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**The role of Value-Action gap in shaping pro-environmental
behaviours: *A theoretical review and implications for
policymaking***

RELATORE

Chiar.mo Prof.
Marcello Di Paola

CANDIDATO

Giovanni Daniele Starita
Matr. 073242

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Introduction

More than 40 years passed since the 1972 Stockholm Conference, the first Environmental Summit organized under the flag of the United Nations, took place. Since that first meeting, much more has been done to reduce the human impact on the environment.

In particular, for what concerns mainly developed Countries, many public policies have been introduced, aimed to raise the awareness of the population over environmental issues, and push them to start taking individual actions, to improve their individual environmental impact.

These policies have been developed with the objective of providing individuals with the information necessary to understand the pressure of environmental issues, and how their individual actions can improve or worsen the aggregated environmental outcome, which is the result of the actions of the whole of the individuals, that have an impact on environmental issues (Kollmuss and Agyeman, 2002). For example, one of the activities that are encouraged by communication environmental campaigns is the purchase of products that are labelled and certified to be environmentally friendly. In many cases, those products have also some positive aspects affecting directly the consumer himself (Honabarger, 2011).

So, environmentally concerned consumers should easily adopt this kind of purchasing behaviour. Instead, what social psychologists and environmentalists have observed to happen is that, given citizens the information necessary to understand their impact on the environment, and subsequently change their behaviour for a pro-environmental outcome, is not enough to bring a radical change in their actions and develop a “green” lifestyle (Blake, 1999).

Such issue brought to the development of many theoretical frameworks that try to point out what causes individuals to engage in actions that have an impact on the environment, and are not aligned to the values they sustain to believe in. This discrepancy between what a person thinks and what he believes, has been defined as the value-action, or attitude-behaviour, gap. Both of these expressions will be equally used to describe the defined phenomenon in this research.

This script focuses on the notion of the attitude-behaviour gap through the analysis of different theoretical models, developed using frameworks from different fields of the social sciences, that aim to identify the factors influencing pro-environmental behaviour.

Such research is considered to be particularly relevant by environmentalists, because it may be the main tool to overcome the problem of individual actions that are not particularly damaging for the environment by themselves, but that may contribute to worsen many environmental issues when considered on an aggregate level. Moreover, the issue of a discrepancy between attitudes and behaviours, is not only relevant in the environmental field, but also in the matter of social psychology. Thus, since it analyses what may cause individuals to take actions detached from their way of thinking.

Hence, the attitude-behaviour gap is important not only to address issues related to individual behaviours relevant for the environmental field, but also to understand the complex mechanisms determining our decision-making processes and how they entail with our values.

This is important to understand the setting of the subject that we will deal with in this research.

Therefore, in this first chapter we will clear up the different notions of value/attitude and action/behaviour, and all the different factors that can influence both the values and the actions of an individual, in particular when he engages in environmentally relevant behaviours. This is necessary in order to understand what we are talking about when we speak of value-action gap. Moreover, we will try to describe how those factors can combine with each other, and provide examples of the results of these combinations in terms of attitudes and behaviours.

Following, in the second chapter, we will analyse five of the most popular theoretical frameworks developed by social scientists in order to identify the relation between the values of an individual and its actions. In particular, we will start from the earliest US linear model, which is the first ever used in the environmental field, then we will focus on the possibility of predicting behaviour through past actions, with the theory of habitual behaviour developed by Aarts, Verplanken & Knippenberg (1998). Furthermore, we will analyse the Goal-Framing theory and finally arrive to the Value-Belief-Norm theory developed by Stern (2000). We will see the variables that those different frameworks consider to be determinant for attitudes and behaviours, what kind of relation is showed between values and actions and how such relation entangles with the environmentally relevant behaviour. Through examples and the integration of empirical studies, the aim of this chapter is to provide a wide scope on the different perspectives developed on the field.

Finally, in the third chapter we will compare commonalities and differences of these models, with the objective of a comprehensive understanding of the different factors shaping environmental behaviour, and in particular how different categories of behaviours, may be better explained by one framework instead of the other. We will compare how the different theories try to fill the environmental value-action gap and which implications the models we have described may have for policymakers.

Chapter 1 – Defining the Value-Action gap and its variables

1.1 What is an attitude?

For many years social psychologists and scientists have been debating on the definition of attitude, and on the fact that a distinction could be (or not be) made between this and other similar concepts such as opinions, beliefs and even values. In this research no conceptual distinction will be made between these terms because their similarities make them congruent for the analysis developed in this study (Fishbein & Ajzen, 1975).

So, the definition on which we will rely when we speak about attitudes is the following: “it is a learned predisposition to behave in a consistently favourable or unfavourable way with respect to a given object” (Fishbein & Ajzen, 1975).

We have to underline that, despite the presence of a broad consensus over this definition of attitude, there is still a debate over its implications, and many different interpretations of it have been given.

Anyway, being this a research focused on the relation between attitude and behaviour, it will be sufficient to say that this definition implies that the concept of attitude has three different key features: it is learned, predisposes actions and those actions must be consistently favourable or unfavourable, towards the object for which the attitude is relevant.

In order to proceed with the entanglement of the attitude-behaviour gap, a clarification over these different factors is needed.

First of all, attitude is connected to actions that are consistently favourable or unfavourable, meaning that having an attitude toward a certain object implies that an evaluative judgement is expressed through it.

Secondly, attitudes are predispositions. This is a particularly ambiguous expression, whose different meanings are linked with the fact that we consider attitudes to be more or less exact predictors of behaviour (Fishbein & Ajzen, 1975). This study relies on the research made by LaPiere (1934), who demonstrated that the evaluation judgement implied by a certain attitude toward an object, does not automatically entail that a certain behaviour will be engaged with that object.

In that particular research, LaPiere (1934) demonstrated that an unfavourable attitude expressed by American hotel managers, in attitudinal questionnaires, against the Chinese ethnicity, did not imply their refusal to serve them on the workplace. Relying on this empirical evidence, this chapter will further develop other factors, which can influence both values and actions in the following sections.

Finally, the conceptualization of attitudes as learned implies that they are residues of past experiences. Which of the past experiences will be relevant for the shape of an individual’s attitude or how they are

going to influence his values and connected behaviours will depend on both internal and contextual factors that must be identified on individual basis (Fishbein & Ajzen, 1975).

1.2 Value Orientations: What shapes an attitude?

After defining what is an attitude, we have to understand how they are formed. In particular, it is necessary to identify the factors that can shape attitudes, and that can influence individuals' orientation towards a certain set of environmental values, despite their past experiences. Despite having been developed under value-based theories, these "value orientations" (Stern, Dietz & Kalof, 1993) have been clearly described and further developed by the New Environmental Paradigm (NEP) researchers.

The NEP is one of the models developed to find a new approach to the shape of environmentally significant behaviour. According to the NEP, there are three different value orientations, that combined, can determine a certain environmental attitude (Stern, Dietz & Kalof, 1993):

- The concern for the welfare of other human beings, also called social-altruistic orientation;
- The concern for our own welfare, also called self-interest orientation;
- The concern for the biosphere and non-human species, also called biospheric orientation.

We can rely on those three categories in order to understand how different orientations can shape different attitudes and therefore bring to a particular environmental behaviour. For example, a person that has a particularly strong social-altruistic orientation will be more willing to bear additional economic costs in order to improve the environmental situation of a region, even if its improvement brings no direct advantage to him, as long as it brings substantial enhancement to others' existence.

Equally, someone with a strong biosphere attitude will be interested in any environmental improvement because he values nature by itself and cares for the preservation of other species. Finally, someone with a strong self-interest orientation will be motivated to bear costs in order to obtain environmental improvement, only when such improvement affects his personal interest.

In conclusion, those three orientations can reflect many people's environmental attitudes, and can be useful to explain why individuals have different orientations towards certain sets of values (Stern, Dietz & Kalof, 1993).

It must be clear that those three categories are not incompatible with each other, and that people's attitudes reflect a combination of those three orientations (Stern, Dietz & Kalof, 1993).

1.3 Factors shaping environmental behaviour

Apart from attitudes, there are many other factors that different researchers have considered to influence environmental behaviour (Steg & Vlek, 2008).

Those factors are particularly important because they can play a role in the creation of a discrepancy between values and actions, and interfere with our rational decision making process.

Analysing the literature on the theme, three different categories of factors influencing environmental behaviour emerge (Steg & Vlek, 2008):

- Motivational factors;
- Contextual factors;
- Habitual Behaviour related factors.

For what concerns the motivation related factors there are different lines of research that rely on different basic assumptions, which explain decision-making processes and therefore how human actions are determined (Steg & Vlek, 2008). However, we will revise all the aspects of such theories, that are relevant to behaviour, in order to provide a wider scope over how human behaviour is influenced (Stern & al. 1993).

Thus, the motivational factors can be divided in: weighing costs and benefits, affective and symbolic factors and moral and normative concerns.

While the idea that a process in which costs and benefits are considered before performing a certain environmental behaviour is clearly based on the assumption that individuals make reasoned choices, the affective and symbolic factors are considered to be relevant by those that do not consider individuals to be perfectly rational decision makers (Steg & Vlek, 2008). In particular, Steg (2005) showed how material goods do not only absolve to an instrumental function, but also fulfil symbolic and affective needs.

These factors have been demonstrated to be particularly relevant when associated with certain categories of goods, such as cars, and the related use and possession (Steg & Vlek, 2008).

Finally, moral and normative concerns are particularly relevant when connected to behaviours that can be perceived as more or less socially acceptable, and when individuals are engaged in low-cost environmental actions. For example, normative concerns can become relevant to stop practices that are not environmentally friendly, such as littering in public places.

They are also important if the aim is to understand the willingness of a person to change his behaviour related to the environment, and adopt a different lifestyle. Anyway, they are not very useful when used to analyse actions that bring high behavioural costs, such as the previously mentioned car use.

Following individual motivations, there are also contextual factors that are to be considered, in order to have a comprehensive view of the factors that may shape environmental behaviour.

Contextual factors can easily constrain or ease pro-environmental actions (Steg & Vlek, 2008).

For example, the positive attitude of a citizen towards recycling waste, will possibly not translate in correspondent positive behaviour, for the absence of adequate recycling facilities, or the lower price of certain material goods can convince someone to renounce to his attitude of buying only biological products. Furthermore, contextual factors can differently influence the relation between motivational factors and behaviour. To make an example, a cheaper bus ticket can push someone to have a more positive attitude towards the use of public transportation, and therefore bring him to adopt a pro-environmental behaviour reducing his car use.

The third type of factors, the habitual behaviour related ones, emerged from a more recent line of research, that contested the assumption on which the relation between motivational factors and environmental behaviour rely, that individuals make reasoned choices (Stern, 2000).

Many human actions are considered to be guided by automated cognitive processes, rather than being based on pre-emptive rational reasoning (Aarts, Verplanken & Van Knippenberg, 1998). Thus, because human action may also involve misperceptions and selective attention, when we come to change habitual behaviours (Steg & Vlek, 2008).

Therefore, in order to design effective behaviour-changing initiatives, the way habits are formed and reinforced must be taken into account.

In conclusion, all these three categories of factors influencing environmental behaviour should be taken into account when considering the relation between value and action. Thus because, apart from considering the different aspects that can influence attitude, we should also consider factors that can influence directly behaviour and, as we will see in the following section, obstacles to the realization of attitude into behaviour, since those factors can really help into understanding how it is possible that a gap between value and action can be present in human everyday actions.

1.4 Obstacles to the creation of pro-environmental behaviour

In the Introduction, we defined the Value-Action gap as the discrepancy that occurs when an individual does not act according to what he thinks on the object of a certain action. Anyway, to experience such differences, barriers must be present, that prevent a person from acting coherently to his way of thinking.

Blake (1999) distinguished three different categories of obstacles to the creation of pro-environmental behaviour, through a field research that asked respondents directly to identify the major problems they encountered in shaping their own environmentally friendly behaviour.

Those three categories of obstacles are:

- Individual barriers;

- Responsibility related barriers;
- Practical barriers.

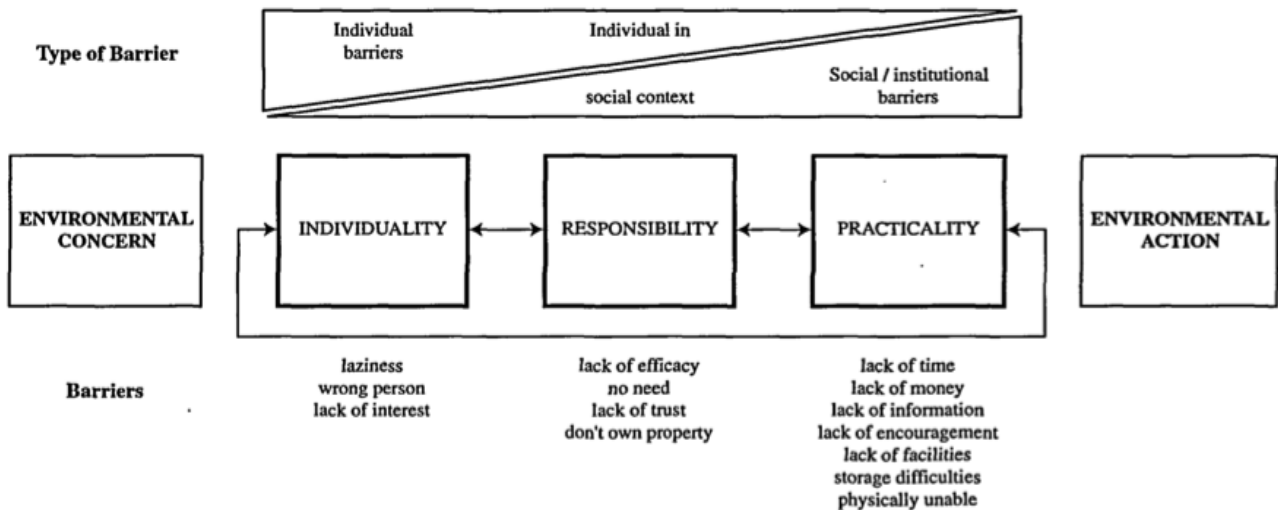


Figure 1 (From Blake, 1999).

All those three types of obstacles can prevent individuals from taking actions that are a direct result of their related environmental concern (as shown in figure 1).

Individual factors intervene especially when the environmental attitude of a person is peripheral, if it is compared with their wider attitudinal structure, or when there are certain cognitive structures that prevent a person from making certain environmental actions (Blake, 1999). In other words, when individuality is a factor influencing environmental behaviour, a person will be prevented from engaging in certain actions, because of certain aspects of his attitude, that he considers to be more relevant than the environmental concerned one. For example, a person will be prevented from campaigning for a certain environmental association, because he lacks of interest, or because he considers himself too lazy. Also, he may think that he is not the right type of person to engage in such actions.

Anyway, even when individual factors do not establish obstacles to the performance of pro-environmental behaviour, an individual may not feel the responsibility to perform certain actions (Blake, 1999).

It may be because he thinks that his actions will have no impact on the environmental outcome or because he thinks that other actors ascribe responsibility for such actions, for example because he considers their actions to have a bigger impact on the environment.

Still, even when no responsibility concerns or individual factors act to prevent pro-environmental behaviour, there could some practical barriers that bring an individual not to act in an environmentally friendly way. For example, an individual may not have access to the necessary facilitations in order to

recycle, or he may lack the information necessary to perform certain behaviours that would improve his environmental outcome.

This type of barriers is particularly important when we take into account people that do have the attitude relevant for a certain environmental behaviour, but still do not act in a pro-environmental way (Blake, 1999).

In conclusion, it is necessary to point out that those three different categories are not rigid. They depend on contexts and the combination of factors. Ultimately, the only way to understand what kind of obstacles are relevant for a certain environmental practice, is to ask the individual, that according to their attitude should take certain pro-environmental actions, what prevents him from doing so. For example, the distinction between laziness, which is an individual factor, and lack of time, that is a practical barrier, may be dependent on contexts and related to individuals' different perspectives and experiences.

1.5 Different types of environmentally relevant behaviour

After describing which factors influence, or prevent, the formation of environmental attitudes and behaviours, it seems necessary to distinguish between the different kinds of actions in which an actor can engage.

In particular, Stern (2000) distinguished two types of environmentally significant behaviours related to the public sphere: environmental activism and non-activist behaviours.

While environmental activism comprehends a set of actions that can be easily recognized since they are performed by individuals within the framework of an organized, environmentally concerned group (which can be both a permanent organization or a temporary protest movement), non-activist behaviours are characterized by influencing the environment only indirectly, and do not entail the actor in a determined organized, environmentally concerned group (Stern, 2000).

Non-activist behaviours can consist in supporting a specific environmental policy, or express willingness to pay higher costs in order to improve an environmental outcome.

This kind of actions, even if hardly noticed by the community, and therefore less likely to raise environmental awareness in others, may have large effects on public policies, which are the main tool to change the behaviour of multiple individuals and organizations at once (Stern, 2000).

Moreover, Stern (2000) listed two other types of behaviour: private-sphere environmentalism and a macro-category of other environmentally significant behaviours.

The private-sphere environmental actions performed by an individual have direct consequences on the environment, unlike public sphere concerned actions, but their final outcome is relevant, only if considered on an aggregate level. Many different individuals have to perform the same private sphere

environmentally friendly behaviour in order to actually improve the environment. Such actions are, for example, consumer and household related behaviours (Stern, 2000).

The last category, concerning other environmentally relevant behaviours, includes all those kinds of behaviours that are not possibly related to any previously exposed category, because of their particular characteristics. For example, all those actions that individuals take on their workplace, may have a relevant environmental outcome, but cannot be considered simply public sphere non-activism behaviour or an action performed within a private sphere. Generally, behaviours aimed to influence non-environmental organizations actions, that have an impact on the environmental sphere, can be considered to be part of this category, as well as environmentally relevant actions performed, for example, on the workplace (Stern, 2000).

Those other environmentally relevant behaviours can actually have a big impact on the environment, since organizational actions are a large cause of many environmental issues (Stern, 2000).

It is worth mentioning, that many researchers consider this distinction of four behavioural types to be statistically reliable and particularly relevant when it comes to identify which social and/or psychological patterns influence a specific behaviour (Dietz, Stern & Guagnano 1998). They base such assumptions on empirical studies that analyse the results of different environmental surveys, as synthesized by Stern (2000).

Moreover, Stern (2000) explained how each type of environmentally significant behaviour might be the result of different combinations of the causal factors that we previously mentioned.

Just to provide an example, we may say that an individual perceived to have a strong environmental concern, may not engage in environmental activism, because his attention to the environment is based mainly on a self-interest orientation, or he may be prevented from taking part to an environmental organization, because of his introvert nature, that can be defined as an individual barrier.

In conclusion, distinguishing different types of environmental behaviours may be useful in order to understand more clearly the relation between those factors, the barriers listed before and the resulting actions. Therefore, such distinction may be useful to policy makers when it comes to try to change certain environmentally relevant behaviours.

1.6 The role of participation in overcoming the value-action gap

In the literature focused on the environmental attitude-behaviour relation, a large part of the debate is focused on the role of participation in shaping sustainable or pro-environmental behaviours and attitudes (Redclift & Benton, 1994).

Recently, researchers have started to suggest methods of overcoming obstacles to behaviours, which imply a more local, community-based participation (Blake, 1999). Anyway, such considerations raise new issues that are still to be considered in the academic debate.

First of all, there is a conflict between the need for more local participation claimed by many researchers and the global dimension that characterizes many environmental issues (Blake, 1999). It would be difficult to rely on local participation in order to solve wider issues, which have consequences out of the area interested by the participants. In fact, the independence required to guarantee local participation could result in conflicts of interests and in coordination issues, when different local spaces engage in solving more global environmental problems. Moreover, the rules created to guarantee a local participation, may result in the exclusion of certain actors from engaging in environmentally friendly behaviours. For example, those who do not constantly live in one place, and those who just moved from an area to another could find more difficulties in taking part to pro-environmental activities (Blake, 1999).

Also to be taken into account, is the fact that a community conceived participation implies some kind of ready-made locus of community, waiting to be encouraged in engaging in environmental activities (Blake, 1999). However, as Dalby and MacKenzie (1997) pointed out: *“community may be better understood as a political and social process rather than a taken-for-granted social geographic entity”*. In other words, we have to consider that communities are no rigid, material entities and that the identification of an individual with one community, may be based on factors that differ from those considered by other members of the very same community (Blake, 1999).

Furthermore, the focus on community-based environmental action should not bring public policy makers to ignore individual action encouraging initiatives, since they tackle different issues, and may target different individuals. Someone could be willing to improve his own environmental impact through individual action, and at the same time he could refuse to take part in any community project or initiative (Blake, 1999).

In conclusion, even if the theoretical frameworks developed towards a scheme of local, community-based environmental participation, we have to consider the fact that such characteristics imply a deep change in the society, which may not be completely suitable for the institutions and tools of participation that we have today. Furthermore, as explained by Blake (1999), many of those barriers to behaviour previously explained, require a cooperation of different individuals and organizations, that operate at different spatial levels, and may have to share power and responsibility.

1.7 The process of changing environmentally significant behaviour

After having identified the different types of behaviours and attitudes, and their influencing factors, it is necessary to analyse the different tools that academia has found to have a role in changing human environmental behaviour. In particular, Gardner and Stern (1996) found four different ways of intervention that can help changing behaviour.

Those four types of intervention are (Stern, 2000):

- Moral and religious approaches, that appeal to values and try to change worldview;
- Education aimed to change attitudes and provide information, in order to raise environmental awareness;
- Changing the material incentives structure to make pro-environmental behaviour less costly, not only by an economic point of view;
- The establishment of a community management, based on a set of shared rules that will bring social expectations and pressure that may push the members of the community towards an environmentally friendly behaviour.

However, none of these approaches will most likely modify human behaviour by themselves. As Gardner and Stern (1996) pointed out, the most effective behavioural change programs involve the combination of different types of intervention. Thus, because different approaches tackling the same issue, may strengthen each other, and raise awareness of the issue more efficiently in targeted individuals. Also, different approaches target different behavioural barriers. Therefore, they will be more or less efficient in raising awareness depending on which individual is reached by the intervention, because different people experience different obstacles to the creation of the same pro-environmental behaviour.

For example, providing financial incentives, without properly informing consumers of the advantages through marketing tools, will only benefit those that are already informed about the financial framework related to environmental behaviour, or that are already aware of the issue targeted by the incentives.

In conclusion, in order to ensure the efficiency of those interventions, policy makers have to identify the individuals that could be involved in the behavioural change, and consequently, try to understand which kind of barriers are preventing them from acting in a pro-environmental way that is to be targeted (Stern, 2000). Therefore, policy makers should combine the interventions, in order to tackle the different possible barriers detected, in the most efficient way.

Conclusion

In this first chapter, we analysed the concepts behind the notion of attitude-behaviour gap, and how they are influenced by different factors.

We saw what defines an attitude and how egoistic, altruistic and biospheric concerns may influence the value orientation of an individual and bring him to engage in certain pro-environmental behaviours and prevent him from taking part to others.

After, we focused on the notion of behaviour. We saw which motivational, contextual and habitual factors researchers have identified to play a role in the shape of environmentally relevant behaviours and how those variables can influence differently each individual and each situation. Moreover, we saw that individual responsibility and practical barriers may prevent certain citizens from taking part to pro-environmental actions. Then, we related them and the influencing factors to different types of environmentally relevant behaviours that are performed both in the private and public sphere.

Subsequently, we paid attention to the debate, still present in the relative literature, on how participation should be shaped, in order to have the most possibly efficient effect on the environmental activities.

We noticed that, despite a general agreement that participation should be local and community-based, there are still many issues for such theorised participation, related to the global consequences and dimensions of many environmental problems and the social and political reality of today institutions (Blake, 1999).

Finally, the last section focused on the different kinds of intervention that may have an influence over human environmental behaviour. We saw that a combination of moral or religious approaches, material incentives, education, and community management of environmental issues, may help people engage in pro-environmental behaviours and overcome their barriers.

All of these aspects have helped us have a clearer view of what we imply speaking of value-action gap, and how different factors influencing both values and actions, may be useful to researchers to solve many issues related to the discrepancy between attitudes and behaviours.

In the following chapter, I will analyse one-by-one different theoretical frameworks, which tried to explain the relation between value and action. Moreover, we will see how those theories tried to overcome the gap and which of the previously analysed factors are taken into account by each framework.

Chapter 2 – Different models for different behaviours

2.1 Theoretical Introduction: Early Information-based models

This second chapter focuses on the different theoretical models developed by the academia on the relation between attitude and behaviour.

First of all, we have to clear that the different frameworks that will be presented in this sections, rely on different basic assumptions and therefore they all show different relations between values and actions. Therefore, no synthesis of all theories will be made, but we will clear, in the final section of this chapter, why the Value-Belief-Norm Theory may be useful to have a wide and general scope over the factors influencing the issue of the attitude-behaviour gap. Moreover, we will describe the implications of using different theoretical approaches to create public policies in the following chapter, through a comparison of the frameworks exposed here.

The earliest models used to represent the shape of pro-environmental behaviour, were based on the assumption that individuals make rational decisions, relying on the information they possess. Therefore, in order to improve the environmentally relevant behaviour, according to those frameworks, more information should be provided to citizens on why the environment is something to give value to, and what individuals can do to improve the outcome of their personal actions (Kollmuss & Agyeman, 2002).

One example is the early US Linear Model, which, in its first version, is the oldest theoretical framework developed in the field.

As shown in Figure 2, according to this model, providing environmental knowledge to individuals, shapes their environmental attitude, which will afterwards push the citizen towards pro-environmental behaviours related to the knowledge acquired. So, educating people is the main tool that should be used to raise environmental awareness and bring a change to behaviours that harm the environmental outcome.



Figure 2.

This model has been developed in the 70s, and has been and is still used to create many environmentally related communication campaigns, such as the one organised in the 1998, by the UK government, called “Are You Doing Your Bit?”.

Thus, despite the fact that this model, and many of those developed during the 70s that relied on the information-bias assumption, have been proved to be not so effective in shaping pro-environmental behaviour (Blake, 1999; Kollmuss & Agyeman, 2002).

We have already analysed obstacles and factors shaping environmental behaviour, so you can easily recognize that those are not taken into account by this model. In fact, if such models were to be an efficient tool to change human behaviour, there would be no discrepancy between attitudes and behaviours, only lack of information.

Anyway, even if the US Linear model is of no utility in order to understand the complex relation between attitude and behaviour, it has been the starting point from which many other theoretical frameworks have been developed, like the “Theory of Planned Behaviour” (TPB) of Ajzen and Fishbein, which will be exposed in the following section.

2.2 The Theory of Planned Behaviour

As previously mentioned, the US linear model has been proved to ignore many issues, which occur when an individual’s behaviour seems to be detached from the information he has and his attitude.

Fishbein and Ajzen tried to solve some of these issues, theorising a new framework.

Their Theory of Planned Behaviour has been one of the most influential attitude-behaviour models in social psychology, also because it provided a mathematical equation to calculate the value-action gap, which was very useful for empirical research (Kollmuss & Agyeman, 2002).

In particular, they aimed their study to understand the problem of temporal discrepancy, which is the phenomenon consisting in the fact that individuals’ attitudes change overtime. Also, the framework developed has been useful to show the problems behind the attitude-behaviour measurements. This second issue has been particularly important for the environmental researchers in the 70s and 80s, because many surveys that aimed to evidence the value-action gap, were actually measuring attitudes much wider than the related, measured actions (Kollmuss & Agyeman, 2002). Thus, could bring the researcher to assume that an individual has a certain gap between his attitude and his behaviour, because he bases his calculations on values that the respondent does not relate to his actions. For a clearer understanding, a typical question on the environmental attitude could have been: “Do you value the environment?”, while actions-related questions would have been on practical issues, such as “Do you recycle your household waste?”.

However, the TPB maintains the assumption, made by the US Linear Model, that people are rational decision-makers, that they make systematic use of the information in their possession, taking into account the possible consequences of their actions (Fishbein & Ajzen, 1975; Ajzen and Fishbein, 1980).

Based on this consideration, TPB points out that *“a persons intention to perform (or not perform) a behaviour is the immediate determinant of that action”* (Ajzen, 1985). In other words, the key factor influencing behaviour, according to the TPB, is behaviour intent.

Moreover, the TPB considers behaviour intent to be a function of three factors, dependant on individual beliefs (Ajzen & Fishbein, 1980):

- The attitude toward the behaviour, that is the person’s positive or negative evaluation of performing the action;
- The subjective norm;
- Perceived Behavioural control.

The attitude toward the behaviour is considered to be the major variable influencing the final behaviour (Ajzen, 1985).

The subjective norm is the result of a combination of (Fishbein & Ajzen, 1975):

- Normative beliefs, that are the social pressure influence perceived by the individual;
- Motivation to comply, the individual’s motivation to comply with such perceived expectation.

Perceived behavioural control is also composed by two variables (Ajzen, 1985):

- Control beliefs, that are the perception of an individual of being (or not being) in control of the action;
- Perceived power, that is the individual’s belief of being capable of performing the action.

Therefore, an individual intends to perform the targeted behaviour whenever he considers it positively, when he believes that others think he should perform it, and when he thinks that he is capable of performing, as well as he is convinced of being in control of its performance of the action (Ajzen, 1985).

The TPB has been developed after that Fishbein and Ajzen’s precedent theory, the Theory of Reasoned Action, had shown to be useful to explain only purely volitional actions. For this reason, the variable of perceived behavioural control was added as a factor shaping behaviour intentions, and therefore the theory was re-named in Theory of Planned Behaviour (Ajzen, 1985).

The TPB has been widely used to identify the mechanisms behind the establishment of health related behaviours, such as smoking, eating habits, etc. Thus, because its different factors can easily show, when a discrepancy between a healthy attitude and an unhealthy behaviour is present, if such gap is mainly present because of individual, social or capability related factors. Subsequently, it has been

useful to understand which of those categories of factors, advocacy campaigns on health practices, should address (Kollmuss & Agyeman, 2002).

However, for what concerns environmental psychology, it has been harshly criticized on the concept of rationality underpinning the model, that many do not consider sufficient, in order to explain the complex relation of individual actions with many environmental issues, that often have a relevant impact only on an aggregate level, ignored by the individuals (Burgess & Harrison, 1998). Still, many environmental related policies have been based on the TPB, and brought to the spread of advocacy and communication focused campaigns on the environment. Just to provide an example of how influencing this theory has been for the following decades, the Going for Green Sustainable Communities project was organized by the UK Government, in 1995, more than 15 years after the first development of the TPB. Thus, despite the development of new and more comprehensive theoretical frameworks, it relied on the TPB, and pointed out a national publicity campaign on sustainable development as the main tool to overcome the value action gap on environmental behaviour (Going For Green, 1995).

Moreover, this model is based on the idea that attitude and behaviour have a high correlation (Fishbein & Ajzen, 1975). Since the TPB assumes that individuals are rational decision-makers, it has been pointed out how it would have not been possible, for a rational mind, to act in way that is completely detached from his related values (Ajzen, 1985). Therefore, when a researcher cannot find a high correlation between the values and the actions of a certain individual, it must be because they are not correlating the behaviour with the right attitude, the one considered by the actor to be the most closely related to the targeted action (Kollmuss & Agyeman, 2002).

For example, people that have a strong concern for the environment are very unlikely to stop completely their car use, in order to reduce their carbon footprint. Thus, since no individual sees the environmental concern as strongly related to car use, even if its impact on the environment may be relevant on an aggregate level. Maybe they have a strong aversion for low temperatures that will bring them to often use the car during winter, even for small routes, or they may be forced to use private transportation because of the lack of public transportation alternatives.

In other words, the TPB is useful to show which attitudes may be considered relevant by the individual, when performing a certain behaviour. Anyway, critics of this framework underline how, with a restricted scope like this, much of the information on the relation between attitude and behaviour may be lost, and not always a possible way to foster a specific behaviour through the shape of certain attitudes will arise (Kollmuss & Agyeman, 2002).

Taking our previous example, it may be true that a person often uses his car, despite his strong environmental concern, because of his fear of low temperatures, but at the same time this relation may be of no utility to the researcher, especially if his objective is to find ways of fostering pro-

environmental behaviour, and what shapes a discrepancy between specific environmental attitudes and behaviours not perceived to be linked with the targeted behaviour.

In addition, Blake (1999) showed how social and contextual constraints (among other factors) could affect not only our attitudes, but also directly shape our behaviour, as showed in section 1.4. This aspect is particularly relevant because many researchers consider this to be the main reason for which providing more information is often not sufficient to overcome the environmental value-action gap (Kollmuss & Agyeman, 2002).

Summarizing, the TPB is one of the most popular models used in social psychology to understand the relation between attitudes and behaviours. His division in three different variables is very useful to identify if an individual relates the lack of pro-environmental behaviour to individual, social or capability issues. Such division helped the development of public policies that could target the factor, which was considered to be the biggest obstacle towards behaviour by the individuals themselves.

Anyway, his reliance on a rationality principle driving human actions brings many discrepancies to be explainable with a lack of information. Nonetheless, empirical studies have shown that advocacy and informational campaigns are not always an efficient way to foster pro-environmental behaviour, because other factors may intervene, and shape directly behaviour, or influence the attitude-behaviour relation in ways that are unpredictable by the TPB framework (Kollmuss & Agyeman, 2002).

2.3 Predicting Behaviour Through Past Actions

A theory that starts from completely different assumptions, than those characterizing the Planned Behaviour Theory, is the framework of Habitual Behaviour as a predictor of actions, developed by Arts, Verplanken & Knippenberg (1998).

Before proceeding with the analysis of the theory, we have to clarify, that Arts, Verplanken & Knippenberg (1998) developed this framework in order to explain those behaviours that are “*similar, if not identical, to behaviours performed many times before*”. Therefore, this theory does not provide an alternative to the frameworks that rely on the rational decision making process as a determinant of behaviour, rather, they provide an integrative theory to those frameworks, useful to analyse those behaviours that exemplify the characteristics that I will further explain in this section.

The theory defines three aspects shaping habitual behaviours:

- They require a goal to be achieved;
- When the outcome generated by the behaviour is satisfactory for the individual performing it, he will likely repeat the same course of action;
- Mental processes mediate habitual actions.

Hence, this theory relies on the idea that habits play a major role in defining many of our everyday

actions: when people frequently act in the same way, the context linked with that action, will be mentally associated with the repeated behaviour. In addition, a decisive factor for the establishment of a habitual behaviour is the repetition of an action over time, in similar contexts. The more we repeat an action, the less and less mental effort and conscious attention is required us, to perform the related behaviour (Arts, Verplanken & Knippenberg, 1998).

Therefore, no elaborated reasoning process is enabled in the case of habitual behaviour; rather there is an automated cognitive structure (this is what is to be intended as mental processes), which is learned, stored and enabled when the individual is frequently posed in front of that same situation (Steg & Vlek, 2008). Such considerations imply that, those considered to be habitual behaviours, may not be guided by deliberately formed intentions and may not respond to a conscious decision making process. If the repeated behaviour produces the desired outcome, the individual will proceed in performing it effortlessly and without conscious intent (Arts, Verplanken & Knippenberg, 1998).

Obviously, a change in context, or in the capability of the actor of performing the same action over and over again may break a habit, or prevent the individual from establishing one at all. Consequently, it is necessary that the same principles of learning and automatization apply to similar situations, enabling the possibility for a person to establish a behaviour that will be enforced through repetition (Arts, Verplanken & Knippenberg, 1998).

Moreover, once a habitual behaviour has been established, simple stimulus-response associations may guide the repetition of the behaviour. Aarts, Verplanken & Knippenberg (1998) however, showed that empirical studies focused on the processes guiding habitual behaviour, were more reliable in identifying habitual behaviour, when a response-time paradigm was used, implying that the less speed is required for an individual to perform an action in relation with a certain situation, the more likely a habit has been established. In other words, the reaction time required by the individual to respond with an action to a certain situation, is an indicator of the strength of the habitual action related to that situation.

In particular, they focused on behaviours implying different travel modes. They observed that these behaviours are particularly related to habit, because of the high chance of being related with the same principles of learning and automatization, that favour the establishment of a habit (Arts, Verplanken & Knippenberg, 1998).

Just to have a clearer understanding of how easy it is, for travel-mode related behaviours, to be established, think about how the everyday repetition of the home-workplace route brings people to perform these actions automatically and easily memorize the streets and spaces connected to the journey. Many people do not even change their route accordingly to traffic, or any kind of contextual conditions, since a very strong habit has been established over the routine of using the same path over and over again.

This same kind of mechanism related to behaviour, has been observed by Arts, Verplanken & Knippenberg (1998). They analysed undergraduate students' travel-mode habits and provided them different hypothetical routes. Afterwards, they had to express their likelihood to perform those routes by bicycle. The researchers noticed how those that usually used the same travel-mode over their different habitual routes (the so-called strong-habit persons), were less likely to consider the information specifically related to a hypothetical route, in order to express their likelihood to use bike to travel. At the contrary, weak-habit persons, who were less habitual in travel modalities, relied more on the specific information provided, and their choices were more affected by those contextual conditions (Arts, Verplanken & Knippenberg, 1998).

With these results, Aarts, Verplanken and Knippenberg, (1998) showed how the repetition of behaviours related to similar situations, like travel related actions, affect the future behavioural choices, related to the same or more or less similar situations.

In conclusion, how do these implications over habit and related actions do entail in shaping pro-environmental behaviour?

Indeed, they could be very important to be considered, in order to create public policies that aim to change those behaviours that could particularly harm the environment, and be related to habit. Thus, because the provision of information over the environmental damage of certain actions, could not be enough to bring a change in individuals' behaviours, even in those persons that have a strong environmental concern. Since the establishment of a strong habit brings a person to easily ignore information relevant to the situation related to the habitual behaviour, it could be necessary to provide the tools necessary to make people conscious of their automated cognitive processes that are enabled when an habitual action is established.

In order to provide a deeper understanding of the role that habits may play in our performance of environmentally relevant behaviours, I compare the theoretical framework provided by the Theory of Habitual Behaviour with the empirical studies made by Chung & Leung (2007) and Honabarger (2011). The first research focused on recycling behaviours performed by Hong Kong University (HKU) undergraduate students, the second study surveyed purchasing decisions related to more or less sustainable cleaning products, among American citizens. Recycling waste and purchasing goods choices, which were analysed in those two studies, are particularly relevant for a wider understanding of how habits shape our environmental practices, because they involve an everyday repetition, being strongly connected with household activities. Therefore, being actions repeated through time, those might be especially connected with our automated mental processes that enable habitual behaviours.

Chung & Leung (2007) noticed how, despite a generally strong environmental concern being present among HKU students, many of them did not recycle enough to be considered coherent with their attitudes. In other words, there are motives to believe that the respondents overstated their recycling

frequency (Chung & Leung, 2007).

Moreover, they highlighted that the 47% of the infrequent-recycling participants indicated their practice of throwing recyclable goods in normal waste bins instead of using the recycling facilities. So, no practical or contextual barrier is considered by the students to prevent them from recycling. Instead, what emerges is the presence of a routine practice over the usage of waste facilities (Chung & Leung, 2007).

The researchers explained these routine practices with the distinction made by Giddens (1986), of practical and discursive consciousness. Practical consciousness is defined as knowledge that enables individuals to take action without having to make new decisions every time the same situation is present. While, discursive consciousness is considered to be a body of knowledge, determined by values and experiences, which enables the ability, for the individuals to consciously defined why and how they engage in a certain activity.

Both these types of consciousness shape our behaviours. In particular, practical consciousness drives, according to Giddens (1986), routine practices and more in general everyday actions, but it is so internalized that even the actor hardly notices it.

Therefore, taking into account what we have said in section 2.3, we may consider routine practices congruent to the concept of habitual behaviours and practical consciousness as the automated cognitive structure that enables habits, as defined by Arts, Verplanken & Knippenberg (1998) in their Theory of Habitual Behaviour.

As a consequence, we can understand that one important factor in shaping a value-action gap in recycling behaviours, may be habit. Moreover, as said by Chun & Leung (2007): “there is an indication that a substantial proportion of casual recycling participants... do recognize and are receptive to environmental values, but they do not always pay attention to or apply these values and rather let the recursive state of mind rule their behaviour”.

Such conflict between what those individuals recognized to be important and what they actually did on recycling waste can be easily understood through the framework of the Theory of Habitual Behaviour. Respondents asked on their values gave answers determined by their discursive consciousness (Giddens, 1986), or conscious mental processes (Aarts, Verplanken & Knippenberg, 1998). At the same time, their recycling behaviours were determined by practical consciousness (Giddens, 1986), or automatic cognitive process (Aarts, Verplanken & Knippenberg, 1998), that were not acknowledged by the respondents themselves.

Despite the strong environmental concern demonstrated by many respondents, a big portion of those was still resulting as an infrequent-recycling actor, and almost a half of those infrequent-recyclers indicated their habit to use common waste bins even for recyclable goods, as a major factor driving their behaviour (Chung & Leung, 2007).

The second study, made by Honabarger (2011), focused on the evaluation made by respondents on products with different environmentally related labels.

Honabarger (2011) showed how those that had high level of past environmental purchasing behaviours, also evaluated products bearing eco-labels notably more positively than those that recorded no past environmental purchasing practice. Moreover, the researcher noticed that the overall consciousness of respondents on the environment did not influence their evaluation of “green” products (Honabarger, 2011).

Thus, implies that information provided on environmental issues, and the resulting environmental consciousness shaped in the targeted individual, may not be a sufficient factor to bring a change in environmental purchasing practices. More likely, those practices, because of their everyday repetition, are more connected to habitual behaviour and automatic cognitive processes.

The results obtained from those two empirical studies, reinforce the idea that habits play a major role in shaping our environmentally related behaviours. Moreover, it is not to be underestimated that, behaviours related to habit, being the result of automated mental processes, may not be easily changed by public policies that rely on providing more information to the individuals.

In fact, what Honabarger (2011) evidenced is that those that are considered to have a higher environmental consciousness do not link it with their practices.

In conclusion, for policy makers to effectively tackle environmentally damaging practices that are considered to be related to our everyday actions, like purchasing goods, or recycling waste, the target should focus on making individuals conscious of how habits establish and reinforce themselves through their repetition over time. Thus, since less and less cognitive energy is required to the actor to repeat those actions and no conscious attention is generally paid by the individuals to those habitual activities.

Also, as explained by Steg & Vlek (2008), forcing strong-habit people to perform different actions than those they are used to, for a limited period of time, could bring them to change their perceptions over the behaviour related to that context and similar situations. In particular, Steg and Vlek (2008) showed how, frequent car users, once temporarily forced to use alternative travel modes, experienced a long-term reduction in their car use. This effect suggests that strong-habit persons have inaccurate, or at least modifiable, perceptions of the situations and actions related to their habits.

In conclusion, policy makers need to provide information useful to raise awareness of their habits, in individuals, and of how much their strength could bring them to ignore the consequences of these actions. Therefore, they should focus on providing alternative habits, which could replace environmentally harming behaviours. In this way, more than one accomplishment could be achieved: disrupting habitual behaviours that could harm the environment and make people more conscious of their automated cognitive processes that bring to the establishment of their habits. In addition, such

automated mental processes could be used in order to establish green habits, which could provide a way to reduce individual environmental impact, without the need of performing actions that could be perceived by the actor to involve a high behavioural or cognitive cost. Thus, because we have already showed how habitual actions, require less and less cognitive effort once they start repeating constantly over time.

2.4 The Goal-Framing Theory

Starting from a completely different point of view on the mechanisms shaping human behaviour is the Goal-Framing Theory (GFT), developed by Lindenberg (2001).

This theory focuses on the general perspective of the pro-social behaviour that is to be intended as any kind of action that benefits other people or the society as a whole. It is clear that pro-environmental behaviour is a sub-category of pro-social behaviour, being the environmental capital a good affecting everyone's well being and the society as well (Blake, 1999; Lindenberg, 2001). Hence, we can proceed to understand how the GFT is composed, and how it may be a useful tool for environmental policy makers.

The GFT is composed by a number of interrelated cognitive processes, motivations and goals that together are considered to be intervening in shaping our behaviour. Together with them, we have to consider mental models, which are specific way of thinking, related to, and enabled by, particular social contexts (Lindenberg, 2006).

To be more clear over the concept of mental models, I will make an example: if a school asks for financial contribution to parents, to be able to renew certain locals, let us say, in a meeting with teachers, suggesting them to contribute as much as their economic situation allows them, it will be a completely different situation than, for example, organising a fundraising dinner in order to collect the money for the renewal. Even if the people involved will be most probably the same, and the problem is the same, those two situations will bring different reactions by parents, because different mental models are associated with each situation. Thus, even if in both cases we are speaking of pro-social behaviour, and if in both cases donations are made public: in the first case with a list published by the school, to thank the donors, and in the second case with a "contributions box" passed hand-by-hand during the dinner. While in the first case richer and wealthier parents will most likely contribute more than families that have financial problems, such behaviour may not be present in the same way, or in the same grade, during the fundraising dinner, because no mention to families' economic situations is present.

Such different situations arise, because different mental models are enabled in individuals asked to donate, in those two situations. In the case of the fundraising dinner, even a mother that has economic

struggles will feel the duty to contribute as significantly as a richer parent, or at least enough to meet the social expectation of other participants. In the other case instead, the very same, financially troubled, mother, might feel no need at all to help the renewal, because she believes it is responsibility of other, richer families and the publicity of the action is not on the same level of the “contributions box” present in the fundraising dinner. So, not only different mental models, but also different goals are present in these two situations: in the case of the dinner, the individual feels the need to be “competitive” with other donators. An objective that is not present when considering the situation of the teachers meeting, in which case, the individual will feel the need to contribute according to his economic situation.

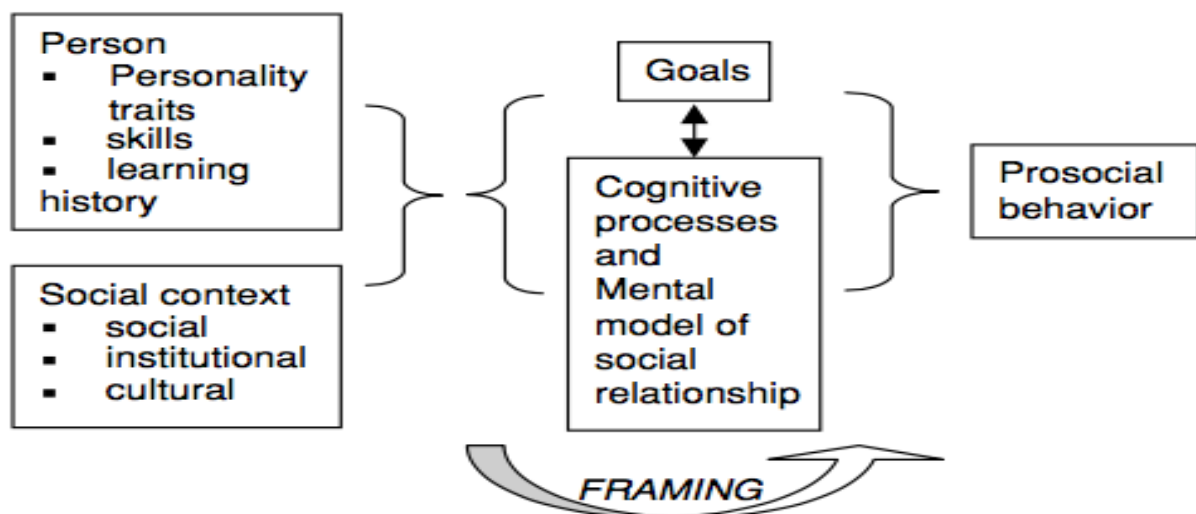


Figure 3 (Lindenberg, 2006)

Cognitive processes, mental models and goals, are considered to be the factors influencing pro-social behaviour. As showed by Figure 3, those factors are shaped in many different ways by personally determined factors and social contexts. The whole process is defined as framing, because it results in the creation of a certain set of alternatives, within which the actor will choose his behaviour, according to all the previously mentioned variables (Lindenberg, 2001).

Anyway, in order to properly understand the GFT, and how it may be useful for public policing, in addition to the factors that shape pro-social behaviour, we have to clear the assumptions it starts from and their implications, apart from the framing process itself.

First of all, people’s perception of a situation is considered to be selective. So, individuals focus on one aspect related to the targeted action, and ignore, or do not pay the same attention to other aspects; which aspects are relevant to people, depends mainly on the major goal they are pursuing at the moment (Lindenberg, 2006). Moreover, these cognitive processes are linked to motivation that is largely determined by the major goals. The sum of those goals and the cognitive processes previously described composes the frame (Lindenberg, 2001).

Let's take the example of a consumer in a supermarket: despite a generally strong environmental concern, the person could have the major goal of reducing the economic costs of groceries to the minimum. Therefore, he ignores his environmental concerns related to low-price production, and buys even those goods that are probably too cheap to be produced in an environmentally respectful way.

Second assumption to be considered, is that, in order to give more importance to a certain major goal, many other aspects are cognitively pushed into the background. Thus implies that the individual puts some information, knowledge and attitudes in the background, because he is more sensible to other aspects, more strictly related to his major goal (Lindenberg, 2001). From our previous example, we can see how the consumer pushes his knowledge on the environmental issues and his individual impact as a consumer in the background, because of the major goal of reducing economic costs to the minimum. For such reason, he is more sensible to low-prices and offers rather than to labels that could indicate those products that are produced in an environmentally respectful way.

Third aspect to pay attention to, is that goals cannot be represented as ordered preferences, because they influence the situational preferences, expectations and selection from their behavioural repertoire. They are, in other words, part of the frame (Lindenberg, 2006). Goals are the main factor influencing behaviour, and not the behaviour itself, neither the behavioural alternatives posed to himself.

This is important to consider that the GFT does not simply rely on the selective attention process, but on a cognitive process that ranks all alternatives relative to a behaviour and chooses one of them, based on the combination of his major goal, his other goals, the alternatives available, his expectations, his perception of normative expectations, and many other external and internal factors that are to be determined case per case (Lindenberg, 2006).

Finally, exactly like for information and attitudes, there are goals that are pushed in the background by the overriding goal, that dominates the framing process related to that particular behaviour (Lindenberg, 2006). Anyway, those "secondary" goals will not be completely ignored by the individual, but will have less influence on the final action that he will perform, compared to the role played by the major goal.

Taking a slight variance of the previous example, a consumer that is more concerned that the goods he purchases are environmentally friendly, rather than cheap, has as major goal to buy "green" products. Anyway, this does not imply that price variances within different "green" products will not have an influence on his final purchase. Thus, not because he ignores the goal of reducing economic costs, rather, because he considers it secondary, compared to the objective of being an environmentally responsible consumer.

Still, we have to consider the presence of these background goals, because their influence on individuals' choice may have two effects: they may change the ordering of the possible alternatives,

within which the actor will choose his preferred behaviour, and they may influence the strength of the frame (Lindenberg, 2006).

Taking again our previous example of the consumer mainly concerned over the environmental effects of his purchasing, but that also has the background goal of reducing as possible economic costs, we can see that, if he has to choose between two equally sustainable products, he will more likely choose the cheapest one. At the same time, if there is another consumer that has the background goal of choosing the best quality goods, no matter what the expense is, between two equally sustainable products, he will be influenced by his background goal to consider the purchase of the more expensive good, because it may be index of better quality.

So, we can understand how, different background goals have to be taken into account as influencers of the preference the actor has, between the alternatives posed by his major goal.

For what concerns the second effect mentioned: influencing the strength of the frame, we have to consider that every overriding goal, that creates and is the main influencer of a certain frame, has also a certain strength, which influences the choice between the alternatives of the individual (Lindenberg, 2006). If the overriding goal is really strong, the individual will be pushed to choose the best alternative, according to that major goal. While, if the main goal is weaker, the background goals may play a role in the individual's choice, and bring him to choose an alternative that suits both the background and foreground goals, but that may be considered to be the second or third best choice according to the overriding goal. Also, another effect that could be a consequence of a certain frame and the related major goal becoming weaker, is that a goal that was previously on the background, may now arise as the foreground one, and determine a frame switch, towards alternatives that suit the new overriding goal. Thus, because the alternatives determined by the previous major goal, are no longer attractive as the new one (Lindenberg, 2006).

Take our example again: if, the price of sustainable products increases substantially in a short period of time, making the foreground goal of being a sustainable consumer less attractive, it can bring the consumer himself to change his behaviour accordingly, purchasing less "green" products, or even bring him to switch towards the "smart" consumer frame, in which the preferences are determined by economic costs. Therefore, he would change his major goal from being an environmentally responsible consumer, to reduce as much as possible the economic costs of purchasing consumable goods.

Moreover, the GFT, in order to be linked with pro-social behaviour, considers the many overriding goals to be entailed in three different master frames. These frames can be taken to be core motivations, which are the result of the major goal related, desired outcome.

Lindenberg (2006) describes three different master frames:

- Normative Frames;
- Gain Frames;

- Hedonic Frames.

All these three categories are linked with different set of alternatives. Which category will belong to a certain situation, will depend on the individual's major goal, and the related possible behaviours.

In a normative frame, the major goal of the actor will be to act appropriately to the social expectations of others. In a gain frame context, the major goal of the person will be to find the most efficient behaviour. Finally, for a person entailed in a hedonic frame, the major goal will be of acting in the way that makes him feel better emotionally (Lindenberg, 2006).

Also, those different master frames, are differently sensible to contextual changes: a normative frame may be strongly disturbed by uncertain social norms; in the same way, gain frames can bring an individual to be unsure on his alternatives, because of uncertain gains and costs related to the possible actions. Likewise, hedonic frames are particularly sensible to mood changes and to the emotional response of others.

All the three of those frames, will emerge from individuals' major goals, in different contexts: in a public business meeting, for example, the normative frame will most likely be the dominant one for each participant.

However, all the three different sets of major goals and the related master frames can enable pro-social behaviour. Different contexts and experiences will bring individuals to entail different situations in different combinations of those master frames. Consequently, if the behaviour considered being the most suitable to the related major goal, and master frame, is also a pro-social behaviour, we can see that a relation between major goals, and therefore master frames, and the pro-environmental behaviour is established (Lindenberg, 2006).

In conclusion, we can understand how the Goal-Framing Theory can help us in making pro-environmental policies more efficient. We have to look at what are the major goals of an individual, and, as a consequence, which master frames emerge in different contexts. Identified the master frame, we will know which are the possible alternatives that the individual will most likely choose. Therefore, to enable pro-environmental behaviour, policy makers should push for an environmentally friendly action that fits the master frame and the major goal that is identified to be motivating the individual in the targeted situation. According to the GFT, understanding the overriding and background goals, and the related list of alternatives of different individuals in different situations, will enable the possibility, for policy makers, of creating situations, in which both the individual utility and the pro-environmental behaviour are at their best.

2.5 The Value-Belief-Norm Theory

As shown in the previous sections, there are many different models that aim to predict human behaviour, through the attitude-behaviour relation. All these theories have very different point of views, and may be useful to understand and predict different environmentally relevant behaviours. However, Stern (1999, 2000) developed the so-called Value-Belief-Norm theory (VBN), a model that tries to provide a more coherent framework, capable of synthetizing many different factors influencing the attitude-behaviour relation that we saw to be differently used and considered by other theories.

To do so, the VBN connects variables taken from value theories (that rely on the assumption that values are the basis of environmental concern and of pro-environmental behaviour), from Schwartz's (1977) norm-activation theory and from the New Environmental Paradigm (NEP), already mentioned in section 1.2.

For what regards value theories, their aspects that are relevant to the VBN model, have already been described in the first chapter, section 1.2. Moreover, as also explained in the very same section, the value orientations declined by value theories, have been further developed under the NEP.

Therefore, in order to understand the VBN, we need to understand the factors on which the norm-activation theory and the New Environmental Paradigm are based, that are relevant for the framework of Stern's VBN theory.

The norm-activation theory relies on the assumption that an individual performs altruistic behaviour, including pro-environmental behaviour, only when he has developed certain personal moral norms. Those personal norms can be defined as internalized sense of responsibility to act in a certain way.

So, personal moral norms occur when a person believes two things (Schwartz, 1977). First, he has to believe that particular conditions may harm the others (Stern, 2000). This is the so-called awareness of adverse consequences (AC). Second and strictly related to the first aspect, the person has to believe that his actions could in some way avert those consequences (Stern, 2000). This is the phenomenon known in behavioural psychology as ascription of responsibility to self (AR). In other words, the individual is conscious that he is capable of reverting some of the conditions harming the others, therefore he feels responsible to do it. As we will see AC, AR and personal moral norms will be relevant concepts for the VBN framework and the attitude-behaviour relation it declines.

Different assumptions and perspectives entail instead, the New Environmental Paradigm.

The NEP has been developed in order to give an analysis tool, useful to understand behaviours and environmental values that rely particularly on a broad perspective of the environment. Those values are generally ignored by empirical studies, which tend to focus on specific attitude-behaviour gaps and pro-environmental actions (Stern, 1999).

The NEP aim is to give an insight on the growing acceptance of a new worldview that highlights the negative impact of human actions on the biosphere. For this reason, the NEP considers the biosphere as something that environmentally concerned individuals, may consider valuable by itself, not only for his connection with human life (Stern, 2000).

Subsequently, it is particularly useful in order to understand the beliefs individuals have, over adverse consequences (AC) of their actions on the environment. This is the reason for which Stern (2000) includes it in his framework: those studies based on Schwartz's norm-activation theory, generally give an insight on narrower, problem-specific consequences, while the NEP may give a clearer understanding of the awareness of adverse consequences that individuals actually have.

In order to have a clear understanding of how those different factors, referred to different theories, entail in the scheme of the VBN theory, we rely on the scheme represented in Figure 3.

As shown in Figure 3, the combination of the value orientations described in section 1.2, is the key variable determining an individual's ecological worldview, which will consequently define his AC and AR. The resultant of his beliefs on adverse consequences and the perception of his own ability to reduce the threat through his individual actions, is going to shape a certain set of personal moral norms, which will bring him to feel a sense of obligation to engage (or not engage) in pro-environmental behaviours (Stern, 2000). The types of environmentally relevant behaviour that are considered by the VBN theory, are the very same that have been described in section 1.5.

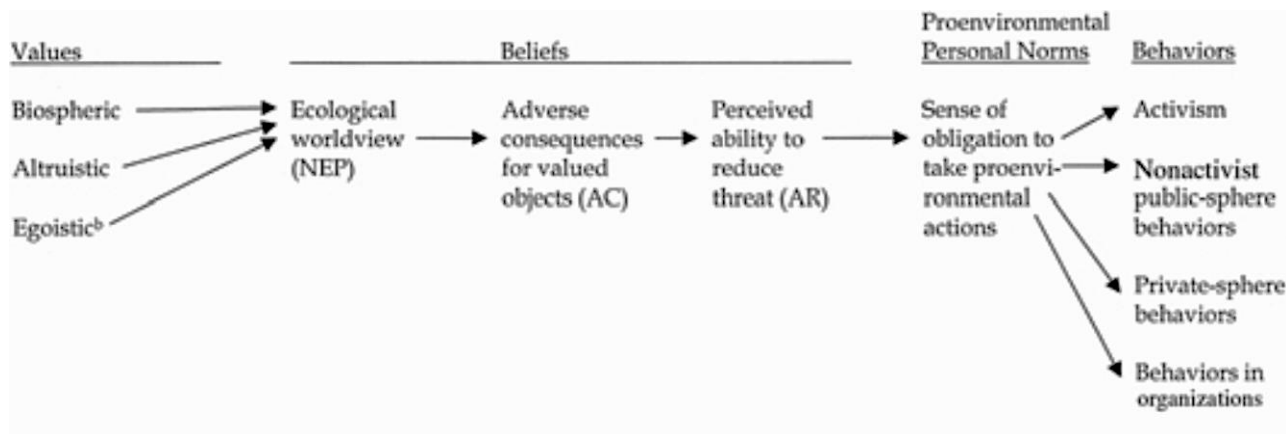


Figure 3 (Stern, 2000).

Stern (1999) postulates that each factor composing this causal chain, directly affects the one that follows, and can as well directly affect factors further down the chain.

Moreover, since the VBN theory postulates that the adverse consequences are going to shape personal norms, depending on whatever personal values the person has, it is consequential that different individuals will have different pro-environmental personal norms, that address various environmental issues, depending on their personal combination of value orientations (Stern, 2000).

In other words, a person having a strong biospheric concern will feel a sense of obligation to engage in behaviours reducing his impact on non-human life and the nature in general. For the same reasons, an individual having a particularly strong altruistic set of values, will have personal norms pushing him to engage in actions, that aim to reduce the environmental harm procured to others. Finally, a person with an environmental concern based on egoistic values, will be pushed by his personal moral norms to perform actions aimed to improve the environmental aspects directly affecting his interests (Stern, 1999).

For example, a person with a strong altruistic attitude will engage in activities such as reduction of car use. While, a person that feels a strong biospheric concern will engage in behaviours such as waste recycling or activism for an environmental organization.

In addition, the relation between pro-environmental behaviours and beliefs, such as the awareness of consequences (AC) and the perceived individual capacity to reduce threats that target valued individuals or objects (AR), bring to the conclusion that personal moral norms on the environment, and consequentially the connected environmental behaviour, may be influenced by information that shape these beliefs (Stern, 1999).

New scientific discoveries over individual actions that have a substantial aggregated impact on the environment, and a widespread advocacy of these findings, as well as the citizens' perception of the openness of the political system to individual's environmental concern, may be decisive in order to foster environmental concern through the shape of personal beliefs and moral norms (Stern, 2000).

Afterwards, Stern exposes causal variables that may play a role in shaping our beliefs, but also directly influence our performance of environmentally relevant behaviours. Thus, in order to provide tools, useful to employ the VBN theory in empirical studies (Stern, 2000). Moreover, those causal factors are particularly useful to understand the value-action gap as entailed in the VBN framework, because they are considered to directly influence behaviour, no matter which values, beliefs and personal norms the individual has developed. In other words, they may explain the presence of a discrepancy between personal moral norms and behaviours, because the actor perceives those causal factors as more important, or more related, to the targeted behaviour (Stern, 2000).

Those causal variables are divided in 4 categories (Stern, 2000):

- Attitudinal factors, such as environmentalist predisposition and non-environmental attitudes in general, that may affect environmental behaviour;
- Personal capabilities, such as education, social status, economic resources and personal skills;
- Contextual factors, such as costs, laws, technology, social norms, etc.;
- Habitual and routine related factors, which have been described in section 2.4.

All these causal variables differently and directly influence beliefs and behaviours, and they can be general or related to a specific action.

Personal capabilities as education and personal skills may influence the awareness of consequences (AC). In a similar way, contextual factors may shape people's perceived capability to reduce threat (AR). For example the current laws on household energy efficiency may play a role in an individual's perceived capability to reduce his own household energetic impact, through the use of solar panels. Also, different factors will interact differently with people that have different value orientations. Taking the previous example, there might be particular economic incentives on the purchase of solar panels, that bring a person with a strong egoistic value orientation to perceive that he can have a personal advantage from buying solar panels, that will on the long-term make him save economic resources linked with energy consumption.

Of course, as clarified by Stern (2000), all those causal factors, as well as value orientations have to be considered in a broader view. In other words, all pro-environmental behaviours involve different combinations of causal factors and are a resultant of different mixes of value orientations (Stern, 2000). Moreover, as previously mentioned, those combinations will be affected by general conditions as well as by intervening variables relevant only for a specific behaviour.

As a consequence, no general theory on environmental concern may be possible to synthetized. Nor it may be useful to understand the value-action gap, and tackle specific environmental issues related to individual behaviours. Differently, a framework as the one provided by the VBN theory, may be useful to understand how the many variables, both general and specific, shaping behaviour, may influence environmentally relevant actions (Stern, 2000).

In conclusion, we can say that the VBN theory may be a useful framework, in order to have a broad view of the complex relation underpinning attitudes and pro-environmental behaviours. Also, it may be useful to understand the impact of different combinations of social, individual and contextual factors on pro-environmental behaviour, from an actor-oriented point of view.

As explained by Stern (2000): *“First, identify target behaviours that are environmentally significant in terms of impact. Then analyse the behaviours to identify the responsible actors and actions. Then consider the full range of causal variables and explore their possible relevance to the target behaviour from the actor's standpoint. By exploring the possibilities directly with representatives of the population whose behaviour is to be changed, it is possible to find promising strategies for intervention without trying them all out experimentally.”*

In other words, this theoretical framework may be useful to analyse cases in which we want to identify if a set of environmentally relevant behaviours performed by an individual, is linked with his general environmental attitude and his set of values. Therefore, researchers can identify if there is a problem of value-action gap, or if there is an issue related to lack of information, or any other possible causal variable. Moreover, they do not need to test empirically all the possible effects on behaviour produced

by causal variables, since this framework gives the possibility to identify which factors are related to the targeted behaviour and which are not.

Hence, the VBN brings a new insight on pro-environmental behaviour, because of the association of variables influencing environmentally relevant actions that come from three different theories, which have different starting assumptions and point of views on the attitude-behaviour relation. The use of the VBN theory then, may be useful to understand which are the factors that play a major role in different types of environmental action, and help us understand which other theoretical framework may be useful to analyse that action and its shaping variables.

Conclusion

In this chapter, we analysed how the theoretical frameworks developed on the subject of the attitude-behaviour gap during the last decades.

We observed how, from a simple, linear theory (the US Linear model), which connected attitudes with actions almost directly we arrived to a much wider and more complex Value-Belief-Norm theory that tries to include many different variables, that have been demonstrated to affect our values and behaviours by other theoretical frameworks.

However, what emerged from this chapter is that no theory can provide a general understanding of the attitude-behaviour gap. Thus, since no environmentally relevant behaviour is dependant on a single variable, different situations and different actions, have to be considered with different point of views. Therefore, each framework may be more or less useful to understand a certain environmental behaviour, depending on contextual circumstances and on the factors that shape the targeted individual's motivations and perspective.

According to what we exposed previously, Ajzen and Fishbein's TPB will be particularly useful to identify which attitudes, does the actor relate to his actions. However, such strict scope will bring us to lose the possibility to have a wider perspective over a certain person value-action gap.

At the same time, the Habitual Behaviour framework may be useful to understand which actions individuals perform without paying conscious attention to the consequences, because their repetition over time created automated cognitive processes. Subsequently, the theory of Habitual Behaviour may be useful to tackle those behaviour that are highly environmentally damaging but that are generally perceived by individuals to have a high behavioural cost, when it comes to change them. Thus, since many environmentally relevant behaviours are entailed in our routines and everyday actions so strongly, that individuals have misperceptions and selective attention on their possible alternatives.

Afterwards, we analysed the goal framing theory, and how it may be useful to understand how slight differences in similar contexts, and in situations that may require the same pro-social behaviour, can

bring an individual to behave in many different ways. Moreover, it provides a completely different point of view over the cognitive processes that guide our actions, as it entails them in a goal-to-be-achieved perspective, which may have many implications for policy makers. Analysis on targeted actions, based on the framework provided by the GFT, may bring us to understand which alternatives involved individuals do consider, and which they ignore, due to external and/or personal factors. Subsequently, we may have an effective tool to identify which external variables are to change in specific situations, in order to enable pro-environmental behaviour in as many actors as possible.

Finally, we analysed Stern's VBN theory and how its unification of variables coming from three different frameworks, provides one of the best general perspectives on people's value-action gap on pro-environmental behaviours. The mix of "value orientations", with individual beliefs, awareness of consequences (AC) and related perceived capability of reducing threats (AR), that all contribute to form personal moral norms, considered to be the basis of our actions, entails all those factors that emerged from theories developed on the subject, by different fields of the social sciences.

In conclusion we can say that no general relation between attitude and behaviour is determined by any of those frameworks. More likely, the relation between those two variables is determined by factors related to the single individuals performing the actions, and the social and contextual conditions in which the behaviours take place. In addition, we noted how different environmentally relevant actions may be better analysed by one framework or the other, because even specific conditions determined by the characteristics of the behaviour itself, may shape differently the relation between values and actions.

Chapter 3 - Conclusion

3.1 Towards a coherent understanding of the value-action gap theoretical frameworks

In the two previous chapters, we analysed which factors influence attitude and behaviour. Moreover, we saw how, according to different theories, those factors interact with each other, determining the relation between values and actions. In addition, we provided different examples of environmental actions in order to understand how they entail in the different theories. Thus, provided a deeper understanding of the complex set of variables shaping environmentally relevant behaviours.

We saw that different frameworks may better explain different pro-environmental behaviours, and that none of them is capable of taking all the factors described in the first chapter into account.

Such issue derives from the fact that those theories rely on different assumptions, which often are not compatible with each other. For example, the assumption of individuals as rational decision-makers made by the Theory of Planned Behaviour, exposed in section 2.2, cannot be integrated with the idea of automated cognitive processes and selective attention concepts on which the Theory of Habitual Behaviour relies.

Anyway, despite such fragmentation being present in the literature on the value-action gap and on the shape of pro-environmental behaviour, we have to say that none of those theories has been developed with the intent of being inclusive of all possible factors and combinations, that may influence the attitude-behaviour gap.

One clarification is needed: even the Value-Belief-Norm provided by Stern (2000), that I have explained in section 2.5 to be the most comprehensive framework, capable of providing a wide scope on the attitude-behaviour gap of an individual on environmentally relevant actions, has a specific purpose and does not claim to be the best framework to be used in analysing any environmental behaviour. The specific target of the VBN Theory is to evidence the overall environmental attitude and related behaviours, with the aim of providing an idea of how strong

Comparing it to the TPB developed by Fishbein and Ajzen (1975), we can understand how those two theories can be useful in order to understand two different situations, related to environmentally relevant behaviour. The TPB is particularly useful to understand which specific attitude is considered by the individual to be relevant, for a certain action. For example, the TPB may be used to understand which values are considered to be relevant by people, when engaging in car use.

While, the VBN theory might be more efficient to understand which is the actual attitude-behaviour gap in a certain individual. For example, when we want to identify if the heavy car use of a certain individual is coherent with his environmental attitude, or if we want to understand the overall

environmental attitude of individuals that engage in certain environmentally damaging behaviours, in order to understand if the problem is linked with lack of information, or other issues.

The same way of thinking can be applied for all the other theoretical frameworks provided in this research. In other words, we noticed the particular efficiency of the Theory of Habitual Behaviour to explain the attitude-behaviour gap present in everyday actions performed by people, because those actions are characterised by a constant repetition over time.

Similarly, the Goal-Framing Theory exposed in section 2.4, may be particularly useful to understand how the relation between attitude and behaviour varies between different contexts. In particular, it describes how different external factors may influence individuals' way of thinking over certain issues that require their action, and influence the resulting behaviour. As explained by the example exposed in section 2.4, a fundraising, organised by a school and targeted to the families, may bring parents to act in competition with others (i. e. donate as much as other donators) or to contribute according to their financial situation. Thus, derives from the fact that the social context, in which the donations are requested, even if the request and its objective are still the same, will enable different framing processes and goals in the participants. If it is the situation of a fundraising dinner, with a contribution-box exposed to the public, people will be pushed to compete, while if the situation in which donations are requested is that of a teachers-parents meeting, with private donations, people will be pushed to contribute according to their economic availability. Therefore, the Goal-Framing Theory may be particularly useful to understand which factors may prevent, or foster, pro-environmental behaviour.

In conclusion, no provided framework is capable of successfully identify all the value-action relations linked with pro-environmental behaviour. Anyway, no such framework is needed, more likely, it is necessary to link the correct framework with the different issues that we want to address, depending on internal (or individual) and external factors play a role in the different behaviours the researcher wants to analyse.

3.2 Implications for policymaking and general conclusion

To conclude this research on the value-action gap, it is necessary to synthetize what the analysis of those theoretical frameworks, implies for environmental policies.

In particular, we mentioned in sections 2.1 and 2.2 that public policies mainly rely on information-based models and on the general assumption that more information on environmental issues raises concern in individuals, that are consequently pushed to take part in pro-environmental activities aimed to foster the environmental outcome of certain human behaviours.

Thus, despite the fact that researchers have showed how the relation between attitudes and information is complex and other factors may intervene, preventing certain knowledge from being used by

individuals. For example, the theory of habitual behaviour explains this situation with the intervention of misperceptions and/or selective attention, determined by past behaviours, which enable certain sets of knowledge and push the individual to ignore others.

In addition, we noticed that even the relation between attitudes and behaviours is complex, and may vary because many other variables intervene and modify both our values and actions. This is easily explained by the Goal-Framing Theory as an interaction between background and foreground goals, as explained in section 2.4.

Therefore, policies that aim to change environmentally relevant behaviour providing more information may not be sufficient. Advocacy campaigns may be efficient in changing the so-called purely volitional behaviours. Those are the behaviours that are analysed and properly explained by theoretical frameworks relying on the assumption that we are rational decision makers, making systematic use of the information provided to us, such as the Theory of Planned Behaviour exposed in section 2.2.

For what concerns other behaviours, that involve other variables rather than simply our attitudes and their influencing factors, more complex or specific frameworks may be needed.

For example, we exposed in section 2.3, that there are certain routine actions that, through their repetition over time, enable automated mental processes that enforce those actions and may bring individuals to not relate their performance to their values. For this kind of behaviours, providing more information on the environmental impact of those actions may not be enough to make people change those routine actions. Because of the processes of selective attention and misperception enabled by habitual behaviours in individuals, routine actions may not be consciously performed. Therefore, no systematic use of information is made here. Hence, what is probably needed is more knowledge related to the way habits are formed and reinforced, rather than information on environmental issues. This could provide a tool to individuals, to bring them to perform even their habitual behaviours with more conscious attention. Moreover, policies focused on how to change our habits towards a more pro-environmental lifestyle, may be useful in order to make people more conscious of their routines and their environmental impact.

Clearly, the theories exposed in this script, are not comprehensive of all possible variables, relevant to the shape of human behaviours, because such a wide scope on the subject would not provide information useful to understand how specific behaviours that have an impact on our environment are determined.

As a consequence, what emerges from this analysis, is that no general relation between attitudes and behaviours can be synthesized. Thus, because this synthesis would imply the exclusion of variables, that are relevant only for specific contexts or behaviours. The attitude-behaviour relation is determined by both general and specific factors, whose influence on values and actions may differ because of aspects relevant for specific actions and situations.

Consequently, no general theoretical framework can be developed, without losing much of the useful information on the attitude-behaviour relation and on possible policies aimed to change our environmentally relevant actions and raise awareness of our individual impact on the environment.

However, what may be useful for a more coherent understanding of the issue is the use of specific frameworks to analyse specific types of behaviours. We provided examples with the behaviour of car users described through the model of the theory of Habitual Behaviour, and with the analysis of different behavioural contexts through the scope of the Goal-Framing Theory, in the sections 2.3 and 2.4. Moreover, those specific frameworks should be used in empirical studies together with more comprehensive theoretical models, such as the Value-Belief-Norm Theory developed by Stern (2000). While the specific frameworks may be useful to address issues related to the inefficacy of changing specific behaviours through public policies, the general one may be used to have a wide scope of the attitude-behaviour gap present in specific communities or populations, for what concerns environmentally relevant behaviours.

For example, it may be useful to compare the attitude-behaviour gap present in communities belonging to different cultural tradition, to see if there are different discrepancies on the same objects.

In conclusion, the Value-Belief-Norm theory could be particularly useful to have a broad view of the value-action gap present in different contexts, and to make comparisons that may provide us new insights on the issue. However, for what concerns policies that aim to change specific actions, or address specific environmentally damaging practices, models that focus on a specific relation between attitudes and behaviours, may be more useful to develop efficient policies aimed to foster pro-environmental behaviour.

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Riassunto in lingua italiana

Questa ricerca si pone l'obiettivo di individuare come valori (o credenze) e azioni (o comportamenti) di un individuo interagiscono tra loro e come influenzano, in particolare, i comportamenti che hanno un impatto sull'ambiente.

L'analisi e lo studio della relazione tra mentalità e comportamenti di un individuo è particolarmente rilevante nel campo ambientale, in quanto è considerata da molti ricercatori la chiave per poter comprendere perché gli individui non si impegnano nel migliorare i propri comportamenti che, pur avendo un impatto ambientale irrisorio a livello individuale, sono significativi quando si considerano a livello aggregato. Numerosi studi empirici hanno infatti dimostrato che, nonostante molte persone abbiano ormai sviluppato una mentalità pro ambiente, questa non viene spesso seguita da azioni in linea con i principi che essa presuppone. Pertanto, l'analisi della relazione tra la mentalità e le relative azioni delle persone, è importante per poter spingere gli individui a sviluppare valori in linea con i principi ambientalisti, che possano anche portare allo svolgimento di azioni coerenti con essi. Tutto ciò per poter migliorare l'impatto individuale sull'ambiente.

Per poter analizzare le possibili relazioni tra valori e azioni, prima è stata fatta un'analisi dei fattori che sono considerati dalla letteratura relativa, rilevanti per l'interazione tra valori e azioni degli individui. Ciò è stato fatto nel primo capitolo, nel quale ho prima definito i valori (o la "mentalità") come "una predisposizione, imparata, a comportarsi in maniera concretamente positiva o negativa nei confronti di un determinato oggetto". Successivamente, sulla base della letteratura che si affida a questa definizione, una delle più largamente accettate, ho sintetizzato le variabili influenzanti i valori, in tre orientamenti individuali, la cui combinazione porta le persone ad essere predisposti ad accettare determinati valori, e adottare conseguentemente determinate mentalità. Questi tre orientamenti sono: la predisposizione a preoccuparsi di se stessi (orientamento "egoistico"), la predisposizione a preoccuparsi dell'interesse altrui (orientamento "altruistico") e infine la predisposizione a preoccuparsi della preservazione della natura in quanto tale (orientamento definito come preoccupazione per la biosfera). Ovviamente, come sottolineato nella sezione 1.2 della ricerca, queste tre predisposizioni non sono tra loro alternative. Piuttosto, la predisposizione individuale ad avere certi comportamenti è determinata dalla combinazione di questi tre orientamenti, che portano a risultati diversi da individuo ad individuo.

Dopo aver definito le variabili che interessano la mentalità, e le predisposizioni che portano a comportarsi in un determinato modo, sulla base della mentalità di un individuo, sono passati ad analizzare e categorizzare i fattori che influenzano il nostro comportamento, con attenzione particolare a quelle azioni che hanno un impatto sull'ambiente.

Per un'analisi più chiara di questi fattori, sono stati divisi in tre categorie: fattori relativi alle motivazioni, o individuali (che rappresentano tutte quelle variabili individuali), fattori contestuali (determinati dalle circostanze e tutto ciò che è esterno all'individuo) e fattori legati alle abitudini.

Queste categorie tuttavia, sono considerate diversamente dai vari modelli teorici, come spiegato nel secondo capitolo, che analizza le teorie maggiormente importanti per lo sviluppo della letteratura relativa al rapporto tra valori e azioni.

Ho poi analizzato quali barriere si potrebbero frapporre tra i nostri valori, e in senso più generale le nostre intenzioni, e le azioni che intraprendiamo. Sono state individuate tre diverse tipologie di barriere, rilevanti per le azioni che hanno un impatto ambientale: individuali, di responsabilità e pratiche.

Mentre le barriere individuali sono relative a fattori considerati dagli individui inscindibili dalla propria persona (quali tendenze caratteriali, personalità, ecc.), le barriere di responsabilità sono considerate rilevanti nel momento in cui l'individuo si ritiene in grado di svolgere una determinata azione, ma non la intraprende poiché non ritiene di essere l'attore responsabile per quel determinato comportamento e le relative conseguenze. Queste barriere potrebbero essere particolarmente rilevanti quando si cerca di portare gli individui ad avere comportamenti che hanno un impatto positivo sull'ambiente. Infine, rientrano tra le barriere pratiche, tutti quei fattori che prevengono un determinato comportamento ma non sono dipendenti né dalle caratteristiche dell'individuo, né dalla sua percezione della situazione e relative responsabilità, ma piuttosto da fattori esterni, indipendenti dalla volontà dell'attore.

Come successivamente osservato, all'interno del secondo capitolo, queste barriere alla creazione di comportamenti che hanno un impatto ambientale positivo, o che riducono l'impatto ambientale negativo al minimo, possono essere particolarmente rilevanti per una corretta comprensione della discrepanza tra valori e azioni che si può verificare nei comportamenti di un individuo.

In seguito, ho considerato la divisione, presente in letteratura, tra i diversi tipi di comportamento rilevanti per l'ambiente. In particolare, ho osservato come nella letteratura i comportamenti con un impatto ambientale rilevante, siano stati divisi in azioni concernenti la sfera pubblica o quella privata. Le azioni che hanno una rilevanza pubblica si dividono in attivismo ambientale e comportamenti non strettamente legati all'attivismo, quali ad esempio esprimere consenso per una politica pubblica ambientale, o essere disposti a pagare costi economici maggiori per ridurre il proprio impatto sull'ambiente o finanziare progetti ambientalisti. Mentre per ciò che riguarda i comportamenti operati all'interno della sfera privata, essi si dividono in comportamenti ambientalisti che hanno rilevanza solamente da un punto di vista aggregato, per la collettività e ogni altro genere di comportamento che abbia un qualunque impatto più o meno diretto sull'ambiente, ma che viene svolto esclusivamente nel contesto privato.

Successivamente, due sezioni sono state dedicate al ruolo della partecipazione nella creazione di comportamenti ecologici e nel superare la discrepanza tra azioni e valori, e come i ricercatori sul tema abbiano delineato un modello di partecipazione basato su comunità locali, ristrette, che facilitino la partecipazione di tutta la collettività a comportamenti che hanno un impatto ambientale rilevante a livello aggregato.

Tuttavia, come esposto nella ricerca, tale caratterizzazione della partecipazione potrebbe essere incompatibile con numerosi elementi della nostra società odierna, e in particolare potrebbe entrare in conflitto con la divisione istituzionale degli Stati moderni, che prevede che diverse agenzie operino a diversi livelli spaziali e condividano compiti.

Nell'ultima sezione primo capitolo, sono state analizzate le quattro diverse tipologie di approccio, considerate dalla letteratura sul tema, atte a spingere le persone a cambiare i propri comportamenti per ridurre il proprio impatto ecologico individuale.

In particolare, secondo questa divisione vi sono approcci atti a cambiare i principi religiosi o morali, degli individui, in modo da spingerli a cambiare in senso generale la visione del mondo degli individui e di conseguenza spingerli verso comportamenti collegati a questi valori.

Vi sono gli approcci educativi, che perseguono l'obiettivo di cambiare la mentalità degli individui e di fornire informazioni, relativamente a questioni più specifiche, come particolari problemi ambientali, con l'obiettivo di creare interesse nell'individuo verso determinate tematiche e migliorare la sua consapevolezza delle conseguenze delle sue azioni su queste problematiche.

Vi sono poi approcci più pratici, atti a diminuire le barriere economiche e sociali, che l'individuo potrebbe dover affrontare nel tentativo di cambiare le proprie azioni in senso più ecologico; inoltre, numerosi autori hanno puntualizzato la necessità di politiche concentrate sulla creazione di comunità, che attraverso pressioni sociali e regole condivise possano spingere gli individui a ridurre il più possibile il loro impatto ambientale.

Chiaramente, tutti questi fattori non devono essere presi in considerazione singolarmente, né il loro effetto deve essere considerato singolarmente. Piuttosto, l'insieme dei fattori rilevanti per uno specifico comportamento e/o per una specifica mentalità o valore, deve essere considerato nell'insieme di variabili che determinano il comportamento finale di un individuo, che sarà il risultato di una combinazione di questi fattori, da determinare caso per caso.

Nel secondo capitolo, ho analizzato come differenti modelli teorici, atti a delineare una relazione tra valori e azioni, prendono in considerazione differenti variabili. Partendo dai primi modelli sviluppati nel campo della psicologia sociale, atti ad analizzare la relazione di alcune variabili con i valori e le azioni degli individui, e che sono stati applicati in campo ambientale, ho analizzato le principali teorie sviluppate in campo accademico, e applicate in alcune politiche pubbliche.

Sono partito dalla teoria del comportamento pianificato, sviluppata da Fishbein e Ajzen negli anni Settanta, che, basandosi sul presupposto secondo cui gli individui fanno uso sistematico delle proprie informazioni e prendono decisioni razionali, sostiene che la differenza tra valori e azioni è spiegabile dal fatto che quei valori non sono considerati dagli attori, strettamente collegati alle azioni compiute. Ciò ha fatto sì che, le politiche pubbliche basate su questo modello, si concentrassero sul fornire le informazioni necessarie alle persone, per poter correlare l'impatto ambientale delle proprie azioni individuali alle problematiche globali del cambiamento climatico.

Tuttavia, numerosi riscontri empirici hanno evidenziato che fornire informazioni non sia sufficiente a spingere le persone a cambiare le proprie azioni in senso ecologico. Inoltre, alcuni ricercatori hanno avanzato la critica secondo cui la concentrazione sui valori considerati dall'attore strettamente collegati alle proprie azioni, faccia perdere importanza a molti aspetti rilevanti nella relazione tra valori e azioni.

Perciò ho analizzato teorie sviluppate successivamente, utili a fornire una prospettiva più dettagliata su particolari aspetti della relazione tra valori e azioni che hanno un impatto ambientale.

Per fare ciò, mi sono soffermato sulla teoria sul comportamento abituale, che offre un diverso punto di vista sui meccanismi alla base delle decisioni umane. Questo modello, si basa sul presupposto che le azioni vengono principalmente determinate dai comportamenti abituali. Quindi, secondo questa teoria, le azioni ripetute nel passato, sono la variabile più importante da analizzare quando si cerca di predire le azioni future di un individuo, in contesti analoghi a quelli passati. Ciò, in quanto esse creano processi cognitivi automatici, che riducono l'attenzione richiesta all'individuo per compiere l'azione. Pertanto, una costante ripetizione nel tempo di una determinata azione, in contesti tra loro simili, spinge l'individuo a ripetere la suddetta azione con sempre minore consapevolezza.

Analizzando questo modello e comparandolo con alcuni studi empirici, che si concentrano su particolari categorie di comportamenti aventi un impatto ambientale, abbiamo evidenziato come questo modello sia molto utile per descrivere la relazione tra valori e azioni, per quanto riguarda comportamenti legati ad azioni quotidiane, o che comunque hanno portato l'individuo a sviluppare una "automaticità" nel loro svolgimento.

Azioni legate alla quotidianità, come il riciclaggio dei prodotti consumati, o i beni acquistati al supermercato, sembrano essere in gran parte influenzati dalle nostre abitudini. Perciò la teoria del comportamento abituale, può essere particolarmente utile per ideatori di politiche pubbliche, che mirino a cambiare le azioni ripetute dagli individui, nella propria quotidianità, rendendoli maggiormente consapevoli delle proprie abitudini e dei processi cognitivi che le determinano.

Tuttavia, questo modello non sembra esserci utile ad avere una più ampia visione della relazione tra valori ed azioni. Aspetto particolarmente rilevante, è che non tiene conto di come variabili individuali

vengano influenzate da fattori esterni, come il contesto sociale, e l'effetto del rapporto tra questi due fattori sulle nostre azioni rilevanti per l'ambiente.

Per riuscire ad avere più chiarezza su questo aspetto, molto importante per avere una visione più completa dell'argomento, ho analizzato la teoria degli obiettivi di Lindenberg.

Lindenberg sostiene che i nostri comportamenti, in particolare quelli rilevanti socialmente, sono il risultato di una complessa interrelazione tra processi cognitivi, motivazioni individuali e obiettivi. Queste variabili, secondo Lindenberg, se analizzate nel complesso posso essere un mezzo per predire le azioni degli individui.

Schematicamente, possiamo dire che Lindenberg esplica la relazione tra valori ed azioni come il risultato degli obiettivi, dei processi cognitivi e delle convinzioni dell'individuo di quali azioni possano essere adeguate a un determinato contesto sociale (quest'ultimo fattore definito come modelli mentali). Fattori legati a contesti sociali e all'individuo attore dell'azione, influenzano gli obiettivi, i processi cognitivi e i modelli mentali, che a loro volta determinano la possibilità, per l'individuo, di scegliere l'azione da intraprendere tra una lista di alternative, che soddisfano gli obiettivi dell'individuo e sono coerenti con i suoi modelli mentali.

Questo modello è particolarmente utile per determinare il ruolo del contesto sociale nella nostra scelta di compiere o meno azioni con un impatto positivo a livello sociale. L'individuazione di comportamenti determinati in parte dal contesto sociale, può infatti aiutare gli ideatori di politiche pubbliche a sviluppare norme e situazioni sociali che spingano l'individuo a compiere azioni utili socialmente. Inoltre, la considerazione di un fattore come quello degli obiettivi nella relazione tra valori e azioni, e la correlazione stabilita tra contesti sociali e obiettivi da Lindenberg, ha permesso ai ricercatori di dedicare maggiore attenzione non soltanto all'impatto del contesto sociale sulle nostre azioni, ma anche nella sua influenza su fattori individuali, precedentemente considerati dalla letteratura sul tema slegati da fattori esterni.

L'ultima teoria introdotta nel secondo capitolo, è quella basata sulla relazione tra le norme, i valori e le credenze degli individui, sviluppata da Stern e ampiamente utilizzata dagli studi empirici più recenti per individuare la discrepanza tra valori ed azioni delle persone, in campo ambientale.

Stern, attraverso una sintesi delle variabili considerate dai ricercatori in diversi campi delle scienze sociali che affrontano il tema, delinea un modello particolarmente efficace nell'individuare la differenza tra i valori e i comportamenti degli individui da un punto di vista generale. Questo modello, quindi, non mira a spiegare comportamenti legati a particolari variabili, ma piuttosto a individuare quali differenze vi sono tra le credenze di un individuo e i suoi comportamenti da un punto di vista complessivo. Sulla base di un struttura complessa ed articolata in più variabili che si influenzano, più o meno direttamente tra loro, questo modello teorico è quello che tra i quattro analizzati nel corso del secondo capitolo, risulta essere più efficace nell'individuare le discrepanze tra valori e azioni delle

persone. Esso ovviamente può risultare insufficiente, se si cerca una relazione tra valori e azioni all'interno di contesti specifici, o per comportamenti specifici.

Pertanto, come osservato nel terzo e conclusivo capitolo di questa ricerca, l'efficacia dei modelli atti a spiegare la relazione tra valori ed azioni, dipende da quale sia l'obiettivo della politica pubblica.

Qualora si tenti di individuare la discrepanza presente, legata a una precisa azione, si dovrà utilizzare il modello più efficace, in base a quanto spiegato nel secondo capitolo, per analizzare i dati empirici raccolti. L'efficacia di un dato modello può anche dipendere da fattori individuali, che devono essere tenuti in considerazione.

Tuttavia, se l'obiettivo è quello di individuare la discrepanza presente tra valori ed azioni, da un punto di vista complessivo, in un determinato individuo, probabilmente la teoria sviluppata da Stern risulterà essere la più efficace, grazie alla sua unione di diversi fattori, dimostrati essere rilevanti nel determinare le nostre decisioni e azioni da approcci teorici molto differenti tra loro.

Pertanto, gli ideatori di politiche pubbliche dovranno concentrarsi su quali dimensioni siano da considerare maggiormente rilevanti, per il comportamento che si è intenzionati a cambiare in senso più ecologico. Successivamente, dovranno applicare gli strumenti indicati dai ricercatori come i più efficaci per colmare la differenza tra credenze e azioni delle persone.

Nel terzo e conclusivo capitolo della mia ricerca, osservo quindi, che nessuno dei modelli teorici presentati ed esplicitati, fornisce uno strumento che possa essere utile nell'analisi di ogni comportamento, o nella creazione di ogni politica pubblica. Piuttosto, ciò che si rileva è la presenza di diversi modelli, adatti a interpretare e spiegare diversi comportamenti e valori annessi. Pertanto, ciò che i creatori di politiche pubbliche dovrebbero fare secondo quanto implicato dalla ricerca esposta nei primi due capitoli, è concentrarsi nell'individuare il modello più efficace per cambiare il comportamento oggetto della politica, o descrivere le problematiche che la politica si pone l'obiettivo di individuare.