

## REVIEW OF SOCIO-PSYCHOLOGICAL DETERMINANTS IN PUBLIC ENVIRONMENTAL BEHAVIOUR

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### Abstract

In the era of urbanism, the emerging and ongoing development has been trendy and frequently associated with adverse environmental impacts such as anthropogenic climate change and waste secretion. Poor environmental behaviours among public are accused for the negative impacts towards the environment. Considering that, it is importance to understand the interrelationship of socio-psychological factors to environmental behaviour for it will help the stakeholders such as policy makers and social marketers to form better strategies to foster pro-environmental behaviour among the public. Previously, researchers had explored socio-psychological factors such as environmental concern, attitude, intention, cognition, awareness and knowledge that affect their environmental behaviour. Based on the precedent studies, this paper aims to review the gaps among socio-psychological factors in determining the public environmental behaviour among Malaysian. Theories and concepts of environmentalism that are related to environmental behaviours are discussed and reviewed. The paper concludes by introducing importance of socio-psychological factors that are plausible to explain the causes of human environmental behaviour for the use of policy and decision making.

**Keywords:** *Socio-psychological factors; environmental behaviour; policy and decision-making*

### 1.0 INTRODUCTION

In the past decades, urbanism or urbanization has been gradually taken place to suffice the growing human populations. However, unsustainable urbanism can be devastating that lead to negative environmental impacts. Therefore, it is arguably as one of the central causes to anthropogenic pollutions such as air pollution, water pollution and climate change. Thereby, such human-driven environmental degradation is presumably to be ended by what has started it, notably human well-being conduct.

It is believed that positive human environmental behaviour plays indelible roles in solving environmental issues (Mobley *et al.*, 2010; Klöckner, 2013). Therefore, attention is allocated on what the influencing human factors

towards environmental behaviour. Considerable number of social researchers have been revolving in addressing human environmental behaviours towards environmental issues, as reflected by human socio-psychological factors including environmental awareness, environmental knowledge, environmental attitude and environmental concern. These socio-psychological factors are considered as social and cultural facets to influence an individual behaviour towards environment or nature. For instance, these factors interact and affect natural environment in a way that they have an impact on human environmental behaviour. The connectivity between the disciplines reveals a comprehensive view of environmental condition that could influence national development. Consequently,

relationship between public environmental behaviour and its influencing socio-psychological factors has a demand to be explored.

However, there have been studies focus on studying specific environmental behaviours such as water saving (Mondejar-Jimenez *et al.*, 2011), climate change (McCright, 2010), waste from electrical and electronic equipment (Afroz *et al.*, 2013), solid waste management (Desa *et al.*, 2011, 2012), recycling of solid waste (Jibril *et al.*, 2012), and municipal waste management (Saeed *et al.*, 2009).

However, limited social researcher had laid interest in investigating the socio-psychological factors that explain generalized environmental behaviour especially public environmental behaviour.

Noting that many social scientists have demonstrated various theories and hypothesis regarding interrelationships of socio-psychological factors and environmental behaviour, this paper intends to reiterate previous literature reviews in explaining environmental behaviour in the context of socio-psychological factors and identify the environmentalism theory that most adequate to be used as grounded theory to explain generalized (public) rather than specific environmental behaviour, with the involved socio-psychological variables from that grounded theory.

## 2.0 METHODOLOGY

Rigorous literature review was conducted in order to gather the articles that introduced theories and concept about the socio-psychological determinants in public environmental behaviour. Predominantly, the searching of articles was scoped by the information about the theories or concept that has been adopted to determine environmental behaviour. Furthermore, the search was conducted to indicate the environmentalism theories and concept that focused on public environmental behaviour. The time frame of the literature review was between 1975 and 2014. All the references and bibliographies including

articles titles, authors and abstract were stored and managed by using Endnote.

## 3.0 REVIEW OF THEORIES

In reviewing precedent theories and hypotheses regarding environmental behaviour, this paper revolved on Theory of Reasoned Action (TRA), Theory of Planned Behaviour (TPB) and Theory of Responsible Environmental Behaviour (REB).

From studying the above mentioned environmentalism theories, the influencing socio-psychological factors of environmental behaviour were introduced and identified.

### 3.1 Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)

In the study to rationalize the reason of people implementing positive environmental behaviour, previous researchers kept on applied, advocated, compared, re-examined, refined and modified environmentalism models from the simplest linear model to complicated structure of affecting variables over the years.

The extension theory of Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980) and Theory of Planned Behaviour (TPB) (Ajzen, 1991) was then developed to explain the linkage between attitude and action through behavioural intention. Both of the theory suggested that to address people behavioural action, the proposed action must be specific so that their personal attitude towards intentional behaviour can be evaluated reasonably to lead to a specific behaviour (Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980). As shown in Figure 1, TRA model illustrates that that the environmental attitude can be a good predicting factor to behaviour in which behavioural intention as a function of personal attitude to environmental behaviour whereby subjective norm as the social environment that positively or negatively influential to an individual belief and perceptions. Figure 2 draws a detailed version of TRA where the belief and evaluations fundamentally affect a person attitude towards an specific action; meanwhile, normative belief influence the subjective norm respectively

whether a person is motivated to perform the specific behaviour or vice versa. However, TPB (Figure 3) was proposed as extension of TRA to address the limitations in TRA by incorporating additional perceived control over behavioural conduction as an affecting variable for shaping behavioural intention (Ajzen, 1985; 1991). Perceived behaviour control is regarded as a requisite directly influencing variables in predicting behaviour but indirectly influence behaviour through behavioural intentions. It also represents the barriers and opportunities that could impact how likely a person to perform the behaviour. The proposal of perceived behaviour control in TPB enhances the prediction of specific behaviour compared with TRA (Madden et al., 1992).

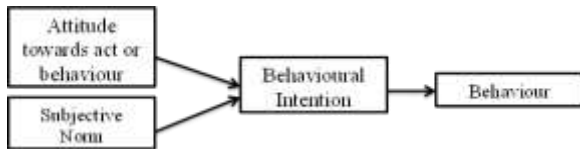


Figure 1: Theory of Reasoned Action (TRA) (Fishbein & Ajzen, 1975)

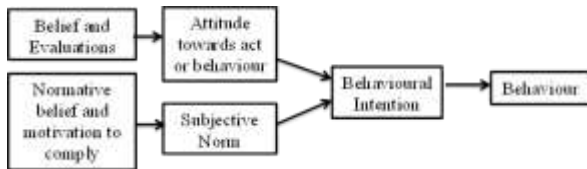


Figure 2: Theory of Reasoned Action (TRA) (Ajzen & Fishbein 1980)

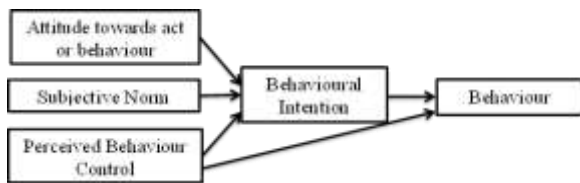


Figure 3. Theory of Planned Behaviour (TPB) (Ajzen, 1985;1991)

### 3.2 Theory of Responsible Environment Behaviour (REB)

Model of Responsible Environmental Behaviour (REB) (Figure 4) as developed by Hines, Hungerford, and Tomera's (1986/87) based on meta-analysis consisting of 128 empirical

studies of environmental behaviour. Also, the proposal of REB model is based on Theory of Planned Behaviour (TPB) (Hines *et al.*, 1986/87; Hungerford & Volk, 1990; Mobley *et al.*, 2010).

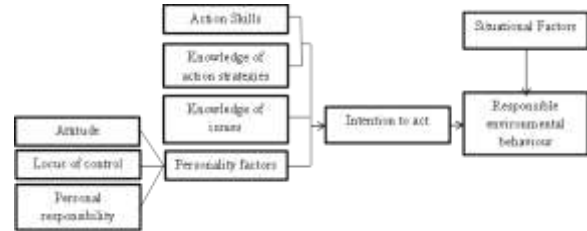


Figure 4: Theory of Responsible Environmental Behaviour (Hines *et al.*, 1986/87)

The following sections postulate the REB model oriented affecting variables in predicting environmental behaviour:

*Knowledge of issue:* REB model proposed that people must possess knowledge of environmental issues cognition. They have to aware of the existence of environmental problems with their causes and consequences. This variable has also termed as Environmental Awareness. Hungerford and Volk (1990) articulated that in accessing the public citizenship, the initiating motivation for people to environmental behaviour-shifted is by originating from focus of issues, later, awareness and knowledge, and beyond of that. As defined by Kollmus and Agyeman (2002), environmental awareness is “knowing of the impact of human behaviour on the environment”. It is synchronized with Schwartz's (1977) declaration of awareness of consequences (AC) in Norm-Activation Theory. AC is defined as how well one individual is aware of the negative consequences of environmental disasters when not acting sense of pro-socially Bamberg and Möser (2007) conduct meta-analysis to explore the determinants in predicting environmentally responsible behaviour with REB model-based and the findings prove that awareness to problem is an important variable.

*Knowledge of action strategies:* In REB model, people with knowledge of issues have to know series course of action accordingly to each

behavioural conduct in order to mitigate the bad consequences from environmental issues. The action factor which explains the how much skilful and knowledgeable to carry out the preservation behaviour, is proved to be the most insignificant to behaviour prediction (Chao, 2012). Therefore, the introduction of knowledge of action strategies is disparate from knowledge of issues and known as Environmental Knowledge. Without considerable knowledge of action strategies, the ability to take action is vulnerable and weak.

*Attitude, locus of control and personal responsibility (personal factors):* Personal factors category explains that “desire to act” drives people more likely to practice responsible environmental behaviour. It was proposed in REB model that people with positively-shifted attitude, internal locus of control and personal responsibility leads to positive environmental behaviour performance. The deficiency of these personal factors demotivates environmental behaviour and people less likely to perform behavioural action.

*Verbal Commitment:* In REB model, it verbal commitment is an expression of intention to act on in response to environmental issues. It is measured in communicated willingness to evaluate how much willing a person to convey environmental behaviour.

#### 4.0 DISCUSSION

In comparing with the TPB and TRA, REB model might not been rigorously adopted in empirical study (Chao, 2012). Thus far, the application and testing of REB model is limited to water pollution among boaters (Cottrell & Graefe, 1997); environmental education (Hsu & Roth, 1998; Hsu, 2004); ecotourism (Chiu *et al.*, 2013); environmental responsible behaviour by reading environmental literature (Mobley *et al.*, 2010).

However, TPB is developed for explaining target behaviour rather than generalized behaviour, whereas REB model can be account for describing a generalized environmental behaviour that represented by several groups of

environmental behaviour (Chao, 2012). Considering that, REB model is potential to be used to measure generalized environmental behaviour but not just limited to specific environmental behaviour. Furthermore, different from TPB and TRA, the socio-psychological determinants in REB model is inclusive of both internal and external aspects of explaining generalized environmental behaviour. Internal aspects are referred to the physical and mental aspects of a person; meanwhile external aspects are regarded as environmental influence of an individual. Internal aspect that revealed in REB model is personality factors which including of attitude, locus of control and personal responsibility. External aspects that highlighted in the model are action skills, knowledge of action strategies and issues. It is important to include internal and external aspects in an environmental theory or concept to assist the presentation of socio-psychological factors that affect environmental behaviour in practice (Krajhanzl, 2010). Thus, REB model is suitable to be grounded theory in facilitating the orientation of socio-psychological variables that determine public environmental behaviour.

#### 5.0 CONCLUSION

It is expected by incorporating the environmental theories and models, the study of the behaviourally driven factors will improve the effectiveness of environmental policy and guideline provision (Huffman *et al.*, 2014). A model development to explain behaviour is paramount to present a holistic development of either effective strategies, approaches or program (Von Eye & Bergman, 2003; Lanza *et al.*, 2010; Terzian *et al.*, 2014). In other words, prediction of public’ environmental behaviour by theories or models is for a better provision of environmental policy, guidelines, or approaches that might be beneficial in changing the behaviour towards environmental preservation.

In sum, socio-psychological factors that reviewed from this study are beneficial to propose a better theoretical framework to explain generalized environmental behaviour. In future study, environmentalism theoretical framework can be proposed based on REB

model in order to be adopted as a sustainability assessment tool to measure public generalized environmental behaviour among Malaysian through nationwide survey.

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