Relationship between Values/ Worldview and Environmental Awareness

RUPINDER KAUR

Research Scholar, Manav Bharti University, H.P., India

Abstract: **This work attempts to clarify how environmental awareness can be utilised as a tool for environmental policy making and management. Since this study covered various areas of social sciences surrounding the study of environmental awareness and its link to behaviour, it was obliged to focus only on the key literatures in each area. Also, due to the information constraints, it was not able to obtain many of the original sources and often relied on the discussions in the tertiary sources. Despite of these limitations, this study hopes to demonstrate the importance in considering environmental awareness as a new policy tool, additional to legal and economic instruments.**

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INTRODUCTION

The value system or worldview of individual is fundamental and it is rarely changed. Value is defined as "the deep tides of public mood, slow to change, but powerful" in comparison to opinion 8 and attitude (Worcester, 1996). If public opinion is a reflection of the current information and situation given to the person, socio-economic background can be considered as a framework of a person who receives such information. In this context, the value/worldview is considered as one of the most important element in decision making.

Each individual is embedded in social structure where the decision is shaped by individual's values and worldview 9 (Stern, Dietz, Guagnano. 1995, Inglehart, 1990). The studies assume that broad concept such values and attitudes determine more specific concerns for environment since these concepts act as filters for new information or ideas. Information that went through the "filter" is more likely to influence the formation of attitudes (Kempton, Boster and Hartley, 1995). Hence it is important to identify the values /worldview that would influence positively to the formulation of environmental attitudes. In this section, two major studies are reviewed. Those are a study on "value system" by Inglehart and a study on "worldview" by Dunlap.

Materialist vs. Post-Materialist theory

Ronald Inglehart (1977, 1990 and 1997) does one of the early and extensive researches on value systems. He has written widely about cultural values and has developed a theory of 'Post Materialist Societies'. His works set the hypothesis that a society's culture- its basic values and beliefs of its peoples- are closely linked with its economic and political system. His analysis demonstrated powerful linkages between value systems and socio-economic systems. According to that, the increase of environmental concern is considered as one of the phenomena caused by the "value shift" from 'materialist' to 'post-materialist' (Inglehart, 1990). This means that there was a 'shift' away from the long predominant preoccupation with material well being and physical.

As stated earlier, Worcester (1996) states that " …opinions: the ripples on the surface of the public´s consciousness, shallow and easily changed; attitude: the currents below the surface, deeper and stronger…"

The work of Dietz, Stern and Guagnano (1995), differentiates value from worldview in the following three points:

1) values are formed earlier in life, within the family whereas worldview may be the result of political and social experience in the larger world; 2) values seem more general than worldviews, encompassing broad dispositions or orientations that seem nearly as basic as personality itself; 3) values probably are more stable over the life course because they can be challenged only in terms of their desirability or appropriateness.

Inglehart defines Materialist as those "emphasising economic and physical security above all" and Post-Materialist as those "emphasising self-expression and the quality of life" (Inglehart, 1997).

He sets of two hypotheses for the factors, which influence value changes (1977):

1) A Scarcity Hypothesis: an individual's priorities reflect the socio-economic environment: one places the greatest subjective value on those things that are in relatively short supply.
2) A Socialisation Hypothesis: The relationship between socio-economic environment and value priorities is not one of immediate adjustment: a substantial time lag is involved because, to a large extent, one's basic values reflect the conditions that prevailed during one's pre-adult years.

The scarcity hypothesis is similar to the principle of diminishing marginal utility in economic theory. Like in Environmental Kuznets Curve, he considers that economic factors tend to play a decisive role in determining the 'shift'. For instance, under condition of economic scarcity the materialist value prevails; however, as material scarcity diminishes, demand for the quality of life, Post-materialist value, increases. Although it shares the basic concept with theory of Environmental Kuznets Curve, Inglehart suspects that environmental quality improvement is not simply achieved by the economic level since post materialist value reflect one's subjective sense of scarcity. Therefore, the situation of social welfare, cultural and political setting of individuals in which one is raised, also have an influence on the change in environmental quality. In this context, the socialisation hypothesis becomes important.

He also considered that “value system”, established during one’s formative years, has an impact on “cognitive mobilisation” or political behaviour such as ecological movement. He links the degree of impact to the social background of individuals by claiming that impact is greatest among those with relatively high levels of education, political information, political interest and political skills. In relation to that, relationships between degree of post-materialist and socio-demographic factors such as education, age, sex, political ideology, religion were analysed. As the result, he fond that that age and economic level are the strongest factors for Post-materialist value, environmental concerns, thereby confirming his 2 hypothesis.

In his work of 1997 (Inglehart, 1997), he extends his 'materialism and post- materialism thesis' into modernisation and post modernisation and explains Post modernism as the selective re-valorisation of tradition or as a rise of new values and lifestyles. This work focused on the process of democratisation and citizen’s political participation as the sign of Post-modernisation and, through the discussion of increased participation and changing role of institution indicated the importance of awareness in starting a social movement. He states that " awareness is essential to any realistic strategy of social change…" (Inglehart, 1997). He considers the change in the value from modernisation to post-modernisation is occurring as a result of diminishing return of modernisation felt subjectively by the population through the degradation in the quality of life, in which includes environmental quality.

He also refereed the importance of link between attitude and behaviour. He states that, the specific attitudes are generally" unrelated or only slightly related to overt behaviours" (Wicker, 1969 quoted in Inglehart, 1997); however, the global attitudes are relatively good at predicting global patterns of behaviour. He admits that these attitudes do not determine behaviour in any one-to-one fashion but assert that such attitudes, combined with situational factors, will become an indicator of behaviour since behaviour requires both motive and opportunity.

Inglehart’s work is criticised on the bases of the lack of information and small variety of countries studied. Although he had huge amount of samples (as much as 200,000), the information (such as experiences in the pre-adult, “former” period) that he obtained from these samples are not enough to prove his hypothesis of socialisation (Inkeles, 1991). Also the works of Brechin and Kempton (1994) and Furman (1998) question the effect of Post-materialist on environmental values. They claim that increasing concern for the environment is a global phenomenon, emerging from multiple sources such as observation of environmental degradation, institutional process, availability of effects of the mass media and information, therefore, that environmentalism may have transformed itself as a part of materialistic value.

In addition to materialist/post-materialist theory, theory of Human Exceptionalism Paradigm/New Ecological (Environmental11) Paradigm, founded by Dunlap and Catton, is frequently mentioned in discussion of environmental concern. This theory focused on worldview on environment and evaluated its relationships with socio-demographic factors.

They claimed conventional sociology is unable to find a solution for environmental problems because it stems

from particular worldview,"Human Exceptionalism Paradigm (HEP),12 which fail to acknowledge the biophysical bases of social structure and social life (Buttel, 1996, Taniguchi, 1998). They asserted a need to "shift" paradigmatically from HEP to New Ecological Paradigm: NEP.13 The NEP, unlike HEP, consider human beings as a part of ecological system (Buttel, 1996) and the environmental improvement can be achieved through the spread of NEP among public (Buttel, 1996).

Dunlap uses the term "ecological" except for his paper written in 1978. According to them, HEP is explained as: 1) human being has exceptional status because its has culture; 2) Culture has unlimited variety and it changes much faster than biological characteristics, 3) thus, differences of human beings stems from socialisation process and such differences can be fixed socially; 4) thus, accumulation of culture means that enabling to solve all the social problem as well as unlimited progress (Taniguchi, 1998).
New Environmental Paradigm: NEP is characterised as: 1) Human beings are just one of the species which is dependent on life community which formulates our social life, 2) In the natural network exist complex relationships of factors, results, and feedback. The human activities in such network should create various unexpected results, 3) World is limited, and there exist the physical and biological limit for economic growth, social progress and other factors, which regulate social phenomenon (Taniguchi, 1998).

Dunlap considers studies on environmental concern are important in order to know whether the "shift" had taken place in the society. In this opinion, the "shift", which imply increase of environmental concern, not only gives legitimacy to the pro- environmental social movement, but also put pressures on government in policy making and implement environmental regulations. In this context, he considers the trends of public opinion on environmental issue as a sign of environmentalism. He came up with a set of questions 14 to measure the degree of NEP to estimate the worldview of citizens. This set of questions is widely used in different studies such as in case of the United States (Kempton, Boster and Harley, 1995) and case of Istanbul, Turkey (Furman, 1998) amongst others. Despite of his contribution in the concept of NEP, Dunlap is often criticised for not linking his theoretical work to his empirical contribution on environmental attitude (Fujimura, 1996, Taniguchi 1998).

The study of values and worldview are important in predicting people's behaviour since these work as "filters" for the information and ideas. However, studies discussed above concentrated on evaluation of the 'shift' in value system/worldview and lack the analysis to link the value/worldview and behaviour.

REVIEW OF MAJOR STUDIES THAT LINK ENVIRONMENTAL AWARENESS AND BEHAVIOUR

As the Human Development Report (1998) states, the consumption of individuals are increasing with tremendous speed and putting significant pressure on environment. This reality is already pushing people, in both developed and developing countries, to accept that some of their lifestyle are unsustainable (Dunlap, Gallup and Gallup, 1993). The study on the trend of environmental attitudes is considered important because such attitude were thought to predict environmental actions (Stern and Oskamp, 1987). There were also a hypothesis that an attitude is "an enduring set of beliefs about an object that predispose people to behave in particular ways toward the object" (Weigelt, 1983, quoted in Tarrant and Cordell, 1997). These are based on the idea that people with pro- environmental attitude would behave as such.

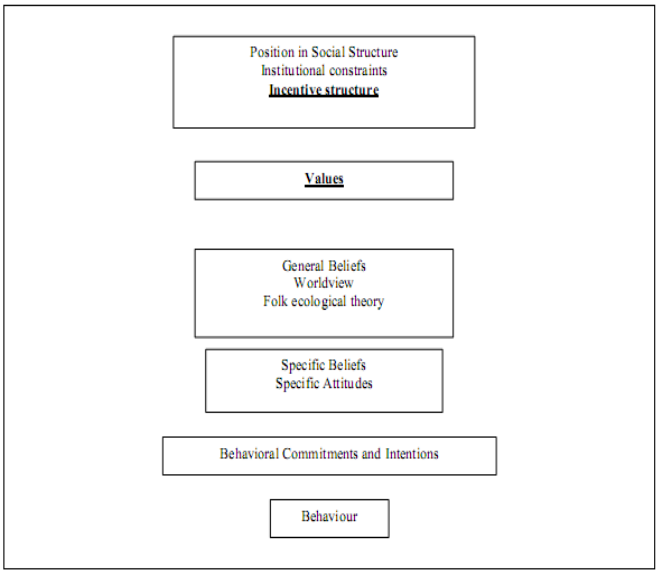
A number of studies showed inconsistency or non-existence of the relationship between pro-environmental attitude and behaviour (Buttel 1996, Van Liere and Dunlap, 1981, Mainieri, Barnett, Valdero, Unipan, Oskamp, 1997). In fact, although the opinion poll demonstrated that the highest percent of environmental concerns are recorded in 1990s in its history (Dunlap and Scarce, 1991), few of these concerns have directly transformed into pro-environmental behaviours. Several studies has demonstrated empirical results such as: a) low correlation among environmental behaviours, b) different levels of specificity in the measure of attitude and behaviour, c) effects of extraneous variables and d) lack of measurement reliability and validity (Mainieri, Barnett, Valdero, Unipan, Oskamp, 1997).

Most of the studies on environmental concern are conducted by sociologist and political scientists on environmental awareness and end by identifying the level of specific attitudes or at the level of behavioural commitments. For this reason, these studies were criticised by social psychologist for not reaching to the behavioural level (Stern, Dietz, and Kalof, 1993, Stern,

Dietz, Guagnano, 1995). The study of worldview and value would enable to approach the inner cause of environmental concerns; however, the social psychological approach attempts to find out the factors that lead to action.

The work of Stern, Dietz and Guagnano (1995) offers a framework which binds together earlier works on environmental concern and extend further to behavioural level in their schematic causal model of environmental concern (Fig. 1). In this framework, factors such as: 1) position in social structure, institutional constrains, incentive structure; 2) values; 3) general beliefs, worldview, folk ecological theory; 4) specific beliefs, specific attitudes; 5) behavioural commitment and intentions; and 6) behaviour, are presented in this order. In the model, the strongest causal effects are considered to exist between variables that are adjacent, despite the fact that non-adjacent factors could also affect each other directly for instance, between institutional constrains/incentive structure and behaviour or behavioural commitment amongst others.

Figure 1
Schematic Causal Model of Environmental Concern



In the model, social structure factor acts in two ways. Like Inglehart (1990) stated in the Culture Change, social structure "shapes early experience" and forms "individual's values and general beliefs or worldview". But unlike Inglehart, they linked social structure factor to behaviour and added that these factors also "provide opportunities and constraints that shape behaviour and the perceived response to behaviour" (Stern, Dietz and Guagnano, 1995). The values and worldview are considered as an antecedent to more specific beliefs by acting as filters for new information or ideas. Hence value and worldview influence greatly in formation of attitudes and behavioural commitments and intentions.

In this section, attempts are made to: 1) clarify inhibiting factors for pro- environmental actions; 2) review two of the major theories that link awareness to behaviour; 3) suggest the possible tools which may induce behaviour.

Inhibiting factors for taking pro-environmental action

Despite the existence of high public concern on environment and taking pro- environmental actions are still difficult for most of people. The reasons for such inaction are characterised into three: subjective character of environment, dilemma between convenient life and environmental conservation, and difficulty in executing the right behaviour.

Subjective nature of environment

The discrepancy between the concern and behaviour is explained by the lack of clear link between the general environmental concern to specific action and lack of image as environment affects the individuals. In general, people obtain two kinds of knowledge: descriptive and procedural (Hirose, 1995). The descriptive knowledge explains cause and effect of phenomenon. The procedural knowledge gives instructions to achieve or avoid such phenomenon. Most of environmental information belongs to the descriptive type of knowledge but not the procedural one. For instance, people have general knowledge, as the consumption of too much paper would destroy forests. However, they lack procedural type of information such as what type of paper can be recycled and how could be collected to be recycled.

Another factor that makes difficult for people to change behaviour is the unclear link between one´s action and its impacts on environment. For instance, as stated earlier, consumption is putting more pressure on environment than ever but in order to explain how consumption affects environment, it must go through the long chain of process

and makes it difficult for individuals to feel responsible for the damages cause by his/her action. This is especially true when environmental damages are caused at international and global levels. For example, it is very difficult to link clearly how 'eating hamburger' in U.S. would 'destroy native forest' in Brazil if there were no information to fill the gap.

Having environmental concern and behaving accordingly is quite another matter. The factor discussed here presents the deficiencies in the current environmental knowledge held by people and adequate information that would induce people to take pro-environmental action. If the link between environmental condition and behaviour remained weak, it is hard to expect the pro-environmental action to occur and continue.

Dilemma between Convenient Life and Conservation of Environment.

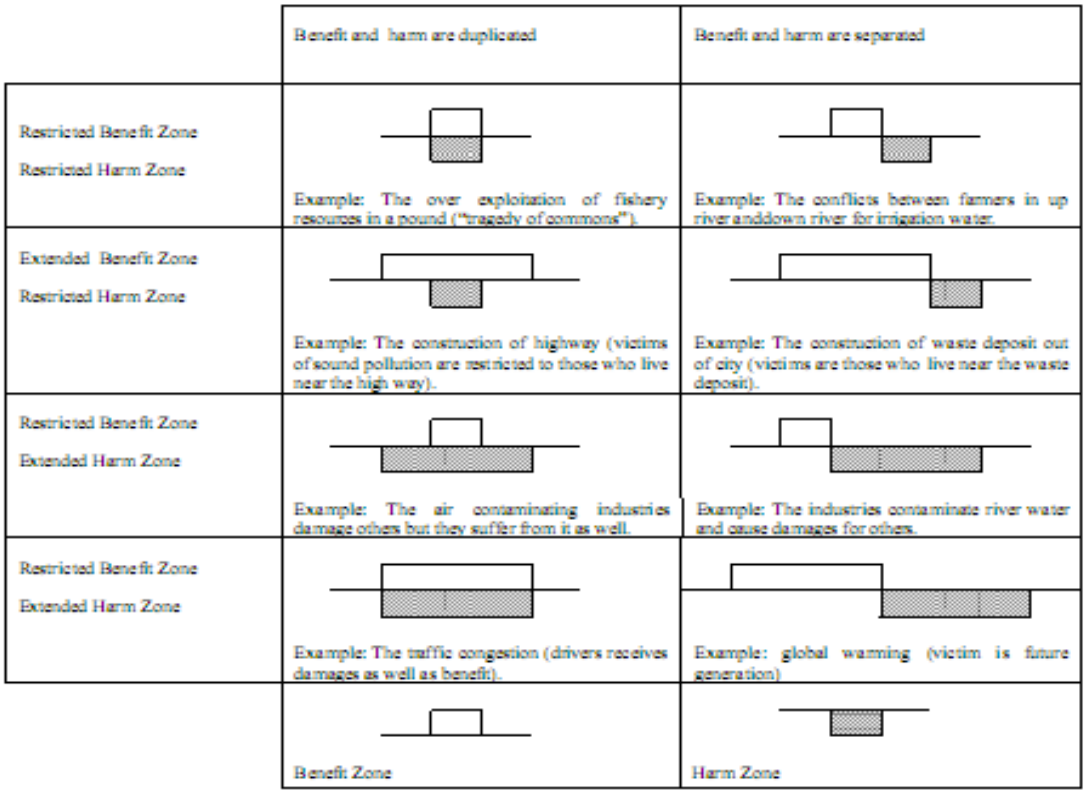
The dilemma between convenient life and environment can be explained by the work of Garret Hardin (1968), "Tragedy of the Commons". In his work, Hardin differentiated the individual and collective gains when people are using common goods, such as environment. He took the example of herdsman who seeks to maximise his gain by taking rational decision under the condition that each individual herdsman are allowed to keep as many cattle as possible on the commons, pasture. The utility maximisation under such condition has positive and negative consequences. He gains by the positive utility nearly 1, if he decides to add more animals, but he loses for a fraction of 1 by overgrazing the pasture which will be shared by all the herdsmen irrespective of whether he decides to add more animal or not. Hence, as a rational being, the individual choice would be to add another animal to the herd to maximise his individual gain. However, if all herdsman decide to maximise his gain, the pasture will be overgrazed and eventually everyone will lose, thereby "tragedy" occurs (Hardin, 1968).

The dilemma between convenient life and better environmental quality is thought as a dilemma between having one more cattle and loosing productivity of the land. A key feature of common goods is non-excludability: those who provide the good are unable to prevent others from consuming it. Once provided, these goods can thus be enjoyed by anyone, irrespective of whether they helped provide them. A temptation thus exists for individuals to free ride and let others contribute. From the perspective of individuals, change in behaviour depends on the existence of collective action; whether enough individuals will contribute rather than free ride (Balmey, 1998).

The degree and type of "social dilemma" depend upon the circumstances of environmental degradation. The environmental problems are generally grouped by the locality of the problem such as local, national, regional and global level. This coincides with the thinking that closer the people are to environmental degradation, quicker the establishment of consciences for collective action because responsibilities for environment, or commons, in smaller locality, are generally stronger than those dispersed. Funabashi (1989) viewed cases differently (Fig. 2). He considered that the difference in the relationship between the beneficiary and victimised would make variances in people's acceptance toward the collective action. By that, he looked at the relationship between benefited and victimised and differentiated the cases by what he called "benefit vs harm zones". He divided the relationships first, in 2 types: A) beneficiary and victimised are duplicated and B) beneficary and victimised are separated.

Second, he divided each type into 4 categories according to combinations of different sizes of zones as follows: 1) restricted benefit and harm zone, 2) expanded benefit zone and restricted harm zone, 3) restricted benefit zone and expanded harm zone, 4) expanded benefit and harm zone (Funabashi, 1989). He states that the example of pasture by Harding would belong to type A, category 1) since herdsman is the benefited at the same time victimised by his action and it is restricted in the relatively small locality. On the contrary, air pollution caused by automobile exhaust an example of type A, category 4) since victim and beneficiary are duplicated but the area more extended. The problem of locating dumping site for solid waste falls into type B, category 2) since beneficiary and victimised are separated and victim is concentrated small locality, near the site, than beneficiary. According to Funabashi, people are more likely to take actions when they knew that they would be directly harmed or benefited from taking the collective actions. However this require enough information on damages and benefits of such collective pro-environmental action because not all-environmental degradation is visible and explicit to the individuals.

Figure 2
Categorisation of Benefit and Harm Zones



Source: Funabashi, 1989.

Changing the behaviour is difficult especially if it involves fewer conveniences and more tasks. Many empirical studies prove this point by illustrating the discrepancies between high environmental concerns and relatively low participation in pro- environmental behaviours. From this section, it is possible to conclude that factor that inhibits one from act environmentally is his own "rational" decision of seeking his own interests based on an illusion that world is unlimited.

Difficulty in executing the right behavior.

Even after the people decide to behave in pro-environmental manner, lack of correct knowledge and technology inhibit people to take effective measures. Some studies showed that although many people said that they have acted "pro-environmentally", in many cases, what they believed to be "pro-environmental actions" are not considered pro-environmental for its ineffectiveness (Hirose, 1995). Effective measures are unlikely to be taken if environmentally harmful behaviour is taken unconsciously. Also, the difficulty of changing the behaviour is high when the behaviour is strongly embedded to one's daily routine.

The theme common for all the factors mentioned in relation to pro-environmental action was the provision of correct information. The availability of information may play a key role in linking people's action to environmental risk and individual responsibility, indicate the correct and specific action to avoid such risk and involves one into collective action.

2. Socio-psychological frameworks on environmental attitude-behaviour link

Several theoretical frameworks exist to examine how individuals decide to engage in different forms of pro-environmental behaviour. According to Hirose (1995), earlier models are: "Energy Conservation Model" by Honnold and Nelson, "Yard Burning Model" by Van Liere and Dunlap, and "Energy and consumption model" by McClelland and Canter, Consumption Model by Seligman and Ferigan to mention a few. Amongst these earlier frameworks, Ajzen and Fishbein's Theory of Reasoned Action and Schwartz's Norm activation Model are the most cited. These models are originally formulated for other purposes but are extended and applied to the environmental attitude- behaviour context.

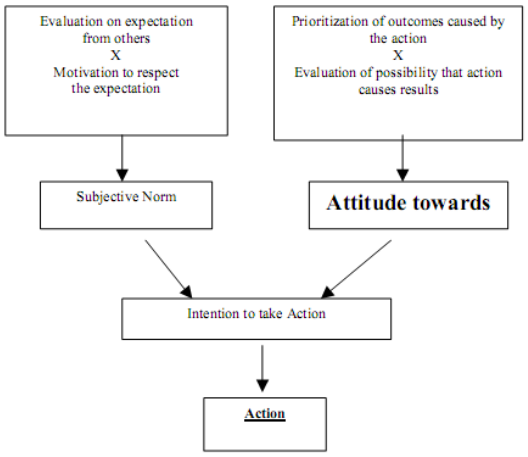
Framework by Ajzen and Fishbein

Original Theory of Ajzen and Fishbein

The Theory of Reasoned Action by Ajzen and Fishbein (Ajzen, 1991, Ajzen and Fishbein, 1975 quoted in Stern, Dietz, and Guagnano, 1995 and Hirose, 1995) analyses behaviour as an output of attitudes toward specific objects, subjective norms about behaviour towards those objects and perceived control over behaviour. This original model of Ajzen and Fishbein is proved of its effectiveness in predicting behaviour in case of voting as well as one's job selection.

The original model by Ajzen and Fishbein predicts the behaviour from attitude as explained in the diagram (Fig. 3). The 'intention to take action' is determined by 2 factors: 'attitude towards taking action' and 'subjective norm'. Attitude is defined as decisions taken based on his/her personal norm. The subjective norm is defined as decision taken based on how the individual is expected to behave in the society. The attitude toward action is determined by one's priority of taking the particular action and the evaluation of possible effect from the action one is about to take. The subjective norm is determined by an evaluation of expectation by others and strength of one's feeling of responsibility to meet the expectation or social norm.

Figure 3
Fishbein and Ajzen Attitude and Action Model drawn by Hirose



Source: Hirose, 1995

Application of Ajzen and Fishbein Models on pro-environmental behaviour

One of the earlier attempt to apply Ajzen and Fishbein model to the case of pro- environmental behaviour was done by Seligman and Ferigan (1990 quoted in Hirose, 1995). First, they hypothesised that consumption behaviour is based on the rationality that maximises the utility. Next they applied Ajzen and Fishbein Model to the case of Energy and Water conservation behaviour. In case of water shortage, the subjective norm affected strongly to determine one's action by proving empirically that water saving was much more practised in watering the garden, activities exterior, much more than other activities that are done inside of the house (Hirose, 1995). This is an example that shows that "expecting how 'others' consider one's action" induced individuals to take collective action.

Activation of Environmental Norms based on Schwartz's Model

Original theory of Schwartz's Norm Activation Model Schwartz's Norm Activation Model analyses behaviour as an outcome of beliefs on the consequences of actions and norms about personal responsibility to undertake specific action in response. This theory is also called theories of activation of altruistic norms (Widegren, 1998). This is because the theory is originally developed to explain the purpose of altruistically motivated 'helping behaviour'. In its most basic form, Schwartz's theory states that the activation of norms of 'helping' is most likely when an actor is aware of the 'positive consequences of helping' for an 'object in need' and ascribes responsibility' to him/herself for 'helping'.

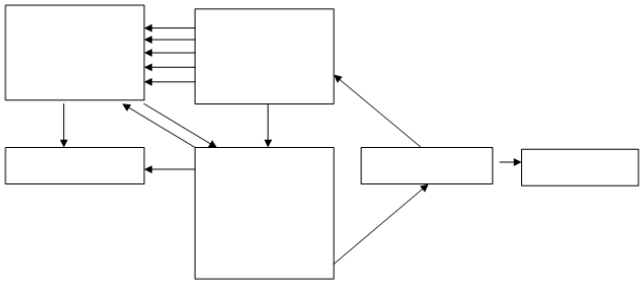
In this theory, Schwartz hypothesises that "individuals sometimes act in response to their own self-expectations than their own personal norms" (Schwartz, 1977, quoted in Widegren, 1998). In this, he differentiates the social norm from personal norm. He defined personal norm as one's self-expectation such as pride and self-esteem. He further assumes that the personal norm becomes "activated" for 'helping' by the awareness of consequences for others "in need" and admit to ascribe the "responsibility" to help the person in need.

The process of activation of personal norm to behaviour is divided into five sequential stages. Each stage is explained as follows (Schwartz, 1977 quoted in Blamey, 1998) (see Fig.4).

The Stage 1 (Attention) involves three steps: first, individuals notice that a person/object is in need, second, individuals identify actions which could help the object in need, third, individuals recognised a personal ability to engage in these actions. The "awareness of need" includes an "awareness of the consequences" of inaction for the "object in need". After these three steps are fulfilled, individuals move to the Stage 2. If that is rejected, it will go to non-normative, or inaction, exit.

At Stage 2 (Motivation), three types of evaluation are made: first on non-moral factors such as "physical, material and psychological implications that follow directly from the action", second on value, moral and emotional factors such as "implications of the actor's held values", and third on social factors (Blamey, 1998). The first category is the evaluation of planned action against things such as risk of injury, trauma, or cost in terms of monetary and time that may incur as the result of action. The second category is the assessment of the action against one's moral and internalised values as to evaluate how much of satisfaction one could achieve from the action or inaction. The third category, social implication, involves outcomes that depend on the reaction of others. Individual assesses how the action would comply with socially accepted standards (social norm) of "helping" behaviour. In such context, the definition of 'others' varies from single individual to society at large depending upon the situation. In this Stage 2, feelings of obligation, or awareness of responsibility is generated.

Figure 4
Process Model of Norm-Activation Model



Source: Blamey, 1998 elaborated by author.

At Stage 3 (Anticipatory Evaluation), justification of an action is made. It is the cost-benefit evaluation of on the three implications mentioned above. In this, salience of specific costs and benefit in Stage 3 is influenced by both the values of the individual and situational cues. If the result of Stage 3 indicates the clear decision of inaction or action, then the process ends at this Stage. If the cost and benefit of helping are fairly evenly balanced individuals go into the Stage 4, which delay the decision or re-examine the situation.

In the Stage 4, individuals re-evaluate the case by denying to the situation, which one had so far recognised. The re-examines the case by four types of denial to neutralise feeling of obligation created in the first 2 stages. These are "denial of need", "denial of effective action", "denial of ability", and "denial of responsibility" etc. Once the process of denial is completed, cost and benefit are re-evaluated. This process continues until a decision is made. The duration of this process varies depending upon urgency of the situation and anticipated monetary or moral cost in delaying the decision. After these processes, individual enters into the Stage 5, "behaviour," which takes the form of action or inaction.

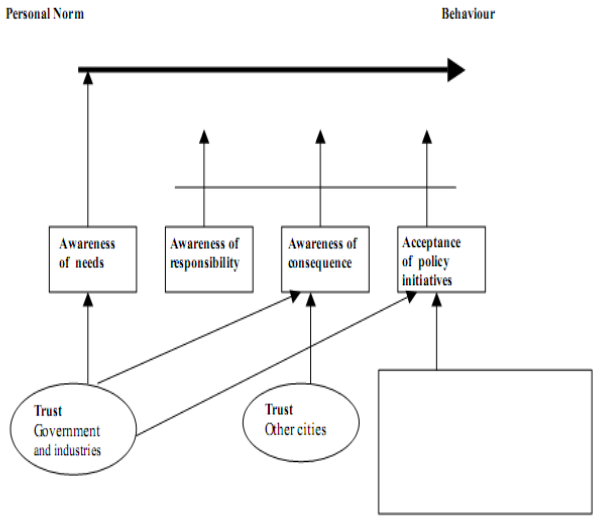
Application of Schwartz's model on pro-environmental behavior The Schwartz's Model has been applied to explain the pro-environmental behaviour (Stern, Dietz and Kalof, 1993). According to Blamey (1998), such application date back to Heberlein (1972 quoted in Blamey, 1998) on explaining the widespread changes in environmental attitudes and with the rise of what has been referred as "environmental ethic". Van Liere and Dunlap (1978 quoted in Hirose, 1995) also applied this theory on the yard burning behaviour. Most recently, this model is applied in consumer responses to energy situation and recycling behaviour (Black, Stern, Elworth, 1985, Nielsen, 1991, quoted in Blamey, 1998, Widegren,

1998).

Blamey (1998) attempted to apply Schwartz's theory to the public goods, such as environment. As Hardin (1968) discussed previously, collective action is necessary to protect common goods. Blamey, in order to include the collective action, extended the model. In this new model, attitude-behaviour relationship is expressed as following figure (Fig.5). In process of transforming one's "Personal Norm" (PN) into "Behaviour", it goes through the process of establishing inter-relating factors such as Awareness of Needs (AN), Awareness of Responsibility (AR), Awareness of Consequences (AC) and Acceptance of Policy Initiatives (AP).

This model is established specifically to illustrate how institutions can "alter or co-ordinate human behaviour". In this given situation, Blamey (1998) supposes that having an incentive to co-operate and being assured that others will contribute, is not a sufficient condition for contributing towards the provision of public goods. Individuals may, for example, need to be assured that organizations (Government) involved in implementing the "policy bargain" will do their bit and that this will be done in accordance with shared standards of fairness. In this sense, the "Awareness of Needs (AN)" in the expanded model included first, non-human object for individual in need, such as environment, and second, factor of "trust" from government and industries to initiate "helping" behaviour.

Figure 5
Norm-Activation Model by Schwartz extended by Blamey



Source: Blamey, 1998

The value and moral implication of 'self' or "Awareness of Responsibility (AR)" is considered to have indirect influence with the "trust" in Government or any other institutions, which execute the policy. On the other hand, the "Awareness of Consequences (AC)," the evaluation of the judgement on the action individual is about to take, is directly influenced by the "trust" in government as well as "trust" in "other citizens". This is because the consequence of action is influenced by the government in formal norms (regulations) as well as by informal norms (social pressures).

Finally, the "Acceptance of Policy Initiative (AP)" is added in the extended model. This AP tends to involve norms of distributive and/or procedural justice, which is established where no formal policy initiative is exited. In the context of AP, AR and AC are reflected as "inaction" or "action". Also, the collective awareness such as AR of "government and industry" and "other citizens" as well as AC of "government and industries" and "other citizens" influence AP.

In the extended Schwartz's model involves co-operation and trust for "others" in obtaining desired effects in environmental quality. This is due to the fact that co-operative or collective action is crucial in treating environmental matters. The realisation of this co-operative behaviour is more likely when the actions of others are easily monitored. The studies show that people feels much obligated to co-operate when others will do likewise. In fact, Blamey (1998) states that the "trust" established among actors plays a central role in the definition of parameter of needs and costs and benefits of executing "helping" behaviour. Also, Braithwaite et al (1994 quoted in Blamey, 1998) concluded that both "social and shared understanding" of goals between regulators and regulatees is the key to successful regulatory compliance. He continued that this tendency of keeping the regulation is strengthened if the iterations of game are involved because that would establish the reputation for co-operation or more "trust". Therefore, in order to manage the environmental policy successfully, first the "trust" between regulatees and regulators becomes necessary. This is only achieved with the establishment of clear and acceptable norm, continuity in its implementation and disclosure and diffusion of information on policy.

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