

# Ecological Attitude- Behavior Gap: A Theoretical Analysis

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**Abstract**— Many studies have been undertaken to examine whether environmental attitudes predict ecological behaviors. The assumption is: someone with an environmental attitude behaves in ways consistent with that attitude. Some studies have highlighted the important role of environmental attitude in explaining the ecological behavior and have found a positive relationship (Arbuthnot & Lingg, 1975). However, some other researchers have reported completely different outcomes. A weak to in-existent relationship has been found between environmental attitude and ecological behavior (Wicker, 1969; Oskamp et al., 1991). The key question in the present article is: why do we get different results and so many discrepancies in attitude-behavior relationship, mainly in the ecological field? The article represents a theoretical analysis and a review of research analyzing the gap between the environmental attitude and ecological behavior.

**Keywords**— Attitude-Behavior gap, Ecological Attitude, Environmental Behavior, Ecological Behavior, Gap.

## I. INTRODUCTION

Environmental psychology has spread to too many branches to study the complex interactions between people and the environment. General environment issues (e.g. excessive exploitation of natural resources, the damage of the ozone layer, starving polar bears in the arctic region due to the ice melting caused by climate change, upper respiratory diseases because of air pollution, etc.), all point towards changes in ecosystem and threatens the existence of the future generations of the human race. Many scientists, scholars, psychologists and researchers in fields related to the environment have come up with many models with the purpose of understanding the variants of pro-environmental behavior. They have pointed to the individual's ecological behavior, and they defined it as actions and activities that contribute towards environmental protection and conservation (Axelrod & Lehman, 1993). They have endeavored to explain what can determine people's ecological behavior and how behavior can be steered towards a more ecological direction. The concept of attitude seems to be the

most promising and close antecedent to behavior (Newhouse, 1990). Not surprisingly, two-thirds of all environmental psychological

publications consider ecological attitude in one way or another (Kaise, Wolfing, & Fuhrer, 1999). Studies have been undertaken to examine whether environmental attitudes predict ecological behavior. The guess is that people with an ecological attitude are supposed to behave ecologically; attitude is a powerful concept that pushes people to behave in a certain way in accordance with that attitude. However, the attitude-behavior relationship is far from being straightforward. Some studies have highlighted the important role of environmental attitude in explaining the pro-environmental behavior and have found a positive relationship (Arbuthnot & Lingg, 1975). They have demonstrated that people with an ecological attitude are predisposed to behave ecologically. However, some other researchers have reported completely different outcomes. A weak to non-existent relationship has been found between environmental attitude and ecological behavior (Wicker, 1969; Oskamp et al., 1991). There are so many contradictions within these debates; the key question is: why do we get different results and too many discrepancies in Environmental Attitude-Behavior relationship?

## II. THEORETICAL BACKGROUND

### A. Attitude-Behavior gap

In psychology, the bridge between statements and actions is termed as Attitude-Behavior gap or Attitude-Behavior inconsistency (Byrka, 2009). The gap between attitude and behavior is confusing to many people, because intuitively, attitude is closely related to behavior. People have claimed for many years the great ability of attitude to predict behavior, for example, a health conscious person would refrain from a health damaging behavior or an environmentalist would perform a responsible behavior regarding the environment. However, studies on attitudes have discovered the attitude's

poor ability to predict behavior, especially when we consider a general attitude towards a specific behavior. Therefore, the researchers moved from a direct and straightforward relation between attitude and behavior, to discovering new determinants of behaviors, and came up with social-cognitive models that would represent the entire process behind the performance of behaviors (Strack & Deutsch, 2004). Similar description of the inconsistency between actions and declarations has been identified over forty years ago by Campbell (1963). He has stated that declarations were easier to do than overt acts. He has given an example saying that giving a lecture about the effects of carbon dioxide, is actually much easier than walking or cycling. Many studies have reported the lag between environmental attitudes and behavior (Campbell, 1963).

In one research, 80% claiming to be environmentalist and 70% recommend less packaging by manufacturers: however, only 46% have reported buying an environmental product (Gutfeld, 1991). In other studies, between 30% to 50% of people express their intention to buy green products, however the market share of sustainable products is almost less than 5% of sales (Young, Hwang, McDonald, & Oates, 2010). According to the Greendex (2012), the percentage of people who declare that they are green is much higher than the real green purchasers, as shown in Fig. 1. The Greendex, which is a quantitative study of 17 countries, asked about environmental behavior, like the use of green products, transportation choices, attitudes towards sustainability and the environment. An algorithm has been developed to generate an index score that reflects the environmental impact of the consumers (Society, n.d.).

definitions, attitude has been described as — a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon individual’s response to all objects and situations with which it is related (Allport, 1935). Other researchers have relied on the definition of Katz (1960), who suggested that —an attitude is the predisposition of the individual to evaluate a particular object in a favorable or unfavorable manner (Katz, 1960). An Attitude has also been defined as — an enduring set of beliefs about an object that predispose people to behave in particular ways toward the object (Weigel, 1983). In the current article, the concept of attitude is important as it can define and direct the action and dictate the behavior. To do so, scientists focused more on a specific attitude toward a specific behavior, which is called “compatibility”. Ajzen & Fishbein (1977) have suggested the principle of compatibility, which can be described in terms of specificity or generality of the measure. That means, to predict a specific behavior, we need a specific attitude about this behavior. As per Campbell (1963) in the following example, —if we are interested in predicting screening for cancer in Saint Joseph Hospital next Friday, we should also measure an attitude toward screening for cancer in the same place at the same time. At a very high level of specificity of the two concepts the attitude and behavior, there is more chance that attitude predicts the behavior, and the relation between them is stronger. **The difficulty of behavior** is another variable accountable for the attitude behavior inconsistency. It has been proven that behavior is not as easy as attitude to perform; some variables can hinder or facilitate the performance of the behavior. Like situational constraints may stop the behavior from taking place regardless of individual perception. Infrastructure, climate and topography are situational factors that affect people’s behavior. The example given by Kaiser, Midden, and Cervinka (2008), a well-designed bicycle paths facilitate using a bike in the Netherlands more than in Germany. Attitude-behavior inconsistency has attracted too many debates and researches. The poor relationship and the weak correlation between these two concepts (attitude & behavior) found in some studies, cast doubt on the utility of the attitude concept, and question its ability to predict the performance of a behavior. Recent researchers have proposed the moderate degree of the attitude-behavior relationship and have focused on the conditions in which the relationship is weaker or stronger (Wallace, Paulson, Lord, & Bond Jr, 2005). Some plausible solutions have been proposed to explain this inconsistency, some suggested that attitude needs to be compatible with behavior to have a better relationship (Ajzen & Fishbein, 1977). Some other researchers have used intention as a predictor to behavior. They have suggested that the intention of doing something pushes us more to do that thing. An intention describes the people’s willingness to undertake certain actions (Fishbein & Ajzen, 1977), a behavioral intention is considered as an attitudinal indicator, the closest to an overt behavior. The stronger is the intention to undertake an action, the larger is the probability that this action/behavior will be performed.

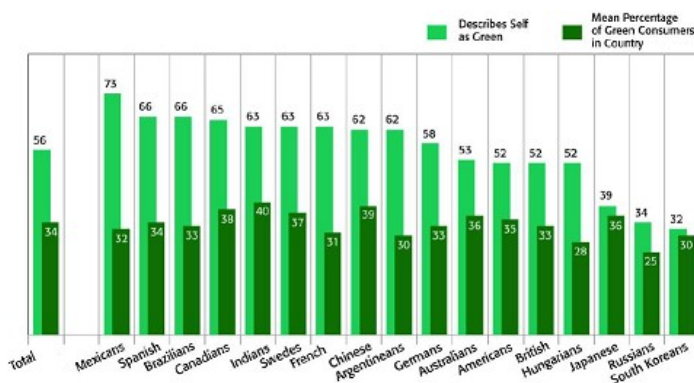


Fig. 1: Respondents with green attitude versus average actual green consumer behaviour in % (Greenindex, 2012)

**Attitude** has been described by Allport (1935) in the first Handbook of Social Psychology as —the most distinctive and indispensable concept in social psychology. Theorists generally agree about the importance of the concept of attitude, however they have differed greatly over decades about an adequate definition of it (Dawes & Smith, 1985), all the definitions given are generally broad. Among the known

The intention-behavior relationship and the determinant of behaviors were presented in the context of the Theory of Reasoned Action (TRA) (Ajzen & Fishbein, 1980), and the Theory of Planned Behavior (TPB) (Ajzen, 1991). The meta-analytical studies have revealed some unexplained variances in the intention-behavior relationship (Sutton, 1998). That undoubtedly leaves room for improvement. The linear relationship between attitude and behavior is far from being straightforward some researchers have suggested some intermediate variables to better illustrate this relationship.

### B. Theory of Reasoned Action

In the Theory of Reasoned Action and its developed version, the Theory of Planned Behavior (Ajzen & Fishbein, 1980; Ajzen, 1985), behavior *intention* seems to be a direct antecedent to behavior. Attitudes do not affect behavior directly; they impact behavioral intention, which in turn influence the behavior. Intention is represented as a function of the individual's attitude towards undertaking a certain action, and one's subjective norms. Attitude, affected by factual knowledge (Stutzman & Green, 1982), it wouldn't be shaped without knowledge and salient information.

Subjective norms represent the normative beliefs and the drive to comply with these beliefs; social and moral values refer to one's principals and what people do from a normative stance.

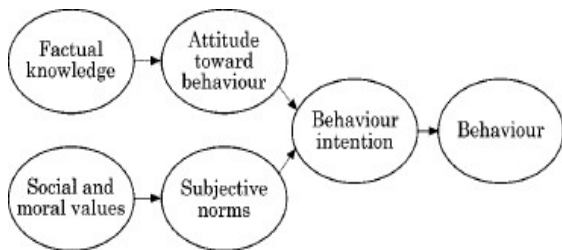


Fig. 2: Theory of Reasoned Action

Fig. 2 shows the Theory of Reasoned Action (Ajzen & Fishbein, 1980). The Theory of Planned Behavior (Ajzen, 1985) is a developed version of the Theory of Reasoned Action by introducing *“influences on behavior beyond people's control”* in the model.

Ecological behavior seems to be influenced by a wide range of factors beyond one's control. People belonging to a country that supports public transportation or facilitates recycling are more likely to behave ecologically. Socio-cultural limitations define, to which extent ecological behaviors are possible to perform. Some of the people who claim to be ecological might effectively be in one domain, and unecological in another (Vining & Ebreo, 1992). That's why the theory of planned behavior is considered very useful in predicting ecological behavior, because it takes into consideration these constraints.

### C. Environmental attitudes and behaviors inconsistency

Gupta & Ogden (2006) have suggested two moderating variables that might strengthen the attitude behavior relationship in the ecological field: the level of individual involvement with the environmental concerns and the Perceived Consumer Effectiveness (PCE) (Gupta & Ogden, 2006). The authors have agreed with (Berger & Corbin, 1992), that *“Environmental attitudes may sometimes be poor predictors of behaviors and...seek to specify variables that systematically moderate the attitude behavior relationship”* (p.80). They have set two hypotheses in relation with **consumer involvement** (Gupta & Ogden, 2006): Consumers with low involvement will display greater levels of attitude-behavior inconsistency/ Consumers with high involvement will display greater levels of attitude-behavior consistency. Also, they have set two hypothesis in relation with **Perceived Consumer Effectiveness** (PCE) (Gupta & Ogden, 2006): People having lower levels of Perceived consumer effectiveness (PCE) will display higher levels of Attitude-Behavior inconsistency/ People having higher levels of Perceived Consumer Effectiveness (PCE) will display higher levels of attitude-behavior consistency. The conceptual framework proposed in their paper has combined two moderation variables, Perceived Consumer Effectiveness (low, high), and involvement level (low, high). Some others have identified other reasons behind these discrepancies (Tracy & Oskamp, 1984) (Tina & Mainieri, n.d.):

- a) Weak correlation among ecological behaviors
- b) Different levels in the measures of environmental attitude and behavior.
- c) The influence of extraneous variables
- d) Lack of measurement validity and reliability

It's often assumed that when someone engages in one ecological behavior, he's likewise engaged in other types of environmental behaviors. However, what is the guarantee that the person, who is recycling household waste, prefers common transport or carpooling as an effective way to reduce emissions in the air rather than driving his/her own car. Studies have stated that ecological behaviors often are not correlated (Tracy & Oskamp, 1984), that's why it's considered misrepresentative to use all the environmental behaviors interchangeably. Some studies figured out that focusing on the specificity of attitude is more likely to predict the related environmental behavior than considering the environmental attitude in general. As per Stern & Oskamp (1987), general environmental attitudes include a wide range of issues (e.g., air pollution and energy conservation), that's why strong correlation has been found between attitude toward a more specific ecological behavior (Bamberg & Möser, 2007). Other variables seem relevant in explaining the attitude-behavior relationship (Weigel, 1983). These variables can be divided into two different categories; personal characteristics (e.g., knowledge, motivation), situational

characteristics (e.g., social norms or economic constraints). They can affect the environmental behavior directly or indirectly. Additional problems accountable for the discrepancies in attitude behavior relationship findings are the lack of reliability and validity in the measurement. Aware of those problems in measurements, some researchers have reported their own scales' validity and reliability (R. Weigel & Weigel, 1978). Other studies have considered the shortcomings that limit the attitude from predicting the environmental behavior concept (Kaise et al., 1999), these shortcomings have been summarized into three main bullet points:

- Inexistence of a unified concept of attitude
- The lack of measurement scales of attitude and behavior on a general level.
- The influence of behavior constraints beyond people's control

Rajecki (1982) has shortened the causes to explain the discrepancy between the attitude and behaviors follows (Rajecki, 1982):

- *Direct versus indirect experience*: People who have directly experienced a bad environmental situation are more willing to engage in an environmental behavior than those who have experience it indirectly. Witnessing a polar bear starving to death due to climate change and melting ice is stronger and more effective than learning about environment issues at school.
- *Normative influences*: Family customs, social norms, and culture shape people's habits and attitudes. If someone is living in an environmentally conscious community, the environmental behavior is more likely to occur, therefore the gap between attitude and behavior will lessen.
- *Temporal discrepancy*: When there is a big time gap between the collected data for attitudes and the one for actions, we get inconsistencies in the results (e.g. A large majority of Swiss citizens were against nuclear power after Chernobyl; yet two years later a memorandum for a 10-year halt to constructing any new nuclear plants in Switzerland was barely approved with a very small margin). Temporal discrepancy refers to the fact that people's attitudes change over time (Rajecki, 1982).
- *Attitude-behavior measurement*: Most of the attitude scales measure attitude in a broader scope than behavior, for example to assess the ecological attitude we broadly ask the following question (e.g. *Do you care about the environment?*) contrary to ecological behavior where the question is more specific (e.g. *Do you recycle?*).

### III. CONCLUSION

During the last decades, the encouragement towards ecological behavior has been the focus of many researchers. It has been found that ecological behaviors deviate from environmental attitudes. Having an environmental attitude doesn't guarantee an ecological behavior. Numerous if not hundreds of theoretical frameworks have been presented, to discuss the gap between the environmental attitude and ecological behavior.

So many factors, mediating, and moderating variables have been found to help translate the environmental attitude into an environmental behavior (e.g. economic (Stutzman & Green, 1982), social, institutional (Kollmuss & Agyeman, 2002), motivation (Kaiser & others, 1996), awareness (Ryu & Jang, 2007), values, emotions (Grob, 1995), locus of control (Mostafa, 2007), responsibility, place attachment (Scannell & Gifford, 2010), religion (Johnson, Bowker, & Cordell, 2004), demographic factors (Tina & Mainieri, n.d.), gender, knowledge (Arbuthnot & Lingg, 1975), involvement (Schwartz, 1994)). Yet no inclusive model have been created (Kollmuss & Agyeman, 2002).

Each transiting variable seems successful in transcending the environmental Attitude-Behavior gap. However, none has been proven sufficient to determine the ecological behavior process. Some researchers tried to combine many of these variables, but still have found some unexplained variance that needs more investigation. The attitude behavior gap, lag or inconsistency as called by diverse researchers is far from being well investigated, which leave the door wide open for more research into the subject.

For future research, there's another element, that has been considered in too many studies as a bias rather than a variable on its own, which is —social desirability. One variable that can affect one's evaluation of environmental issues is *social desirability*. According to Beckmann (2005), *“Who actually would dare to admit disinterest or even anti-environment attitudes?”* (p. 281). That actually would explain, some of the attitude behavior Gap. Researchers have found a lot of self-reported ecological attitudes, but at the same time few have engaged in ecological behavior (Beckmann, 2005).

Socially desirable responding (SDR) is defined as *“the tendency of subjects to attribute to themselves in self-description, personality statements with socially desirable scale values, and to reject those with socially undesirable scale values”* (Edwards, 1957).

Considering it as a variable and measuring its effect (direct or indirect) on the environmental Attitude-Behavior relationship, social desirability can be an interesting variable to consider.

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