Environmental Education and Interpretation: Developing an Affective Difference

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A B S T R A C T

Rather than create another definition this paper explores the philosophy of interpretation in order to identify its core values. This shows that the main difference between environmental interpretation and environmental education is whether affect is considered to be pre-or post-cognitive. To the interpreter particularly significant experiences create deep emotional responses in participants that need no explanation. While moods, feelings and emotions are known to be important to attitude and behaviour change, how they create behaviour change is largely unknown. Interpretation will only make significant advances and become more challenging when it is informed by articulated theory. The implications for practice are that affective rather than cognitive models of learning need to be both employed and explored in future.

When Alison went frog hunting in a wetland it changed her life. As an eight year old who had never been out in the bush at night or seen a frog in the wild she was amazed when her torch beam found several emerald spotted tree frogs—calling, mating and hunting around that wetland. Three months later Alison's mum rang up the Parks Service. Alison now had three aquariums, pesticides could no longer be used in the garden, and she was looking after two orphaned animals. Someone needed to convince Alison that now the holidays were over she could not take her animals to school.

What was it about the frog hunt that had such a profound impact on Alison? Such brief informal activities rely on inspiration. This paper suggests that the key differences between environmental education and interpretation are whether the emphasis is on cognitive versus affective approaches to behaviour change, and on social versus individual change. Its purpose is to suggest the kinds of theorising and research needed to develop the discipline further and improve practice.

What is environmental interpretation?

'no consensus has ever been achieved'

For some time there has been discussion both overseas and in Australia as to the nature of environmental interpretation. It has been variously described as an educational activity (Tilden 1957), a communication process (Macfarlane 1987) and a management tool (Sharpe 1982). However, although Interpretation Australia, Australia's national association of interpretation, has defined interpretation as a 'means of communicating ideas and feelings which helps people to understand more about themselves and their environment' no consensus has ever been achieved. Wood (1986) reported that a 1985 conference by the Society for the Interpretation of Britain's Heritage was unable to agree on a definition of interpretation. Zuefle (1997) told of a similar experience at an interpreters workshop in Montana. Similarly, the first meeting of Interpretation Australia was unable to agree on a definition; indeed, it took several years for it to develop one. One of the most cited works on interpretation by Tilden (1957) also emphasised a distaste at having to confine interpretation to a specific definition. With so many definitions it has been suggested that interpretation is best been seen as a fuzzy set of terms with some central concepts and a number of peripheral elements (Pearce 1993, Knudson et al 1995).

By contrast, the definitions of environmental education used in Australia are generally consistent with the definition adopted almost thirty years ago by the International Union for the Conservation of Nature (IUCN) as 'the process for recognising values and clarifying concepts in order to develop skills and attitudes necessary to understand and appreciate the interrelatedness among people, their culture and their biophysical surroundings' (Environmental Protection Authority 1996). It has also been broadly defined as 'education in, about and for the environment', with the Australian emphasis being on education for the environment, that is education leading to individual action or social change (see Gough 1997, Fien 1997). Most models of environmental education commonly suggest that cognition is critical to create this change. The more rigid of these models are hierarchical with cognition at the base (see, for example, Hungerford & Volk 1990).

Rather than create another definition for interpretation, several authors have adopted the strategy of comparing and contrasting it with environmental education (Hammitt 1981, Sharpe 1982, Mullins 1984, Aldridge 1989). At issue

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is not which approach is best or right, but what is best practice in each field. These comparisons emphasise that interpretation is a form of education. Indeed, Tilden (1957) defined interpretation as:

> *An* educational *activity which aims to reveal meanings and relationships through the use of original objects, by first had experience, and by illustrative media, rather than simply to communicate factual information.*

The differences these authors identify is that environmental education is place specific, that is in a classroom, laboratory or lecture theatre, while interpretation is a leisure time activity involving non-formal education (Mullins 1984). They therefore suggest that environmental educators can more effectively plan the pattern and sequence of learning experiences presented (Hammitt 1984, Zuefle 1997). By contrast, interpretation is rarely sequential. It is more opportunistic, addressing sporadic visitor encounters; it uses the moment to instil understanding, appreciation and develop a strong sense of place.

'interpretation tends not consider collective thought and action'

The Australian emphasis on social change as a critical part of environmental education creates some further differences between it and interpretation. Because interpretation is a leisure time activity and freedom of choice in pursuit of pleasure is exercised by participants interpretation tends not consider collective thought and action; the onus is on the individual. As such interpretation emphasises individual behaviour change rather than social change. While it is easy to assume that because participants are at leisure interpreters continue to let the individual choose to take action it may also be that interpretation is conducted largely by agencies with a world view that is male, middle-class, technocentrically biased (Davidson & Black 1997). There may, therefore, be a reluctance to critically examine the entrenched interests that act against the creation of a just and sustainable society.

To some extent the variety of definitions of interpretation and the comparisons with environmental education outlined above reflect the 'home discipline' of each author. Rather than continue this debate by simply creating another author's definition it may be more useful to examine the philosophy of interpretation. Philosophy establishes parameters in the field. It enables those who define themselves as interpreters to judge whether a given program, institution, or value is an example of interpretive practice and articulates a rationale for interpretive programs.

The philosophy of interpretation

To Tilden (1957) interpretation was unique in its own philosophy, the foundations of environmental interpretation being the writings of 19th and 20th century naturalists in the United States—Emerson, Leopold, Muir, Mills, Thoreau and Whitman (Beck & Cable 1998). These writers promoted intrinsic and spiritual values above extrinsic and materialistic ones; they pioneered a deeper relationship between people and their environments. Thoreau's essays and quotes are often used by interpreters as a powerful force in attempting to extend the appreciation and understanding of the American wilderness in, for example, *Legacy* the Journal of the National Association for Interpretation. Thoreau (1968) suggested the primacy of appreciation in people's interaction with the natural world in remarks such as:

> *The curious world which we inhabit is more beautiful than it is convenient, more beautiful than it is useful; it is more to be admired and enjoyed than used.*

Leopold (1970), too, thought appreciation was needed:

> *It is inconceivable to me that an ethical relation to land can exist without love, respect, and admiration for land, and a high regard for its value.*

To some of these writers, natural places had an almost biblical significance; John Muir spoke of the American Sierras as God's country (Beckmann 1991).

This emphasis on the affective realm of mood and emotion was reiterated by Tilden (1957). One of Tilden's chief aims for interpretation was not instruction, but provocation. Interpretation consisted not of mere information but of revelation based on information. Throughout his book Tilden also talked of beauty and wonder, inspiration and spiritual meaning. Interpretation was for the enrichment of the human mind and spirit.

'sunset at Uluru needs no explanation'

Although moods and emotions have been considered to be important to behaviour change in environmental education (Zimmerman 1996), interpretive philosophers all suggest that these affective states are considered to be either be pre-cognitive or operate independently of cognition. In Zajonc's words (1980) "preferences need no inferences". For example, the experience of swimming with whale sharks or the sunset at Uluru needs no explanation for it to have a long term effect on the individual.

Interpretation in practice loses its emphasis on affect

Interpretation as practised in the United Kingdom, United States of America and Australia has lost it focus on creating

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deeply spiritual inspirational moments for many reasons. For example, interpretation came into practice in park agencies from the advocacy of naturalists, biologists, and rangers who believed that interpretive programs could inform and educate visitors with positive environmental protection and conservation consequences. This belief was based on a rigid hierarchical learning model that suggested that information lead to increased understanding of an issue and to attitude change and then, in consequence, to behaviour change. Indeed, the US National Parks created the often stated dictum "through interpretation, understanding; through understanding appreciation; through appreciation, protection" (Markwell 1996). This notion also became widely accepted in the environmental education field in the 1960s and 1970s (Hungerford & Volk 1990, Weilbacher 1993). The model has appeal in its intuitive logic and simplicity. However, more thoughtful consideration will suggest it is problematic. If attitude change were simply a question of giving people information then presumably the factually based anti-smoking and drink driving campaigns would be more successful.

Managers of protected areas have also had an effect because they have rationalised administration and broadened the focus of interpretation to include all visitor services (Absher 1997). Visitors to heritage sites were changing and agencies needed to communicate in settings and ways equally diverse as the audiences present at these sites. Visitors attracted to heritage areas now encounter a range of communication including signs, pamphlets, visitors centres, computer interactives and ranger guided activities. Faced with decreasing resources and increasing demand for services, managers have had no choice but to employ interpreters in the full spectrum of communication. Thus the roles of environmental education, interpretation and mass media have become blurred within such agencies.

'interpretation has to some degree lost its focus'

The change to include all forms of communication in interpretation may also be due to the inherent nature of the experience. As interpretation is a leisure time activity participants make a choice about whether they participate. Miller et al (1960) were the first to model choice as a decision sequence of 'plan; travel; execute' in a general theory of human action. This theory has subsequently been modified to create the 'trip cycle' in tourism (Hamilton-Smith 1997) and the various 'awareness; interest; evaluation; trial; adoption' models used in communication theory (Fine 1991). This implies that an individual goes through a series of steps leading up to the interpretive experience, and therefore a range of communication approaches such as mass media and marketing is needed to attract visitors (Howard 1997). Thus, it may be confusing for an interpreter about when promotion stops and interpretive experiences begin.

So, interpretation has to some degree lost its focus due to: a poor understanding of it by managers; economic imperatives; and, the nature of the interpretive experience. Fortunately, things are changing and interpreters have now begun to realise the importance of provoking feelings and emotions in visitor management. Ballantyne and Uzzell (1993) called for the implementation of 'hot' interpretation, that is interpretation designed to provoke a reaction. Similarly, the Strahan Visitor Centre in Tasmania, designed and planned to provoke emotional response, was said to 'break all the rules' a few years ago due to large amounts of text (Fagetter 1996), and yet is seen as perhaps one of the best interpretive centres in Australia (McLoughlin 1997).

The difficulty in creating a central concept for Interpretation

'Different perspectives abound!'

If the practice of interpretation is to return to its philosophical roots a comprehensive theory of affect is needed to advance the discipline further. Unfortunately, one conclusion that can be drawn quickly from the perusal of the psychological literature on affect is that there is little consensus about how to conceptualise affect (Knopf 1987, Forgas 1992). Different perspectives abound!

First, attitudes are hypothetical constructs as they cannot be directly observed, so they are inferred from responses (Eagly & Chaiken 1993). Attitude theorists commonly distinguish between cognitive, conative and affective realms and usually assume that these realms are each part of a multi-dimensional 'set' called attitude (for example, Katz & Stotland 1959). In contrast, Bagozzi and Burnkrant (1985) argued for a two dimensional model of affect and cognition, and this model has been the basis for reviews of environmental education (Iozzi 1989, Ballantyne & Packer 1995). No single conceptual framework has been generally accepted which links cognitive, behavioural and affective components into an overall attitude.

Second, a person's relationship to an environment is both complex and difficult to understand. It has been frequently shown that emotion and feeling shape the way a person relates with the environment (Eiss & Harbeck 1969, Iozzi 1989, Petty & Cacioppo 1986). Indeed a number of experimental results on preferences, attitudes, impressions, and decision making suggest affective judgements may be independent of and precede the cognitive operations that are often assumed to be the basis of affective judgements (Zajonc 1980). Ittelson et al (1974), for example, asserted that the first response to the environment is affective. If this is so the affective reactions of participants set the motivational tone and delimit the kinds of experiences they expect and seek. As such, affective reaction may set boundaries to any information 'received' by the audience to an interpretive experience.

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Third, terms such as emotion, affect, mood and feeling are used interchangeably in the literature. Even individual words such as 'emotion' lack a specific set of criteria (Russell & Snodgrass 1987). For example, while everyone may know how to define fear, anger and love the same is not true for courage, pride and serenity. The English language includes hundreds of such words.

Despite these problems, models of affect have been developed (see Russell & Snodgrass 1987). Mehrabian and Russell (1974) contended that affective response could be explained in terms of three bipolar dimensions: pleasant-unpleasant, aroused-unaroused, and dominant-submissive. In this approach 'pleasure' describes feelings of happiness and fulfilment, 'arousal' represents feelings of excitement, alertness and surprise; and 'dominance' referrs to feelings of mastery, power or skill. These dimension have been tested in recreational settings where it appears that pleasure and arousal are most descriptive of affective appraisals (Floyd 1997). Kelly's (1963) work on personal construct theory which described two moods—invitational and indicative—which the individual could assume during the phases of attitude construction might also be of use in studying behaviour change. Indeed, Moscardo (1993) working on a similar theory of 'mindfulness-mindlessness' showed that people's past experiences have an effect on behaviour in an interpretive setting. The research currently being conducted in regard to 'critical incidence stress' may provide new theories as its focuses on how a brief intensely emotional experience may affect long term behaviour (Harvey 1996) although in these cases the experiences have long term and negative effects.

'first response is likely to be to the affective quality of the environment'

Existing models of affect have been applied to areas related to interpretation such as recreation, and provide some speculation as to how moods, feelings and emotions might have profound effects on attitudes during an interpretive experience. Based on the 'elaboration likelihood' model of Petty and Cacioppo (1986) these studies show that feelings generally act as peripheral cues which bias cognition, attitude formation and behaviour (Petty et al 1997). Specifically, past moods and feelings significantly influence the current mood and motivational tone, and limit the kind of experiences one seeks (Ittelson et al 1974, Hull 1991, Murphy & Zajonc 1993). Once in a heritage area, visitor first response is likely to be to the affective quality of the environment (Zajonc 1980, Petty et al 1997). Feelings and emotion may also affect alertness, attention, judgement and persuasion during an interpretive activity (Bless et al 1992, Bohner et al 1992). Finally, affective quality will probably be the bottom line in accounting for the participants' subsequent relationship with a place when the activity is completed (Leeper 1970, Russell & Snodgrass 1987, Petty et al 1993). In summary, before people go somewhere they usually estimate how pleasant the experience will be. When they arrive they are most likely to be struck by the beauty of the place, which will affect the messages they listen to and whether they remember a little about the place other than 'how good it was'.

So, to date, while there is substantial evidence to suggest affect may be important there has been little specific scientific investigation that has even hinted at explaining why some interpretive experiences are intensely affectual while others are not. Nor has there been much attention paid to how interpretation leads to different emotions, and to emotions of various intensities. Thus the application of emotion and affect theory, which appears to be the basis of interpretive philosophy, remains largely uncharted. Research into these areas would broaden our understanding of behaviour change and brief informal education.

Implications for practice

Environmental interpretation, unlike environmental education, takes place in informal, unstructured leisure settings. There can be little chance of behaviour change in an informal two hour session unless it attempts to be inspirational, provoke deeper emotions and stronger relationships with the environment. For example, Jacques Shier's Museum in Belgium exposes people to the full horror of war. Visitors can view the front-line trenches which still contain bullets shells and the bones of men and horses (Uzzell 1989). Not all interpretive experiences need to be that intense. The frog hunt that Alison attended affected her life. Indeed many interpreters have their own stories, similar to Alison's, about a particular experience that led them to become conservationists.

In addition to affective experiences on site, planners need to consider the entire trip cycle. Pre-trip experiences influence how people process interpretation's inspirational moments. Both the pre-trip experience and setting will influence whether conservation messages sent by the interpreter are received and acted on. If interpretation is to play a significant role in encouraging long term conservation behaviour in participants, greater attention needs to be given to the affective intent and content of the interpretation 'event', and also of the pre- and post-trip experiences.

'interpretation in practice is like a lottery'

To conclude, attempts to define interpretation or compare it with environmental education may be semantic to some degree until interpretation is better informed by articulated theory. The philosophy of interpretation suggests much more theoretical work needs to be done in the area of affect and learning. While some theories exist, psychologists have yet to develop a model of how affective moments trigger behaviour change. Thus, interpretation in practice is like a

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lottery; a given experience at a particular time may be 'right'—and may pay off by profoundly influencing a person's life, while for others the combination has little influence. Creating positive moods and emotional experiences is a critical part of any interpretive activity and remains a largely unexplored dimension of interpretation. Exploring the practical aspects of affective realms could make significant advances to the discipline of interpretation, and help it to become more challenging—and effective.

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