

# Environmental Attitudes and Actions: People's Perceptions of the Effectiveness of their Actions and Chinese Cultural Context

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## A B S T R A C T

The paper reports a study within the Chinese cultural context of Hong Kong of the influence which people's perception of the probable effectiveness of their actions has on the relationship between attitudes and actions. As expected, respondents with pro-environmental attitudes and a perception that their actions would be effective indicated a likelihood to act in an environmentally responsible manner which was greater than those whose attitudes were not so pro-environmental and whose perceptions were that their actions would not be effective. However, amongst the group of respondents with little indication of pro-environmental attitudes and a perception that their actions would not be effective there were some who, nonetheless, said they would act in environmentally responsible ways. This observation is discussed in terms of a social ethic of conformity, obedience and suppression of personal beliefs.

This paper examines the relationship between the attitudinal and behavioural domains in environmental education as it expresses itself in a Chinese cultural context. Environmental education worldwide is broadly concerned with developing the knowledge, awareness and attitudes that will encourage behaviour patterns which lead to sustainable lifestyles and ways of organising society (Meadows 1989, Sterling 1992, UNCED 1992, UNESCO 1993, UNESCO-UNEP 1978). However, research on the relationships between environmental attitudes and actions has often shown a marked lack of correspondence between them (Hungerford & Volk 1990). There is the paradox that virtually nobody wilfully seeks to harm their environments. No one claims that they believe that a lowered environmental quality is preferable; yet people's actions often are not directed towards improving or maintaining their surroundings. Individuals who believe that their actions really matter, in that those actions are likely to be effective, consider that the control of important events is located within themselves; they are said to possess an internal locus of control. Those with an opposite belief, that the control of important events is in the hands of others and, therefore, external to themselves are said to exhibit an external locus of control. Internal locus of control and empowerment, or the desire and confidence to act, have been considered to be at the heart of this problem of the lack of correspondence between attitudes and actions. Consequently the empowerment of individuals, which has a symbiotic relationship with an internal locus of control, has been seen as a central task for environmental education.

This paradox of attitude without action can be explored via several avenues one of which is sociological conflict theory (Posch 1993). In citing the work of Heid (1991), Posch saw the tension as centring on differences between the desires of environmental users, or consumers, and the producers, or sellers whose dominant motives are profit. He envisaged the

problem as a product of the way a consumption-oriented economic system functions. Analogous situations of tension are apparent at the level of an individual's psyche. Posch noted work by Ziegler (1992) who argued that sustainable development was only an option for 10% of the then population in Germany; for most people, the scale of demands created by a wish to live sustainably was too great for them to cope with as individuals, or to feel that they could help. Lehmann and Gerd (1991) and Ziman (1985) explained this by people's tendency to define for themselves a 'horizon of responsibility' in time and space. Posch also noted that the ability to access, store, process and communicate information about environmental issues was frequently perceived by individuals as being beyond their competence. The limited understanding that arises leads to a sense of ambivalence towards environmental questions and is called cognitive opaqueness. At the centre of this problem are people who are uncertain of the direction to take because they feel powerless to act.

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However the tension between attitudes and actions is conceptualised what is crucial to individuals taking action is empowerment and the question of where they perceive that locus of control rests. The latter is a key factor moderating the relationship between attitudes and actions. A simple linear model of this relationship visualises understanding leading to attitudes and, in turn, to behaviour. In contrast, a locus of control model argues that changes in attitudes, that is in beliefs, feelings and behavioural tendencies (Rosenberg & Hovland 1960), only lead to active involvement in resolving

environmental problems if individuals believe that their actions are likely to be effective—and therefore accept ownership of the underlying problem and solutions. If people's attitudes are to lead to actions they need to feel that their individual actions are of significance.

The idea of locus of control has been employed in the discussions of several authors. For example, Rotter (1975) highlighted its importance in predicting behaviour. Manzo and Weinstein (1987) and Prella and Solomon (1996) applied the concept to desire for involvement in pro-environmental action. Arbuthnot (1977) similarly found that people who felt it worthwhile to recycle materials also believed that their actions would influence the wider system in which they lived. However, these studies have taken place in cultures in which there is a tendency to espouse individuality. What happens in a culture where conformity is a stronger social force? What sort of environmental education will work within such social norms?

This paper considers locus of control within an Asian cultural context. It examines the impact of locus of control on environmental behaviour in a group of Hong Kong senior secondary school geography students. Hong Kong is 98% Chinese and neo-Confucian norms of conformity, obedience and the suppression of personal beliefs are still important. The territory faces severe environmental degradation but attitude surveys such as those by Wong and Yan (1995) show a predilection for consumerist rather than environmental values and a utilitarian concept of the environment. It is recognised that environmental education is crucial but its coming has been long in gestation and slow in implementation (Stimpson et al 1993). Environmental education is in its infancy and has only started to receive concerted attention since the late 1980s both informally within the community and formally in schools. In 1992, a set of Environmental Guidelines for Schools (Curriculum Development Council 1992) was published advocating that environmental education was a cross-curricular responsibility. However, it has been largely teachers of geography, and to some extent of biology, who have continued to take up the challenge in any systematic and sustained way. It is partly for this reason that the study examined geography students although it was recognised that formal curricula are only one influence on students' environmental literacy. The specific questions examined in this study were:

- what is the relationship between the environmental attitudes young people express and their likely action in support of the environment?
- to what extent and in what way is the closeness of the relationship conditioned by locus of control?
- how far does the notion of locus of control apply in a Chinese cultural context?

## Method

### *The respondents*

Information on their attitudes, behaviour and locus of control was obtained from a cross-sectional questionnaire survey of 141 Grade 12 Geography students aged around 17 years. Students studying at Grades 12 and 13 comprise the intellectually most able 25% of young people in the territory of Hong Kong. All were Chinese and brought a Chinese cultural perspective to questions used in the survey. The students surveyed consisted of 42 boys and 99 girls from the Arts stream. They studied a combination of subjects usually selected from Chinese, English, History, Geography and Economics but not Science or Mathematics at this level. School children in Hong Kong generally choose which stream they will follow at Grade 9; the organisation of schools allows for little, if any, cross-stream learning although all pupils up to Grade 10 study Mathematics and Languages. Whilst nearly all the students questioned had also studied Geography at Grades 9 and 10, only about 20% of the respondents had taken Biology, the other explicitly environmentally aware subject in school curricula. The students involved came from a convenience sample of eight Anglo-Chinese secondary schools in Hong Kong. These subsidised schools, the most common kind in the territory, were located both in the old inner core of the urban area and in newer estates on the urban fringe. The students generally came from working class families many of which lived in public housing. Less than 8% of their fathers and 2% of their mothers had received tertiary education; moreover, more than 40% of parents had no more than primary education. Nevertheless, many students from these kinds of backgrounds have proceeded to university and taken up posts in the professions and government. The attitudes and actions of the students surveyed were considered to be representative of those who will shape future policy in Hong Kong.

### *The questionnaire*

The questionnaire contained closed items arranged in four parts:

1. background details of each student.
2. a 15 item set assessing environmental attitudes on a five point Likert scale. This set was based on the New Environmental Paradigm Scale of Dunlap and Van Liere (1978) and on Maloney and Ward's Ecology Scale (1973). The Environmental Attitude Scale created contained statements about beliefs and preferences concerning resource use and environmental quality.
3. an 11 item self-reporting Environmental Behaviour Scale. This centred on activities which indicate the sort of actions an individual would be likely to take.
4. a 10 item set assessing Locus of Control using a Likert scale. This set was based on modifications of Arbuthnot's Environmental Powerlessness Scale (1977) and Simmons and Widmar's scale (1991) measuring "the sense of personal salience and efficacy".

A total score for each of the three scales was constructed for each student by summing individual item values in each set. The total scores provided an attitudinal index, a behavioural index and a locus of control index.

The questionnaire was given in a bilingual, Chinese-English, format after piloting with a small group of students and validation by an expert panel. After necessary modification it was administered to the respondents by their usual class-teachers. Six students, three with high environmental behaviour scores and three with low environmental behaviour scores, were subsequently interviewed to check the consistency of the questionnaire findings.

## Results

### ***‘A distinction was obvious between attitudes to public, as opposed to personal, matters’***

Students exhibited attitudes which were a mixture of environmental respect and irresponsibility. This finding was consistent with results of other surveys in the territory such as those of Ng (1991) and Wong and Yan (1995). The attitudes expressed were environmentally sensitive in respect of broader questions and issues. For example, 63% of students acknowledged—they either agreed or strongly agreed—that “the balance of nature is delicate and easily upset” and 91% that “humans must live in harmony with nature in order to survive”. However these statements are, in part, ones with which few could disagree. A distinction was obvious between attitudes to public, as opposed to personal, matters. For example, 79% of students acknowledged that “they were disturbed by litter floating in the harbour” but generally admitted that they were unwilling “to stop buying products from companies which were major polluters”, only 34% stating that they would not buy products from such companies. In other words environmental attitudes which were personalised and for which the implied behaviour was readily apparent, but which also put the individual in a quandary, tended to be rejected.

As would be expected, a range of behaviours was indicated. However, much of the reported environmental behaviour of the students reflected consumerist attitudes. Their likely behaviour when faced with environmental issues is best summed up in the response to the item seeking their opinions about the Hong Kong Government’s decision to delay a Master Sewage Plan to save money for a new Port and Airport Development. Most students highlighted the view that “the decision was correct because prosperity should always come first” in choosing between that and the following alternatives—“no opinion because of no knowledge”, “no opinion because of no concern”, “they are equally important”, “concerned but individual views carry little weight” and “concern because of environmental deterioration”. Additionally, only 5% of the students had joined environmental organisations and only 8% participated in environmental activities either inside or outside

of school. On the other hand, a high proportion of students reported taking other actions, suggesting that the respondents were not necessarily environmentally irresponsible. For example refusing the unnecessary use of plastic bags was reported by 87% of the students and avoiding taking unneeded paper napkins from fast-food restaurants by 61%. A majority of the students accepted views expressing aspects of personal responsibility, 79% saying that personal behaviour was a better solution to environmental problems than relying on technology and 89% that stopping environmental deterioration “starts from me”. As is the case with most people, reported behaviours were eclectic and expressed limited horizons of responsibility.

In general, students with high behaviour and attitudinal scores also exhibited high locus of control; conversely, low locus of control was found among students with similarly low attitudinal and behavioural scores. Low locus of control was more obviously associated with low attitudinal scores than low behavioural scores. Although there was considerable “noise in the system” from the presence of other unidentified variables the results showed a statistically significant trend of environmentally responsible behaviour increasing with pro-environmental attitudes. However, further analysis of the results indicated that the the variation in attitude scores across the sample of students surveyed was sufficient only to account for 12% of the observed variation in behaviour scores.

## Discussion

### ***The tendency to act..... would reasonably be expected to be associated with acceptance of pro-environmental attitudes and a feeling of empowerment.***

The results are not altogether what might initially have been predicted. The general trend of an increasing stated propensity to act environmentally with an increasing expressed pro-environmental attitude is as environmental educators would hope for and consistent with intended goals of most environmental education programmes. Similarly the association of empowerment—internal locus of control—with higher levels of pro-environmental attitude and action, and vice versa, is as expected. However, the remaining results include several which display an unexpected pattern for respondents with an external, rather than internal, locus of control.

It might reasonably be assumed that having an external locus of control would be linked to high attitude/low behaviour scores as well as with low attitude/low behaviour scores. Young people who had internalised environmentally sensitive attitudes but who did not feel personally empowered and responded to external locus of control would be unlikely to say that they would act in a ‘green’ manner. The tendency to act,



however, would reasonably be expected to be associated with acceptance of pro-environmental attitudes and a feeling of empowerment. In part, the data show the converse. A stated propensity to act—a high behaviour score—was also found with low expressions of environmentally sensitive attitudes and external locus of control.

The expected model of locus of control makes assumptions about the approaches to learning adopted by learners and teachers, and the cultural values that underpin those approaches. It is assumed that students showing a propensity to act have certain beliefs and conceptual understandings; these enable them to tackle environmental issues at levels where they feel able to influence the situation, or at least to believe that what they do is significant. This assumes an understanding of the issue or problem typical of what Biggs and Telfer (1987) have called a deep learning approach. Solutions to environmental problems with which the individuals identify are internalised and taken on board as possible and useful actions. In contrast where students express pro-environmental attitudes but do not exhibit a desire to act environmentally and do not feel empowered it is reasonable to argue that they are not motivated to think sufficiently deeply. Their learning approach, either as a result of personality factors or problem difficulty, is restricted to a surface level. They believe that the issues are important but have not sufficiently understood problems or solutions to see how to act or to want to act.

The learning scenario just described is much concerned with an independent learner and a cultural context in which pupil-centred learning is espoused. Personal development in whatever direction the individual wishes to take it is accepted as a norm. Not only is the student empowered environmentally but also educationally. There is an emphasis on the process of learning rather than solely the acquisition of knowledge. In cultural terms the situation is characterised by a “low power distance” between student and teacher, and between the student and the education system as a whole (Hofstede 1991).

Hofstede’s cultural analysis showed that, in contrast, many Asian cultures exhibited a “high power distance” within their social systems. For Morris and Marsh (1992) this situation was characterised by learning being dominated by highly didactic teaching. Emphasis was likely to be on achievement and conformity so that young people might feel that they should, and probably would, act in a particular manner because that is what they had been instructed to do. Such societies seek the instilling of certain values and attitudes. Personal beliefs and attitudes are not seemingly of crucial importance; action comes from obedience and the acceptance of authority. Certain behaviours are exhibited because they are known to give the individual success and society’s, or the family’s, approbation.

Whilst the Guidelines on Environmental Education for Hong Kong schools (Curriculum Development Council 1992) offer a rhetoric of liberal goals directed towards deep learning as advocated at Tbilisi (UNESCO-UNEP 1978) it is frequently the case that didactic, authoritarian perspectives are not far below the surface. Details of lesson activities provided in the

Guidelines often stress the knowledge which is needed rather than the ability to think about and to justify ideas. An analysis of teaching styles (Wong & Stimpson 1994) showed that although teachers often began a lesson by discussing an environmental issue in an open-ended manner they quickly reverted to factual exposition interspersed by narrowly focussed question-and-answer exchanges. Environmental education in the situations investigated was often focussed on the teacher and on the teacher’s views of society’s norms and expectations.

A comment by Chan (1993), a community worker, is indicative of much of society’s attitude in Hong Kong to environmental education and how environmental education should go about its work. Recognising the need to develop environmentally sensitive attitudes and actions, she saw the problem in behavioural terms:

*Systematic information processing and expert advice are often effective in persuasion...The involvement of opinion leaders and popular singers are the best examples of modelling (in the process of imitation-author), especially for young persons...Negative models who litter will have to go through public degradation ceremonies of shaming and fines. Diffusion of positive behaviour (through imitation) is actually most effective when natural leaders such as teachers, school prefects, parents and friends within their social network are used as models... In order to avoid rejection and gain acceptance, individuals will tend to conform to the norms manifested by the majority... Behavioural conditioning can be achieved by controlling the physical environment to facilitate desired, and inhibit undesired, actions...Legislation, policies and judicial decisions are important components in a society which conditions individuals to comply or obey. (the emphases are ours)*

The language used in the above is directive and autocratic. It presents education as a top-down transmissive process of modelling prescribed behaviour. Such a view is consistent with neo-Confucian ideology and with the policy strategy of a paternalistic and bureaucratic colonial government. Confucianism, as a set of social norms and tendencies, emphasises the relative importance many people in the territory place on filial piety and obedience (Lee 1996). Although Confucianism was vigorously attacked in the cultural revolution within the People’s Republic of China and there was an inevitable overflow of attitudes into Hong Kong where entrepreneurial values often continue to hold sway, it has remained an important element of family values in the territory. Social conceptions in the communist PRC parallel this today with the notion of the ‘unfilial comrade’ who has nowhere to go. Compliance and acceptance of society’s view, despite occasional conflict, are central to Chinese thinking. Suppression of self-assertion and of self is valued. Chinese social beliefs function to maintain an ‘in group’ which is enhanced by peer pressure as well as pressure from above. The

search by students for approval encourages conformity and discourages questioning. These forces result in a highly pragmatic attitude towards deciding to take action. There is a tendency towards achieving learning held at the surface level in which reaching the desired end is all important. Thus, the environmental behaviours actually undertaken would seem to reflect a pragmatic response to perceived educational objectives which have been transmitted through formal school curricula and through informal education via media campaigns and community events. Exposure to appropriate pro-environmental behaviour generates acceptance of necessary patterns of activity; attitudes, however, are not always changed.

## Conclusion

What we have argued in the paper is that the idea of locus of control as a moderating factor in the relationship between attitudes—the affective domain—and behaviours—the conative domain—has to be considered in its cultural context. The intention has not been to challenge the fundamental basis of the notion but rather to develop further the understanding of what it means and how it operates in different social contexts. In the Asia-Pacific cultural context of Hong Kong and, we suspect, in other educational systems too, perceptions of education and learning seem frequently to impose a conservatism which leads students away from approaches encouraging clarification of individual value positions, and towards an acceptance of values inculcation and action because it is expected. This is not to argue for a naive, simplistic cultural determinism. Rather it is to argue that there are forces at work which encourage conformity and the expectation that the young will follow society's norms of behaviour. These forces are often greater in Asian communities than elsewhere. This stereotype of the 'shallow' learning of many Asian students should, however, be viewed cautiously. The responses of many of the young people surveyed in this study were no different from those found amongst their peers in Australia, Europe or North America (Iozzi 1989, Prella & Solomon 1996). Moreover, attitudes to teaching and learning are not unchangeable—and independent thinking is not necessarily an anathema but is at times submerged in the face of other priorities.

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***6 strategies in environmental education need to be tailored to the cultural contexts within which they are to be employed<sup>9</sup>***

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This paper has been dealing with issues basic to the moral, personal and social education question of whether and how 'we can we teach children to be good', to paraphrase Straughan (1988). An obvious implication is that strategies in environmental education need to be tailored to the cultural contexts within which they are to be employed. Can, however, a pluralist position be accepted in which values clarification is the focus of environmental education in some education

systems, and more didactic approaches in others? This idea is at odds with much of the recent thinking in environmental education which espouses creative and critical thinking (Huckle 1991, Greenall Gough & Robottom 1993). A key concern for environmental educators is that, whilst their work in a culture such as Hong Kong may be able to induce students to undertake desirable environmental behaviours without acquiring associated attitudinal positions, these gains may well be short lived and not readily transferable to future situations. Providing an understanding of what constitutes environmentally sensitive actions and defining the limits for action in a prescriptive personal and moral education is likely on its own to be insufficient; an evaluatory or critical sense of moral education is also needed. Yet many societies in Asia-Pacific, including Hong Kong, often see prescription as the 'proper way' forward. What is required are classroom styles and learning experiences which encourage personal commitment but which also recognise and are not seen to threaten social norms operating at any given time. The challenge is to be culturally sensitive without losing sight of the ultimate goal of environmental educators, to assist learners to develop attitudes that promote their pursuit of sustainable lifestyles. ☺

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