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Feelings of belonging and self-expression in eco-engagement

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Abstract

According to studies, people who have a strong emotional connection to nature are more likely to engage in pro-environmental behavior. Using a sample size of N = 199, the current research tested the prediction power of an expanded model of TPB [Ajzen, I. (1991)]. People's intents to interact with nature may be explained by the idea of planned behavior [Organizational Behaviour and Human Decision Processes, 50, 179-211]. It was postulated that a high degree of intention prediction would result from people's emotional investment in, and sense of belonging to, their surrounding ecosystems. It was hypothesized as a secondary hypothesis that individuals who had been raised in rural settings would express more favorable attitudes regarding interacting with nature than their urban counterparts. Having an emotional investment in the natural world was demonstrated to be a robust independent predictor of future environmental action. In the absence of emotional attachment, environmental identification emerged as a major predictor. The expected differences between rural and urban individuals along the studied variables were observed.

Keywords: Natural environment; Affective connection; Attitudes; Identity; Experience

1. Introduction

Much of the industrialized world's population has become emotionally and physically distant from nature as a result of modern ways of living. The bulk of the population of Britain has lived and worked in urban areas since the 1850s (Thomas, 1983). The natural world, it has been asserted (Kellert, 2002; Schultz, 2002), has become less accessible to the general public as a consequence of this tendency. Pyle (1978) asserts that a lack of exposure to the natural world, or the "extinction of experience," perpetuates apathy and indifference toward ecological problems, the natural environment, and the fauna within it. However, the environment may benefit if this current tendency is slowed down: Experiences in the natural environment have been shown to have substantial associations with pro-environmental behavior, such as recycling, signing petitions in support of environmental conservation and utilizing public transport (Finger, 1994). Researchers Nord, Luloff, and Bridger (1998) discovered that going to forests often was associated with other pro-environment behaviors including donating to environmental groups and making ecologically aware purchases (see also Teisl & O'Brien, 2003).

Similarly, personal interaction with the natural world, particularly during infancy, has been argued to be vital in building meaningful ties with, and encouraging good attitudes towards, the natural environment (Chawla, 2002; Horwitz, 1996; Kellert, 2002). For instance, Bunting and Cousins (1985) discovered that children living in rural areas were more likely to have a favorable reaction to nature than their urban counterparts. Children's self-reported activity preference was also shown to vary between the three groups. Young people who scored higher on their measure of "pastoralism" were more likely to engage in outdoor activities like hiking and camping and animal care, while those who scored higher on their measure of "urbanism" were more likely to spend time in front of the television.

The idea that people's evaluations of an object are more affectively based when they have direct experiences of that object rather than when they have only indirect experience (Millar & Millar, 1996) is consistent with the trend that more experience with the natural environment leads to more pro-environmental attitudes. Fazio and Zanna (1981) found that when people have first-hand experience with an attitude object, they are more likely to maintain a consistent attitude and behavior. The formation of favorable emotive associations with an attitude object may also be aided by repeated exposure to the item (cf. Zajonc, 2001, on the 'mere exposure' effect). Experiencing nature has been shown to improve health and well-being (Kaplan & Talbot, 1983), in addition to encouraging more environmentally friendly attitudes and actions. Inmates who have a view of the outdoors are less likely to call in sick (Moore, 1981), while patients who have a window that looks out into a garden are more

likely to make a full recovery (Ulrich, 1984). Exposure to natural settings may also have beneficial psychological effects: Children's cognitive abilities have been shown to improve when relocating from an urban setting to one with more natural features (Faber Taylor, Kuo, & Sullivan, 2002; Wells, 2000). Moreover, considering the natural environment as a location of leisure, and utilizing it for restorative or respite experiences, might generate a time for self-reflexivity (Kaplan & Kaplan, 1989; Kaplan, 1995). According to some research (Herzog, Black, Fountaine, & Knotts, 1997), this might have a beneficial effect on people's mental health.

1.1. *Affective connection*

The importance of affect in the context of human relationships with the natural environment has been proposed by several commentators (Kals & Maes, 2002; Kals, Schumaker, & Montada, 1999; Kaplan & Kaplan, 1989). Empirical research has found, for instance, that engendering greater empathy towards nature tends to increase the level of connectedness people feel towards it (Schultz, 2000). It has also been shown that affect can be both an important predictor of environmental attitudes and rated as more important by participants, relative to cognitions, in forming their attitudes to environmental issues such as logging native forests (Pooley & O'Conner, 2000). Similarly, Kals et al. (1999) have demonstrated that an emotional affinity with nature is able to predict nature protective behaviour, such as public commitments to environmental organisations and the use of public transport. They also showed emotional affinity to be predicted by past and present exposure to the natural environment. These empirical data have helped support Wilson's (1984, 1993) "biophilia" hypothesis, which has suggested that, as a species, we have an inherent affiliation to the natural environment. Wilson posited that the natural world continues to influence the human condition through our previous close and enduring evolutionary relationship with it. Essentially, the argument is that our technological development has been so rapid that our evolutionary adaptation to modern environments has yet to develop substantially. Therefore, according to Wilson (1993), there is still a *need* to be with nature: we have an "y innately emotional affiliation to other living organisms" (p. 31). There are, however, some advocates of the biophilia hypothesis who have suggested that the genetic bond may well be a weak one, requiring the addition of learning, culture and *experience* of nature to optimise biophilic tendencies (Kellert, 2002; see also Kahn, 1997). Therefore, it might be expected that affective connection would play an important part in predicting intentions to engage with the natural environment. Moreover, it may also be expected that those people with greater experience of the natural environment may express greater affective connections with it than with those with lesser experience.

1.2. *Environmental identity*

As well as eliciting emotional bonds, experiences of the natural environment may also foster *place-identity* (Manzo, 2003; Proshansky, 1978). Proshansky (1978) defines place-identity as the "dimensions of self that define the individual's personal identity in relation to the physical environment" (p. 155). Fe'lonneau (2004) has even coined the term "topological identity" (p. 45) to refer to the degree to which one feels an emotional connection with a place and the people associated with it (see also Lalli, 1992).

The importance an identification with, or sense of connection to, the environment has only recently been recognised, broadening the mainstream concept of identity formation to include, for example, how people see themselves in relation to the natural world (Clayton & Opatow, 2003). For instance, environmental identity, defined as "the meanings that one attributes to the self as they relate to the environment" has been found to have both a direct effect on environmental behaviour and an indirect effect through environmental attitudes (Stets & Biga, 2003, p. 406). Furthermore, these researchers have found that the stronger the environmental identity, the more positive the attitudes towards the environment. Similarly, a high correlation has been reported between a measure of environmental identity and self-reported environmental behaviours, such as energy efficiency (Clayton, 2003) and recycling (Mannetti, Pierro, & Livi, 2004).

Therefore, taken together, affective connection and environmental identity are potentially important explanatory concepts within environmental psychology research. Exposure to the natural environment may facilitate the development of emotional bonds and identification with it, which may in turn lead to positive psychological well-being and to the formation of positive attitudes and behaviours towards the natural environment.

1.3. The theory of planned behaviour

The theory of planned behaviour (TPB) proposes that people act or behave in accordance with their intentions towards particular behaviours providing they perceive some degree of control over implementing those behaviours (Ajzen, 1991). Intentions, seen as proximal predictors of behaviour, are in turn dependent upon three separate factors: attitudes towards the behaviour, subjective norms and perceived behavioural control (PBC) (Ajzen, 2001). Thus, intentions to behave in a particular way may be predicted by strength of attitude towards that behaviour, the extent to which the behaviour is perceived to be compatible with perceived social approval and the degree to which the behaviour is perceived to lie within one's personal control.

Within the TPB, attitudes towards a given behaviour are said to be determined by salient beliefs about behavioural outcomes (behavioural beliefs) and the evaluations of those behavioural outcomes (outcome evaluations). An estimate of attitude is obtained by multiplying each behavioural belief with the corresponding outcome evaluation and summing the resulting products (Ajzen, 1988). It is also claimed that when behavioural beliefs and outcome evaluations are taken together they may represent an indirect measure of attitude that has been shown to have high correlations with more direct measures of attitudes (Ajzen, 1988, 2002a).

The TPB has been applied to a wide range of behavioural domains (Ajzen, 2002b) including those that relate to environmental issues. For example, it has been used to good effect in predicting adoption of green energy and increased bus use (Bamberg, 2003; Bamberg, Ajzen, & Schmidt, 2003), intentions to recycle (Mannetti et al., 2004; Terry, Hogg, & White, 1999), and buying organic foods (Sparks & Shepherd, 1992).

Although the TPB has demonstrated its effectiveness as a model, the inclusion of additional predictors should be acceptable providing they explain additional variance over and above the theory's existing variables (Ajzen, 1991). For example, several researchers have shown that the TPB may benefit, in terms of its predictive utility, from the inclusion of variables such as identity and affect (see Conner & Armitage, 1998, for a review), moral obligation, self-identity, and past behaviour (Eagly & Chaiken, 1993; Manstead & Parker, 1995).

The role of attitude measurement (within the TPB framework), in particular in relation to the distinction between affect and cognition within attitudes, has provoked much debate (Breckler & Wiggins, 1989a; Trafimow & Sheeran, 1998). It has been proposed that current methods of measuring attitudes within the TPB have a tendency to capture cognitive, 'rational', evaluations but not affective dimensions of attitudes (Conner & Sparks, 1995; French et al., 2005; Manstead & Parker, 1995; van der Pligt, Zeelenberg, van Dijk, de Vries, & Richard, 1998). For example, Ajzen and Timko (1986) found that attitudes towards generally recommended health practices, measured with a 20-item semantic differential scale, comprised two distinct factors. The first was deemed to be reflective of participants' cognitive evaluations and consisted of bipolar adjective-pairings such as 'harmful-beneficial' and 'wise-foolish'. The second was deemed to be reflective of more affective judgements with item pairings such as 'pleasant-unpleasant' and 'interesting-boring'. Interestingly, there was not a significant correlation between these two factors, each of which was argued to be measuring discrete aspects of the same attitudes. Moreover, the affective dimension of attitudes was found to be a highly significant predictor of health behaviour independently of the impact of the more cognitive dimensions (Ajzen & Timko, 1986). Consequently, Ajzen (2002a) has proposed that the direct method for assessing attitudes, namely the semantic differential, should elicit both cognitive and affective aspects of attitudes.

Although it has been argued that it is very unlikely that there can ever be 'pure' cognitive and affective elements of attitudes (Eagly, Mladinic, & Otto, 1994), there is a plausible assumption that, for some attitudes towards some behaviours or objects, either affect or cognitive elements may predominate (Trafimow & Sheeran, 1998). For example, it has been shown that affective responses rather than cognitive responses have the stronger relationship with global attitudes towards blood donation (Breckler & Wiggins, 1989a). There is also an influential line of argument in the literature that suggests that attitudes are often essentially affectively based (Wilson & Dunn, 1986; Wilson, Dunn, Kraft, & Lisle, 1989). Therefore, the present study also undertook to discover if the prediction of environmental attitudes could be improved using measures of affective connection in addition to behavioural belief and outcome evaluation product terms, the determinants of attitudes within the TPB (Ajzen, 1988).

1.3.1. Affect and the TPB

Affective factors (often assessed in the form of anticipated negative affective reactions) have been demonstrated in several studies to add significantly to the TPB model (Parker, Stradling, & Manstead, 1996; Richard, de Vries, & van der Pligt, 1998; Richard, van der Pligt, & de Vries, 1995). They also tend to be used when researching topics that are "heavily affectively laden" (Conner & Sparks, 1995, p. 149) such as

leisure activities (Ajzen & Driver, 1991) and safe sex practices (Chan & Fishbein, 1993; Richard et al., 1998).

Moreover, Richard et al. (1998) demonstrated that when anticipated affective reactions and attitudinal measurements remain distinct factors in questionnaire protocols, the attitude measure may be made redundant in its predictive capacity, whereas the anticipated affective measure may account for a significant amount of the variance in behaviour. However, Richard et al. (1998) note that greater use should be made of specific affective reactions when assessing outcome evaluations and behavioural beliefs in order to fully appreciate the independence of affective beliefs from more cognitive beliefs. Although this research area tends to be dominated by the assessment of negative affective reactions, some applications with positive affective reactions have been reported (Richard, van der Pligt, & de Vries, 1996). Therefore, because of the relative scarcity of an assessment of affect (positive affect in particular) in the literature, it is important to try and clarify the importance of affective connection, both within a natural-environment research focus and within the methodological framework of the TPB. Drawing on previous research (e.g., Kals et al., 1999; Mayer & Frantz, 2004) we define *affective connection* with the natural environment as the subjective experience of an emotional attachment with the natural environment.

1.3.2. Identity and the TPB

Self-identity often seems to represent an important addition to the TPB (Sparks & Shepherd, 1992; Terry et al., 1999; see also Charng, Piliavin, & Callero, 1988). For instance, Sparks and Shepherd (1992) found that identifying strongly as a green consumer contributed significantly and independently to intentions to consume organic vegetables. It has been noted, however, that the effect of identity as a predictor may vary according to the target behaviour in question (Conner & Armitage, 1998).

Moreover, there has been some criticism that measures of identity merely act as proxies for past behaviour (Charng et al., 1988; Sparks & Guthrie, 1998; Stets & Biga, 2003) or intentions (Fishbein, 1997). In order to further inform the natural-environment psychological literature regarding the importance of environmental identity (cf. Clayton & Opatow, 2003) a different kind of measure of identification with the natural environment was included in the present study. The aim of this measure was both to avoid items that could be construed as proxy indicators of intentions and behaviours and to represent aspects of identity that are more 'personal' than many of the more 'role-based' forms of identity that are often addressed in this kind of research (cf. Mannetti et al., 2004).

1.4. The present study

From the research literature it appears that experience of the natural environment may elicit positive environmental attitudes and behaviours, as well as facilitating positive psychological well-being. Therefore, identifying the antecedents of intentions to engage with the natural environment may be seen as a useful contribution to the literature. It would also appear that environmental identity and affective connection combined with key TPB variables may be important predictors of intentions to engage with the natural environment.

2. On the basis of the above considerations, the present research focussed on three key hypotheses. First, we expected that a sense of affective connection with the natural environment would be found to be a significant independent predictor of participants' intentions to engage with the natural environment (because such affective experience is not well represented within standard TPB variables). Second, and for similar reasons, we expected that environmental identity would also be found to be a significant independent predictor of participants' intentions. Finally, we expected that participants from rural backgrounds, because of their potential greater exposure to the natural environment, would be distinguished from urban participants by having significantly more positive ratings for behavioural intentions, attitudes, subjective norm, PBC, identification, and affective connection. Method

2.1. Participants

Participants ($N = 199$; female $\frac{1}{4} = 166$, male $\frac{1}{4} = 33$) were undergraduate social science students at the University of Sussex, UK. Participants represented a convenience sample, in that they agreed to participate in the study in return for course credits as part of the requirements of their degree programme. Their mean age was 21.7 years (range 18–53).

2.2. Materials

All participants received an identical four page questionnaire concerning “Attitudes and the Natural Environment”. Following the instructions, a working definition of “Engaging with the natural environment” was presented as “being *in* and actively participating *in* areas and settings produced by nature, such as woodland, hills, lakes, valleys, coastal areas, mountains, rivers and forests”. The questionnaire assessed the central concepts of the TPB as well as a number of additional measures, some of which are not reported here. All responses were recorded on seven-point Likert-type scales (response scale end points are indicated in parentheses). Reverse coding of variables was carried out where appropriate.

2.2.1. Childhood location

Following questions relating to age and gender, participants were asked to indicate the type of location in which they grew up: “In which area did you spend most of your childhood?” with three possible responses, ‘Urban’ ($n = 71$), ‘Suburban’ ($n = 90$), and ‘Rural’ ($n = 36$).

2.2.2. Behavioural beliefs and outcome evaluations

Eight behavioural beliefs about engaging with the natural environment were constructed from an initial belief elicitation pilot study, conducted according to Ajzen’s (2002a) guidelines, with a sample of undergraduate students ($N = 30$). The most frequently reported responses were included in the main questionnaire. These were: “My engaging with the natural environment would” “allow me to experience beautiful scenery”, “make me feel happy”, “be too isolating”, “help me escape the stresses of life”, “give me a sense of connection with nature”, “be an uncomfortable experience”, “be inconvenient for me”, and “help promote environmental awareness” (*extremely unlikely to extremely likely*). These were followed by the eight corresponding outcome evaluation questions, which simply asked participants to evaluate each of the outcomes mentioned in the behavioural belief items, “Please evaluate each of the following” (*extremely bad to extremely good*).

2.2.3. Attitudes

Attitudes were assessed using a five-item semantic differential measure. Responses were recorded to the statement, “For me, engaging with the natural environment would be” (*extremely bad to extremely good; extremely harmful to extremely beneficial; extremely foolish to extremely wise; extremely unpleasant to extremely pleasant and extremely unenjoyable to extremely enjoyable*), anchored at the end points only. The mean of these items ($\alpha = 0.88$) was used to form a composite measure of attitudes.

2.2.4. Subjective norm

Subjective norm was measured with two items: “Most people who are important to me probably think that I should engage with the natural environment” (*strongly disagree to strongly agree*) and “If I were to engage with the natural environment, most people who are important to me would probably” (*disapprove strongly to approve strongly*). The mean of these items ($r = 0.49$) was used to form a composite measure of subjective norm.

2.2.5. Behavioural intentions

Behavioural intentions were measured with the three items “I shall try to engage with the natural environment within the next two weeks” (*definitely shall not try and definitely shall try*), “I shall make an effort to engage with the natural environment in the next two weeks” (*definitely false and definitely true*), and “I intend to engage with the natural environment in the next two weeks” (*strongly disagree to strongly agree*). The mean of these items ($\alpha = 0.93$) was used to form a composite measure of intentions.

2.2.6. Perceived behavioural control

PBC was measured with the items “How much control do you have over whether or not you engage with the natural environment” (*no control and complete control*) and “It is mostly up to me whether or not I engage with the natural environment” (*strongly disagree to strongly agree*). The mean of these items ($r = 0.63$) was used to form a composite measure of PBC.

2.2.7. Affective connection

Affective connection was measured with the items (adapted from Thompson & Barton, 1994), “Sometimes when I am unhappy I find comfort in nature”, “It makes me sad to see natural environments destroyed”, “Being out in nature is a great stress reducer for me” and “I need time in nature to be happy” (*strongly*

disagree to strongly agree). The mean of these four items ($\alpha \frac{1}{4} 0.77$) was then used to form a measure of affective connection.¹

2.2.8. Environmental identity

Identification with the natural environment was measured with the three items “I see myself as someone who empathises with the natural environment”, “For me, engaging with the natural environment gives me a greater sense of who I am”, and “I identify with the natural environment” (*strongly disagree to strongly agree*). The mean of these items ($\alpha \frac{1}{4} 0.75$) was used to form a measure of environmental identity.

3. Results

Means, standard deviations and inter-correlations for the TPB constructs, behavioural intentions, attitude, subjective norm and PBC, and the added constructs of environmental identity and affective connection (see Table 1), indicate that although some correlations are deemed to be high (Cohen, 1988) there was only one extreme case, namely that between affective connection and identification ($r \frac{1}{4} 0.80$). However, an examination of the collinearity statistics revealed that each predictor variable fell within the acceptable boundaries of tolerance (40.3) and the VIF coefficient (< 10), thus ruling out any substantive multicollinearity (cf. Field, 2000). Additionally, although the sample was predominantly female, a series of *t*-tests found no differences between males and females on the extended TPB variables.

Conclusion

The study thus provides both a useful contribution to discussions addressing affective connection as an important predictive factor in the context of environmental issues and as an additional variable in an extended TPB. We do not doubt that both theoretical and measurement refinements would be beneficial, and that the inclusion of objective measures of actual behaviour in future research would help strengthen the assessment of the role of a sense of affective connection. Nevertheless, we would suggest that the present research offers a useful indication of the importance of affective factors in natural-environmental research and in attitude-behaviour models generally. Moreover, it offers an insight into the need to examine the nature of inter-relationships between measures of affect, on the one hand, and identity on the other and of the applied importance of seeking to understand environment-related behaviour in terms of the inter-relationships between people’s affective connections, their sense of their own identity and their direct experience of the natural environment.

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