of human behavior is important. The environmental problems in the shape of global warming, air pollution, noise and loss of diversity brings back the fundamental root cause as human behaviour (Vlek and Steg, 2007). Consequently, themes like focus on sustainability and conservation of ecological world through promulgating pro-environmental behaviour have been expanded and studied enormously during recent years. Some researchers have begun to explore affective behavioral influences on environmental concern and behavior, including sympathy for others (Allen and Ferrand, 1999), “emotional affinity” toward nature (Kals, Schumacher and Montada, 1999). In this regard,

researchers from the behavioral and environmental sciences have been found increasingly embracing the social-ecological models as an outline for managing and conceptualizing the resilience of human-environment systems (Berkes et al., 2003; Folke, 2006; Peterson, 2010).

It is presumed that, the understanding of psychologists' on ideologies, values, and beliefs for individual and group levels stands as an important means to help, explain and address emotional reactions to the social justice issues inherent in climate change impacts (Spence et al., 2009). At the same time, the findings of Bechtel and Corral-Verdugo (2010) has suggested that environmental conservation is not only associated with its antecedent factors but also with its consequences; and studying those consequences is important because human behavior is not only determined by its antecedents but also by its repercussions. One of the important reasons is that though people are able to articulate their opinions, beliefs, and preferences accurately however, they are notoriously poor in recognizing the causes of their behavior (Nisbett and Wilson, 1977).

2.1. Human psychology and environment

Human beings apart from addressing their basic needs such as food, cloth, and shelter they do like to fulfill their additional desires. Therefore, the distinction between the needs and desire stands as the foundation of studying environmental psychology. In this context, Tay and Diener (2011) has said that "While needs can be regarded as a relatively inflexible part of people's consumption, wants in the form of desire are more adaptable, as they are shaped by the perception of what is considered important or valuable in a culture". People in general do not know which kind of their behavior shaped through their desire is significantly affecting others on their use of available resources, and at the same time people are not receiving specific feedback on the results of their behavioral changes (Gatersleben et al., 2002). Therefore, there requires an altruistic behavior which will increase when someone know about other people's suffering and feels the responsibility of easing this suffering (Schwartz, 1977). From a practical point of view, it is anticipated that environmental psychologists should study human behaviour that profoundly affect environmental features.

There are a plenty of frameworks explaining low cost behaviour and actions with environmental intent has been brought out by environmental psychologists, however at the same time systematic research on the range of application of each theoretical perspective seems lacking (Stern, 2000). Doherty (2008) has reiterated the fact that psychologists despite having many skills and roles that may potentially create opportunities for influencing pro-environmental behaviors they have been unable to bring the root causes of environmental despair (Doherty, 2008). One of the reason may be because of the members from psychological community have traditionally not seen themselves as having a central role in addressing environmental issues and augmenting pro-environmental behavior (Kidner, 1994; Gifford, 2008). However, in *Trans-Theoretical Model of Health Behaviour Change*, Prochaska and Velicer (1997) has given a glimpse for understanding the process of individual behaviour change over time. They have acknowledged about ten processes that play a part in moving individuals between the six key stages of the change process, which are as follows:

1. *Pre-contemplation: The stage in which people are not intending to change or take action.*

2. *Contemplation: People are intending to change within the foreseeable future, but are not ready to take action; doubts about the effectiveness of action and of uneven costs and benefits may stall people at this stage for some time (in a state of “chronic contemplation”).*
3. *Preparation: People are intending to take action in the immediate future; they are very aware of the costs and benefits of change and are likely to have taken some related action recently, including having a plan of action in place.*
4. *Action: People have made or are making specific overt modifications to their behaviour*
5. *Maintenance: People are working to prevent a “relapse” to the previous behaviour; levels of confidence about their effectiveness (self-efficacy) tend to be higher than before action was first taken.*
6. *Termination: The changed behaviour has become normative; there is no chance of relapse.*

It has been argued that a transition for wellness and sustainability necessitates an emotional “shift from materialist to post-materialist values, from anthropocentric to ecological worldviews” (Leiserowitz et al., 2005). In this connection, environmental knowledge in the form of awareness stands as a subcategory of a more comprehensive environmental attitude, and that is the starting point of getting emotional involvement which shapes the sense for an environmental attitude (Kollmuss and Agyeman, 2002). It has been further argued that the stronger a person’s emotional reaction, the more likely that person will engage in pro-environmental behavior, and emotional connection seems to be very important in shaping one’s beliefs, values, and attitudes towards the environment (Grob, 1995).

The oldest model of pro-environmental behavior was based on a linear progression of environmental knowledge leading to an environmental attitude, which leads to pro-environmental behavior (Kollmuss and Agyeman, 2002). In this connection, social ecology has tried earlier to draw upon some of the key concepts and assumptions from systems theory, such as homeostasis, interdependence, deviation amplification, and negative feedback, to understand the relationships among people and their surroundings (Maruyama 1963; Katz and Kahn 1966; Emery, 1969). This has been further supplemented that there is a need for a form of teaching from which learners acquire the courage, commitment and desire to get involved in the social and behavioral interests concerning global problems (Jensen and Schnack, 1997). Therefore, the goal of this paper is to study the research literature, associated theories and hypothesis on pro-environmental emotional involvement which is expected to encourage wellness and sustainability.

3. Pro-environmental behavior and Human psyche

Throughout the course of human history, environmental impact has largely been a by-product of human desires for mobility, physical comfort, enjoyment, relief from labor, status, power, maintenance of tradition

and family, personal security, and so forth, and of the technologies and organizations humanity has created to meet these desires (Stern, 2000). The mother earth's human population has increased from 1.5 billion in 1900 to 6.3 billion in 2003 over past 100 years (Cohen, 2003) with a projection of reaching 8.9 billion global population by 2050 (United Nations, 2002). At today's population level, our present exploitation of natural resources questions sustainability for future generations. Therefore, it is high time for present generations to take initiatives in engaging in environmental friendly behaviour which moves beyond the realm of required work tasks. This kind of effort is called as pro-environmental behaviour which is categorized as a helping behaviour directed towards the environment which is a public good (Griskevicius, Tybur, and Van den Bergh, 2010). The pro-behaviour in this connection means a self-driven initiative involving constructive suggestions and changes, identifying problems and engaging in creative problem-solving and overcoming barriers to improve existing processes (Frese and Fay, 2001).

Pro-environmental employee behavior represents an emerging research field in the area of organizational psychology (Tudor, et al., 2008), as the research has found that people who are more concerned about the environment should be more likely to act in ways to protect it (Hinds and Sparks, 2008). The individual psyche manifesting in the form of pro-environmental behavior can be analyzed through the models of pro-social behavior, and altruism.

- *Pro-social behaviour* is defined by Eisenberg and Miller (1987) as 'voluntary intentional behavior' that results in benefits for another: the motive is unspecified and may be negative, positive, or both.
- *Altruism* is a subset of pro-social behaviour stating that people who have satisfied their needs are more probable to act ecologically because they have more resources to care about bigger, less personal pro-environmental and social issues.

Stern et al.'s (1993) has magnified the altruistic notion calling it as human motivation for pro-environmental behaviour is a sum of "social orientation", "egoistic orientation" and "biospheric orientation". Later Lehmann, (1999) has found that in isolation egoistic orientation (for example taking the metro instead of driving the car to have time to relax and read) is a strongest predictor followed by social and biospheric concern. On the ground of human motivation researchers have differentiated primary motives e.g should I bike to work today even though it rains, or do I drive? However, some internal barriers to pro-environmental motivations that are more intense and directed differently such as I will use personal car because I'd be comfortable. In this example, the environmental values (primary motives) are overridden by the personal comfort (selective motives) (Moisander, 1998). Perugini and Bagozzi (2004) has added stating that one might argue that individuals often make a distinction between desiring and intending to do something, or between "desiring a goal and intending to achieve it".

The association between human being and environment grows over the course of an individual's lifetime, and these interactions are primarily shaped by the influence of immediate society that he or she interacts. The value systems stated above comprising of immediate social net i.e. family, neighbors, peer groups are responsible for shaping much of our intrinsic environmental motivation. Predominantly, environmental sensitivity is tendencies to take an interest to feeling concern for the environment, learn about it, and act to conserve it, on the basis of formative experiences (Chawla, 1998). Therefore, it is during our childhood, the

most influential were experiences of family and natural areas; during early adulthood, education and friends were mentioned most often; and during adulthood, it was pro-environmental organizations (Chawla, 1999).

3.1. Anatomy of human desire

Human desire manifesting in the form of behavior plays a dominant role in the appearance and sustenance of environmental issues; that is why a deep shift in human behavior is required (Oskamp, 2000) and behavior change often requires breaking old habits and becomes established by creating new ones (Dahlstrand and Biel, 1997).

Hence, the effectiveness of behavioral intrusion generally enhances when they are aimed at important antecedents of the relevant psyche and then may be efforts can be given for removing barriers for change. The aim is to recognize the aspects that promote or inhibit environmental behavior. In this connection, Fig. 1 proposes a conceptual framework encapsulating the main rudiments of interest in this paper, highlighting the interrelationship between perception, desire for possession and emotional attachment as a behavioral intrusion for environmental wellness. The arrows show the hypothesized links between them. However, the arrows of causality probably can run in more than one direction.

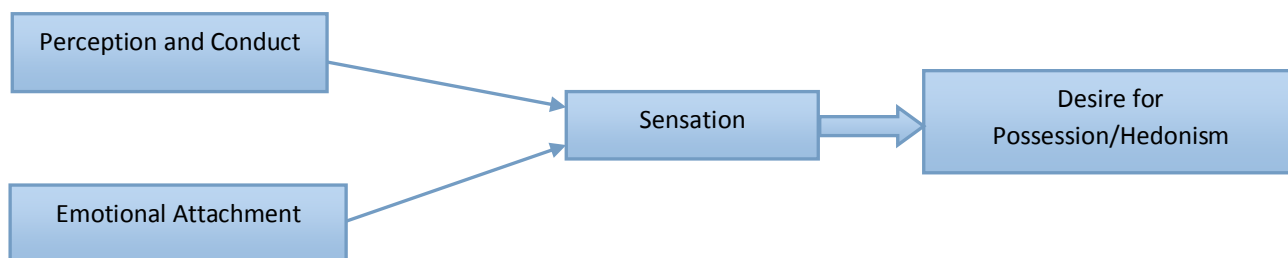


Figure 1. Conceptual framework

3.2. Perception and conduct

According to a study published in Psychological Science it has been pointed out that people perceive desirable objects as physically nearer than less desirable ones. In this regard, the theory of normative conduct distinguishes two types of social perceptions. Injunctive perception refers to the extent to which behavior is supposed to be commonly approved or disapproved of. Descriptive perception reflects the extent to which behaviour is perceived as common. The extent to which injunctive and descriptive perceptions influence behavior depends on the saliency of a particular norm (Cialdini, Kallgren, and Reno, 1991). At the same time it has been long recognized about the importance of proximal (e.g., the presence of others, structures of neighborhoods) and distal (e.g., cultural and economic) contexts for determining behaviors and this stands as an important ingredient for environmental behaviors as well (Wapner and Demick, 2002).

Hence, it is necessary to implement an impact-oriented definition to recognize and target behaviors that can make a big difference to the environment (Stern and Gardner, 1981).

3.3. Emotional attachment

Emotions are perceived as a vital instrument of human evolution and adaptation to the changing environment. In today's context, emotional attachment is a much needed pro-environmental attitude to have an emotional reaction when confronted with environmental degradation. Grob (1991) has hypothesized that the stronger a person's emotional reaction, the more likely that person will engage in pro-environmental behavior. In the field of neuroscience scholars have explicitly mentioned the interplay between emotions and reasoned processes in human decision making as a crucial issue for the study of human concern for the environment (Damasio, 1998). He has suggested that a "well-tempered" combination of cognitive and affective processes can drive human decision to engage in pro-ecological behaviour. Kals, et.al. (1999) has confirmed that factors such as emotional affinity toward nature and love of nature play an important role. It has been understood that analytic reasoning cannot be effective unless it is guided and assisted by emotion and affect (Damasio, 1994) as far from being simply encoded in the genes, much of personality is a flexible and dynamic thing (Mischel and Shoda, 1995).

On the ground of emotional attachment, some people have a fixed (or "entity") theory, believing that their qualities, such as their intelligence, are simply fixed traits. Others have a malleable (or incremental) theory, believing that their most basic qualities can be developed through their efforts and education. Research shows that people with a malleable theory are more open to willing to confront challenges, learning, able to stick to hard tasks, and capable of bouncing back from failures (Dweck,1999). At the same time, there are also research findings reflecting about the reactions to "guilt appeals" which indicates that it is important to make distinctions between messages that lead to feelings of guilt versus shame with the former resulting from reflections on one's behavior and the latter resulting from reflections on personal characteristics basing on one's emotional attachment (Tangney, 2003).

3.4. Sensation

Sensation is a kind of neurological process by which one gets sensitive to his/her immediate environment. A leading role in man's sensory knowledge of reality is engaged through visual sensations, which are closely connected to perceptible sensations. "Touch and sight supplement each other to such an extent that from the appearance of an object we can often enough predict its tactile properties" (Boring, 1948). Sensation for materialism has been defined as a fundamental organizing value that guides three kinds of orientations: (a) the perception that material goods indicate success; (b) the belief and attachment of possessions are a source of happiness; and (c) the view that possessions are central for one's life (Richins and Dawson, 1992).

Therefore, a greater sense of mindfulness develops well-being contributing to a greater sense of clarity with regard to one's values, and to choosing behaviors that are consistent with these values. Through this process, the goals can become more "intrinsic" and will carry a sense of attachment. Lyubomirsky (2007) has

stated that personal well-being can best be served by following “intrinsic” and “authentic” goals, i.e., goals that are inherently satisfying and meaningful, and rooted in one's core values.

3.5. Desire for possession/hedonism

One of the important areas that provide a promising perspective is the theory on the meaning of material possessions which proposes that the use of material goods fulfills three functions: instrumental, symbolic, and affective (Dittmar, 1992). Although happiness which is in the form of pleasure is actually derived out of material possessions is subject to a wide range of external influences and it has been found that there is a heritable constituent of happiness which can be entirely clarified by the architecture of personality (Davidson, 2001; Weiss, 2007). Pleasure bounded by material possessions is fundamentally based on three important characteristics of habits. First, habits require a goal to be achieved. Second, the same course of action is likely to be repeated when outcomes are generally satisfactory. Third, habitual responses are mediated by mental processes. When people regularly act similarly in a particular situation, that situation will be mentally linked with the related goal-directed behaviour. The more frequently this happens, the stronger and more accessible the linkage becomes, and the more likely it is that a person acts accordingly. Thus, habitual behaviour is triggered by a structure that is cognitive that is learned, stored in memory, and retrieved from memory when persons perceive a particular situation (Aarts, Verplanken, and Van Knippenberg, 1998).

Hedonic goals (i.e., searching for pleasure) often oppose pro-environmental behavior. (Lindenberg and Steg, 2007) and frugality, as a sustainable way of life, predicts a state of pleasure that leads not only to psychological wellbeing (Brown and Kasser, 2005) but also to intrinsic motivation that allows the maintenance of a less consumption (De Young, 1996; Iwata, 2001). Typically, happiness is associated with non-rational dimensions, such as love, a closer relationship with nature, etc., but not with state of health, financial situation, and other objective factors. Happiness is found in religious and philosophical concepts, and it has inspired humanity broadly (Bentham, 1997). Being a separate positive consequence of sustainability; happiness should be considered when analyzing the repercussions of people's pro-environmental behavior (Gardner and Prugh, 2008), and this psychological state can be considered an “autonomous” or intrinsic consequence of being sustainable (Crompton and Kasser, 2009; Kasser, 2009).

4. Environment and pro-behavior

Individual value system has been found as a prima-facie for shaping one's intrinsic motivation. However, the question of what shapes one's values is a complex one. Fuhrer et al. (1995) proposed that “a person's values are most influenced by the ‘microsystem’, which is comprised of the immediate social net—family, neighbors, peer-groups, etc”. At the same time on the ground of self-consciousness Hines et al. (1986) has carried out a meta-analysis and found the following variables being associated with responsible pro-environmental behavior as summarized by (Kollmuss and Agyeman, 2002) as:

- *Knowledge of issues: The person has to be familiar with the environmental problem and its causes.*
- *Knowledge of action strategies: The person has to know how he or she has to act to lower his or her impact on the environmental problem.*
- *Locus of control: This represents an individual's perception of whether he or she has the ability to bring about change through his or her own behavior. People with a strong internal locus of control believe that their actions can bring about change. People with an external locus of control, on the other hand, feel that their actions are insignificant, and feel that change can only be brought about by powerful others.*
- *Attitudes: People with strong pro-environmental attitudes were found to be more likely to engage in pro-environmental behavior, yet the relationship between attitudes and actions proved to be weak.*
- *Verbal commitment: The communicated willingness to take action also gave some indication about the person's willingness to engage in pro-environmental behavior.*
- *Individual sense of responsibility: People with a greater sense of personal responsibility are more likely to have engaged in environmentally responsible behavior.*

Our actions are intimately linked to the well-being or disturbance to the society and ecosystems at large. How we choose to live affects the world. Hence, the impetus to change should come from within. Eckersley (2006) has said that this change which will come about from choices, individually taken as citizens, will be a reflection of collective will and do things differently.

5. Scope for future research

The association between human being and environment grows over the course of an individual's lifetime, and these interactions are primarily shaped by the influence of immediate society that he or she interacts. Gardner and Stern (1996) proposed a set of principles to work upon. First, identifying target behaviors that are environmentally significant in terms of impact and then analyzing the behaviors to identify the responsible actors and actions. This should follow considering the full range of causal variables and exploring their possible relevance to the target behavior from the actor's and their immediate society's standpoint. We do vouch the proposition of Gardner and Stern (1996) and propose the future researchers of humanities and social sciences for promoting their investigations towards environmentalism through understanding and managing human psychology.

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