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Title	An exploration of the impact of the Green-Schools programme on the development of sustainable behaviours in the home
Authors	O'Neill, Claire
Publication date	2015
Original Citation	O'Neill, C. 2015. An exploration of the impact of the Green-Schools programme on the development of sustainable behaviours in the home. PhD Thesis, University College Cork.
Type of publication	Doctoral thesis
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Download date	2026-09-01 07:18:17
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An exploration of the impact of the Green-Schools Programme on the development of sustainable behaviours in the home

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April 2015

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Faculty of Commerce

Thesis submitted to the National University of Ireland, Cork, for the degree of PhD.

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Declaration

I hereby declare that this thesis is my own work and has not been submitted for another degree, either at University College Cork or elsewhere.

_____

Claire O'Neill

Abstract

Concern for the sustainability of our planet is widespread. The ever-increasing economic activity and large scale industralisation our consumer society requires has increased concerns among academics, politicians, and consumers alike on natural resource depletion, waste management, dangers of toxic chemicals, and climate change. Human consumption is causing major issues for the space we inhabit. Much work has been done over the past four decades to remedy human impact on our environment at corporate, policy and consumer level. But concerns on our ability to progress the sustainability agenda remain. Consumer behaviour plays a pivotal role in sustainable development. In light of this, we need to explore and understand the ways in which consumption occurs in consumers lives, with an aim to changing behaviours that do not support the natural environment. Questions on how to change consumer behaviour dominate much of the literature on sustainable consumption, but substantial behaviour change among individuals has not occurred as predicted. Some focus has shifted to look at upstream interventions, such as education, with a view to establishing sustainable behaviours early on. The Green-Schools Programme (known internationally as Eco-Schools) is one such intervention. This environmental education programme aims to educate and teach sustainable behaviour practices to schoolchildren. One of the aims of this programme is that the knowledge and skills the schoolchildren learn at school will spread out into the wider community.

The aim of this thesis was to explore consumption in the context of the Green-Schools Programme. The main research question asks: in the context of the Green-Schools, how are sustainable behaviour practices developed in the home? The findings presented in this thesis show that sustainable behaviour has developed in the home from both internal and external factors, the Green-Schools effect being one such factor; the programme does influence behaviour in the home context to some degree. One of the main findings of this research indicates that schoolchildren are imparting '*positive pester power*' on household behaviour practices and the majority of households are *passively* practicing sustainable consumption. These findings contribute to knowledge on sustainable consumption in the home context.

Acknowledgements

The completion of this thesis would not have been possible without the generous support from several people.

I would like to thank my husband Damian, for his loving support and encouragement throughout. His brilliant sense of humour and ability to look on the bright side has kept me both sane and inspired! Thank you! I want to pay a special thanks to my parents Donal and Peggy, for their unwavering support and belief in me, to my siblings Alan, Lorna, Kieran, and Eimear, for their wise words and friendship, and to small man Luke, for his bright smile.

I would like to sincerely thank my supervisor Dr. Joan Buckley, whose advice, encouragement, and ability to see the bigger picture sustained me throughout this PhD process. Thank you!

I greatly appreciate the feedback and advice I received from peers at conferences I attended and presented my work – this was an invaluable help in progressing my thesis. I would also like to thank my friends and colleagues at University College Cork and elsewhere, in particular Stephen, Nora, Darren, & Máire for their friendship and advice.

I would like to acknowledge and thank all my participants (young and old!) for their time and contribution to my research. I would also like to acknowledge and thank the Green-Schools in Cork city and county who welcomed my research.

Finally, I would like to thank Dr. Michael John O'Mahony and Dr. Yvonne Ryan from the Environmental Education Unit at An Taisce, for their assistance and advice in the early stages of my research and for allowing me to adapt An Taisce's survey instrument for the purposes of my research. Your help was very much appreciated.

Chapter 1

Introduction

1.1 Research Context

Everything that we need for our survival on this planet depends directly or indirectly on the natural environment. The need for sustainability has emerged due to significant concern in relation to social, economic, and environmental consequences of large-scale industrialisation and consumption of natural resources. A '*business-as-usual*' attitude will not stand up to logic any longer (Stern, 2007; Jackson, 2009; Peattie, 2010; Wells *et al*., 2011; IPCC, 2014). Changes in attitudes and behaviours have begun to take place among corporations, governments and consumers, but progress in achieving behaviour change towards sustainable consumption currently lacks sufficient momentum to mitigate the impact of our consumption on the planet. The United Nations and the European Union are continuing to inform global communities on the need to address their impact on the environment. Tackling the challenges of environmental damage requires widespread behaviour change. What our planet requires is for individuals, households, communities, and nations to adopt sustainable lifestyles (Jackson, 2005; Stern, 2007; Pape *et al*., 2011; Prothero *et al*., 2011; McDonald *et al*., 2012; IPCC, 2014).

This is the broad context within which this study is situated. It is also important to set the specific context within which this research was conducted. This study involves Irish households in which at least one member of the household attends a school that focuses on environmental education (i.e. a Green-School)[1]. Environmental education at primary and secondary level is a progressive step in ensuring sustainable behaviours among future generations. The Foundation for Environmental Education (FEE), a non-governmental, non-profit organisation, promotes sustainable development through its international environmental education programme, Eco-Schools (known in Ireland as Green-Schools). The Green-Schools programme promotes and acknowledges long-term, whole school action for the environment and focuses on action-oriented learning. The programme is an environmental education programme, environmental management system and award scheme that promotes and acknowledges sustainable behaviour. One of the key

[1] Only households that had a child attending a Green-School were used in this research

success factors of the programme is that it is a themed, seven-step programme[2]. Seven-steps must be completed for each theme before a Green Flag is awarded. This simplifies the process of tackling sustainability issues in the school and allows the school to work through environmental issues one theme at a time. Globally, there are more than 11 million schoolchildren taking part the programme. The Green-Schools Programme in Ireland is operated and co-ordinated by the Environmental Education Unit of An Taisce (FEE member for Ireland) in partnership with local authorities. It is supported by the Department of Environment, Community and Local Government and the Department of Transport, Tourism and Sport and is sponsored by the Wrigley Co. Ltd. (Green-Schools Ireland, 2015). Over 3,800 primary, secondary and special schools in Ireland are currently participating in the programme (>93% of all Irish schools). The Irish Green-Schools programme is one of the most successful within the international network (Green- Schools Ireland, 2015). An Taisce assisted with this study by allowing access to their database of registered Green-Schools in Ireland. A section of my research lends from and builds on a 2001 study conducted by An Taisce which compared attitudes, awareness and behaviours of schoolchildren of Green-Schools versus non-Green-Schools.

1.2 Research Aim

The aim of this thesis is to explore the impact of the Green-Schools Programme on the development of sustainable behaviours in the home. This includes an exploration of if, and how, sustainable behaviours occur in an everyday context. The main focus of this research is on how everyday sustainable practices in the home have developed in the context that at least one member of the household attends a Green-School. The behaviour practices in the home that were explored were: waste management; energy efficiency; water conservation; and transport reduction[3]. This research seeks to contribute to the debate on how we can ease the burden of consumption on our planet by significantly reducing or refining current consumption levels. The long-term view of sustainability focuses on achieving sustainable development, which is

[2] The seven themes of the programme are: Waste; Energy; Water; Travel; Biodiversity; Global Citizenship (Litter & Waste); and Global Citizenship (Energy). The seven steps are: Green-Schools committee; environmental review; action plan; monitoring and evaluation; curriculum work; informing and involving; and green code (Green-Schools Ireland, 2015).

[3] These are the first four main themes of the Green-Schools Programme

broadly accepted as '*meeting the needs of the present without compromising the ability of future generations to meet their needs*' (WCED, 1987, p.8). Integral to this statement is the apparent conflict between present and future needs. Current thought in this area contends that consumers may be willing to compromise their needs and wants for the protection of future needs and wants but I believe that consumption is an activity that is socially and culturally determined, therefore relying on individuals to voluntarily change their behaviours may be too ambitious, especially given that we live in a consumption-orientated society (Jackson, 2009). This study explores the development of sustainable behaviours in the home context, including whether these behaviours are influenced by the interaction and participation of children in the household (given that they participate in the Green-Schools Programme at their school). The findings of this exploratory study suggest that indeed social interaction in the household has contributed to the uptake of sustainable practices. This research suggests that the Green-Schools Programme has, in part, contributed to the development of sustainable practices in the home context. Further internal and external factors were uncovered as contributing to the development of sustainable practices in the home. These factors include: personal; knowledge; life stage; social; structural; and situational. These factors will be discussed in Chapters 4 and 5.

1.3 Thesis Structure

The structure of this thesis is as follows: Chapter 2 reviews literature in relation to sustainability, focusing on the role of corporations, governments and consumers. In particular, this review focuses on literature relating to sustainable consumption behaviours by consumers and how this extensive area of research has developed over the last 40 years. Gaps in the literature are identified which inform the formulation of the research question and objectives. Chapter 3 reviews foundational perspectives on research philosophy and outlines the methodological implications of the research question. A justification of the methodology and methods chosen and a reflection on researcher identity, voice and bias are discussed. Chapter 4 presents the research findings. Chapter 5 addresses the research questions in light of the findings of this research, deliberates the contributions and implications of the research on theory, practice, and policy, and offers a conclusion to this thesis.

Chapter 2

Literature Review

2.1 Review Introduction

This chapter presents literature on how sustainable consumption has developed over the past four decades. Literature relating to how corporations, governments and consumers have responded to sustainability issues and the role of environmental education in this context is reviewed. The main focus of this review is to explore the adoption and practice of sustainable behaviours by consumers. Culminating this chapter is a synopsis of how this thesis is situated within the reviewed literature and the gap in the literature which this research seeks to explore.

The chapter is structured as follows: Firstly, I discuss the greater sustainability issues of modern day consumption. Increased economic activity through large scale industrialisation has led to increasing concerns on natural resource depletion, waste management, dangers of toxic chemicals, and climate change. Sustainability is viewed from a corporate, governmental and consumer perspective. The main focus of this review on sustainability literature is on the role of consumers. A discussion on corporate social responsibility, environmental marketing and environmental policy sets a foundation on which the concept of sustainable consumption is discussed. I then broaden the discussion on sustainable consumption beginning with an overview of ethical consumer segmentation, which dominates much of the literature in this area. I discuss how research has focused on motivating the individual to behave sustainably through the use of several behavioural change models. Increasing consumer awareness and voluntary behaviour change is central to this discussion. I then discuss the issues that have arisen in this research area, with a particular focus on how motivating behaviour change towards sustainable consumption has encountered many barriers and constraints. Consumption in the home and school environments are reflected on, in relation to broadening the understanding of pro-environmental behaviours in everyday contexts. This chapter concludes with a presentation of the research question and objectives, and how these fit within the reviewed literature.

2.2 Sustainability: Framing the debate

> *Sustainability has gone "mainstream". Firms develop sustainability strategies, create sustainable products and operations, produce sustainability reports, and appoint "chief sustainability officers" who espouse sustainability to be their core mission. University administrators promote sustainability as central to their curricula. Scholars pursue sustainability as a field of research inquiry. Consumers buy sustainable products, drive sustainable cars, stay at sustainable hotels, and are seemingly bombarded with sustainability marketing campaigns. Indeed, sustainability has reached into all areas of business, politics, and society. The world, it would seem, is on the road to a sustainable future. Or is it?*
>
> Ehrenfeld and Hoffman (2013, p.1)

A consensus that economic development has placed an untenable affliction on the physical environment is supported by increasing scientific evidence (Stern, 2007; Wells *et al*., 2011; IPCC, 2014). Concern over the social and environmental impact of economic activity has been subject to extensive academic debate over the past four decades (Anderson and Cunningham, 1972; Webster, 1975; Leigh *et al*., 1988; Peattie, 1999; Jackson, 2005). Increased economic activity through large scale industrialisation has led to increased concerns on natural resource depletion, waste management, dangers of toxic chemicals, and climate change (McDonald and Oates, 2006; Moloney *et al*., 2010; Belz and Peattie, 2012). The Intergovernmental Panel on Climate Change (IPCC) (2014) claims that the Earth's average surface temperature is steadily increasing and will continue to do so if substantial change from business, consumers, and governments does not occur. It is suggested that even a 2ºC increase in temperature from pre-industrial levels may have irreversible and catastrophic consequences for the planet. Fisk (1998, p.658) frankly highlights the issues with excessive consumption and population growth *'if the population of the whole world were to enjoy the same level of consumption as North America, it would take three planet earths to meet present global demands'.* The 1992 Earth Summit recognised that unsustainable production and consumption was largely contributing to both the environmental degradation of the world's natural resources and the social deterioration in the form of poverty and social exclusion (Robins and Roberts, 2006).

Society has a consumption problem that must be addressed (Leary *et al*., 2014). This consumption problem is shockingly portrayed in Jeremy Irons' award-winning documentary feature film *Trashed* (2012). This documentary highlights society's (unhealthy) relationship with consumption and waste disposal and presents monumental evidence of our '*throwaway society'*. The concept of sustainability seeks to rectify the issues that the industrialised, consumer society has created. According to the United States Environmental Protection Agency (EPA, 2014) sustainability rests on a basic principle:

> *'Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment. Sustainability creates and maintains the conditions under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic and other requirements of present and future generations'*

The concept of sustainability is presented by Peattie (1999, p.133) as having two underlying principles:

> *'First, only using the earth's resources at a rate which allows them to be regenerated, or (in the case of non-renewable resources) which allows sustainable substitutes to be developed. Secondly it involves creating waste at a rate that can be assimilated by the environment, without impairing it'*

A focus on '*sustainable development*' as a means to achieve sustainability was suggested within *Our Common Future* report, the 1987 United Nations' World Commission on Environment and Development (WCED) (commonly referred to as the *Brundtland Report*). Sustainable development is defined in this report as *'meeting the needs of the present without compromising the ability of future generations to meet their needs'* (WCED, 1987, p.8). This interpretation of sustainable development has gained much political and corporate support; often being used as a guiding principle for those concerned with their social and environmental impacts (Belz and Peattie, 2012; Ehrenfeld and Hoffman, 2013). The World Business Council for Sustainable Development (WBCSD) articulates sustainability as three interrelated dimensions: environmental; economic; and social

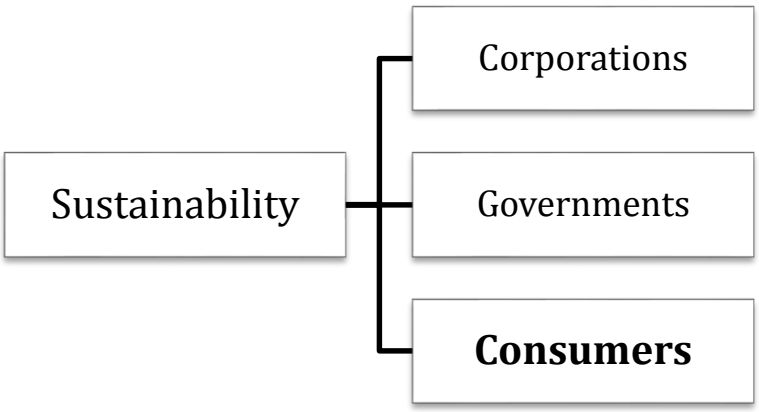
(WBCSD, 1999; Petersen and Alkis, 2009; Walshe, 2013). Moving towards a more sustainable future may require a combination of technological innovation, regulation, investment, financial incentives, organisational change, and education (Wells *et al*., 2011). The emergence of the '*eco-footprint*' measurement in the 1990s encouraged individuals, organisations, and nations to calculate their apparent impact on the environment by comparing the resources they consume in relation to the resources nature can deliver (Sutcliffe *et al*., 2008). This focus on carbon or eco-footprint calculations intended to increase awareness among both producers of consumer products and the individual consumer. The actual impact of these carbon footprint calculations on individuals' awareness and behaviour change is unclear. Carbon emissions are strongly linked to the consumption of private households and the everyday behaviours and choices of individuals. Thus, motivating consumers to change their behaviours is an important step for sustainability (Sutcliffe *et al*., 2008; Wells *et al*., 2011). Jackson (2005) argues that although resource efficiency and reducing the impact of production systems on the environment is important, and has been given much attention (Geyer and Jackson 2004; Guide and van Wassenhove, 2004), this is only one aspect of sustainability. An emphasis on consumption and whether consumption is '*good for us*' must be addressed (Jackson, 2005, p.19).

Extensive research in this field focuses on consumer buyer behaviour, their attitudes, concern, knowledge, intentions, and behaviour towards ecological and social issues (Peattie, 2010; Prothero *et al*., 2010). Some consumers are said to have a high level of environmental awareness and alter their consumption behaviours in order to reduce their impact on the environment (Shaw and Newholm, 2002; Eckhardt *et al*., 2010). However, many other consumers continue to disregard sustainability issues as being of any importance or immediate concern to them (Carrigan and Attalla, 2001; Chatzidakis *et al*., 2006). The question Jackson (2005) poses is whether we can *Live Better by Consuming Less*? Consumers who are concerned about their impact on the environment, namely '*voluntary simplifiers'* (Elgin, 1993; Etzioni, 1998) or '*ethical consumers*' (Szmigin and Carrigan, 2006; Freestone and McGoldrick, 2008), have been reported as freely choosing to live a simpler life by consuming less or more ethically. These socially conscious consumers are in opposition to the seemingly unsustainable consumers who disregard ethical concerns for the environment in their

consumption decisions (Carrigan and Attalla, 2001; Carrington *et al*., 2010). These *'unsustainable'* consumers are largely contributing to the landfills and the unsustainable use of the world's natural resources which, in turn, has led to concern on the achievement of long-term sustainability (Peattie, 2009, 2010; Moloney *et al*., 2010; Young *et al*., 2010).

The following review will discuss sustainability in terms of how corporations, policy makers and consumers have attempted to achieve a more sustainable world. I will firstly discusses corporate and policy responses to a call for a more sustainable world, followed by an extensive consideration of the role of consumers in progressing sustainability. The discussion on the role of corporations and governments in this review is to give the reader a broader perspective on sustainability and suitably introduce the extensive literature on sustainable consumption from a consumer perspective. Figure 2.1 outlines the breakdown of this review. The *consumer* segment is highlighted as the section which receives the most attention in this review.

Figure 2.1 Review Outline



2.3 The Role of Corporations

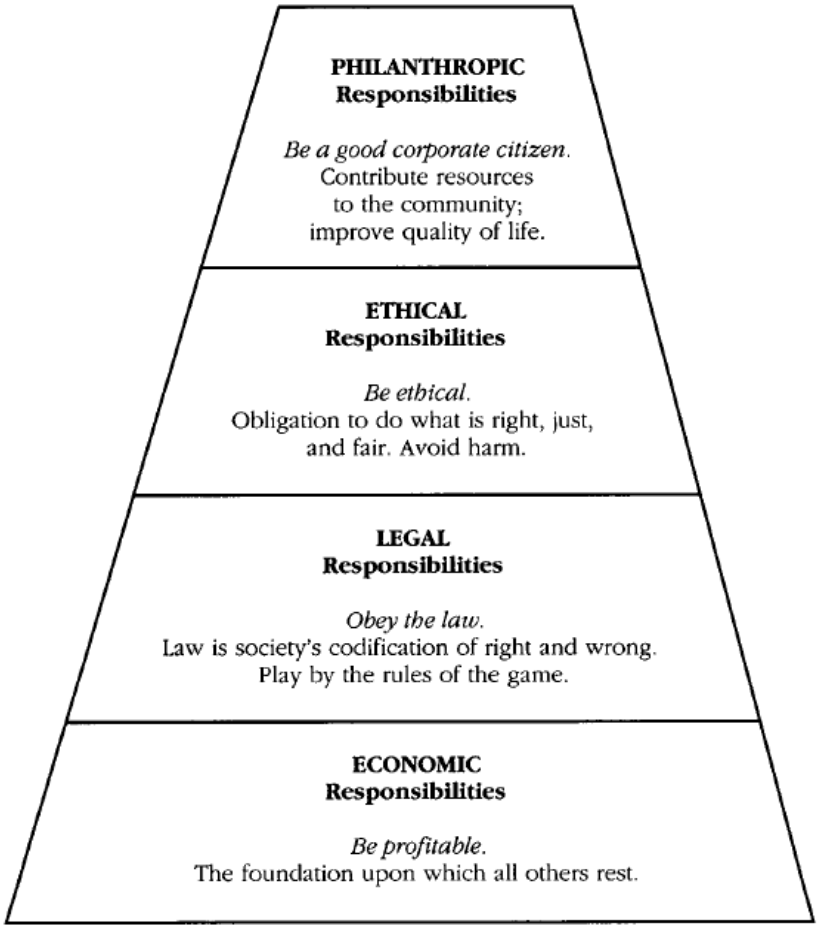
Corporate social responsibility (CSR) is the title given to the strategic and communication programs of companies who are concerned not only with their profit-maximising responsibilities but also their social and environmental responsibilities. CSR refers to business activities that go *'beyond obeying the law'* (McWilliams and Siegel, 2001, p.117). A definition of CSR is provided by the Commission of the European Communities (2002, p.5):

> *'CSR is a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with stakeholders on a voluntary basis'.*

The World Business Council for Sustainable Development (1999, p.3) is more specific on the categorisation of corporate responsibility by dividing responsibilities into three distinct subcategories: corporate financial responsibility; corporate social responsibility; and corporate environmental responsibility (also known as the triple bottom line) (Elkington, 1994). Interest in CSR can be dated back to the 1950s, predating concepts of sustainability and sustainability marketing (Carroll, 1999; Belz and Peattie, 2012). However, from 1970s onwards, due to the introduction of social legislation and the creation of agencies such as the Environmental Protection Agency (EPA), corporations have had to balance their commitments to shareholders with their increasing obligations to stakeholders, who assert both legal and ethical rights (Carroll, 1991). CSR agendas have had varying degrees of attention and focus on social and/or environmental responsibilities (Carroll, 1999; Porter and Kramer, 2006). Carroll (1991) identifies four sub-categories of corporate responsibility: economic; legal; ethical; and philanthropic. Carroll presents these responsibilities in a pyramid format (See Figure 2.2). Economic obligations represent the foundation for all corporate responsibilities; serving goods to consumers at a profit is the primary purpose of business existence. Legal obligations represent the laws, regulations and ground rules under which business must operate. Ethical obligations represent the standards, norms and expectations of all stakeholders. Interestingly, ethical obligations may lead to legal obligations; ethics or values precede law as they become the driving force behind legislation. The final obligation presented by

Carroll (1991) is philanthropic, representing a higher order of responsibility including actively engaging in behaviours or programs that promote human welfare and goodwill.

Figure 2.2 The Pyramid of Corporate Social Responsibility



Source: Carroll (1991, p.42)

Companies adopt CSR agendas by becoming more environmentally and socially sensitive to either remain competitive or to use as a source of competitive advantage (Roberts 1995; Straughan and Roberts, 1999; Porter and Kramer, 2006). This may suggest the economic component of Carroll's responsibilities may come in conflict with other responsibilities. Companies adopting CSR strategies to enhance their economic performance may not have a long-term view of CSR and easily abandon

ethical responsibilities, if they no longer enhance the economic performance of the company. This may have detrimental consequences for the planet given the real concern among experts on the lasting damage of industrial activity on the environment. Is there a way of ensuring that corporations do not unduly add extra burdens on natural resources and the environment? As social and environmental awareness among activist organisations, consumers, and governments has increased, there has been additional pressure on companies to increase their level of commitment to CSR initiatives. Given stakeholders interest in CSR, much early adoption by large multi-national companies was not entirely voluntary (Porter and Kramer, 2006). In recent years, environmental and social issues have become deeply embedded in our daily lives: governments impose environmental taxes; school-children learn about the environment as part of their primary and secondary education; and media attention to environmental issues such as climate change, global warming, carbon footprint and renewable energy sources (Prothero *et al*., 2010). This holistic interest in, and commitment to, sustainability encourages companies to get involved and take responsibility for the impact their operations have on the environment.

Theoretical perspectives on CSR are many and varied (McWilliams and Siegel, 2001). Carroll's view (1979, 1991), as discussed, is one of many views adopted by the corporate world. Friedman (1970), one of the most influential contributors to the CSR debate, asserts that engaging in CSR activities is representative of the agency problem, whereby managers who choose to engage in CSR are pursuing their own social or political agendas at the expense of the shareholders. Friedman (1970, p.7) argues that there is only one responsibility of a business *'to use its resources and engage in activities designed to increase its profits, so long as it stays within the rules of the game'*. According to Friedman, resources of the firm should be spent, from a social standpoint, on increasing firm efficiency. Taking Carroll's (1991) pyramid, Friedman agrees only with the economic and legal dimensions. An opposing argument to Friedman's theory, and one which is recognised as the dominant paradigm for adopting CSR (McWilliams and Siegel, 2001), is corporations' interaction with stakeholders in the form of stakeholder theory. Stakeholder Theory (Freeman, 1984), a theory of organisational management and

business ethics, advocates that management must give due regard to all stakeholders of a corporation. Stakeholders are defined by Freeman (1984) as customers, employees, government, pressure groups, media, competitors, suppliers and shareholders. A stakeholder is identified by Freeman and Reed (1983, p. 91) as *'any identifiable group or individual who can affect the achievement of an organisation's objectives or who is affected by the achievement of an organisations objectives'*. Adopting a stakeholder perspective, a company can implement a CSR strategy that considers not only the financial responsibility of the company but the social and environmental responsibilities that may affect one or many of their stakeholders.

> *'Companies are aware that they can contribute to sustainable development by managing their operations in such a way as to enhance economic growth and increase competitiveness whilst ensuring environmental protection and promoting social responsibility, including consumer interests'.*
>
> (Commission of the European Communities, 2002, p.5)

Therefore, there is a growing perception among academics and corporate professionals that business objectives that narrowly focus only on short-term profit maximisation for shareholders do not necessarily result in sustainable business success (Garriga and Melé, 2004). The Commission of the European Communities (2002) acknowledge that responsible business behaviour leads to sustainable business success. McWilliams and Siegel (2001) also draw attention to the relationship between CSR and financial performance. It is argued that, in order to maximise profit, corporations should *'offer precisely that level of CSR for which the increased revenue (from increased demand) equals the higher cost (of using resources to provide CSR)'* (McWilliams and Siegel, 2001, p.125). When this balance is achieved, corporations effectively satisfy all stakeholders, both financial and social. The Commission of the European Communities (2002) maintains that the key strategic importance for companies is to align their business operations with sustainability. They also highlight however, the individuality of corporations CSR strategies and what constitutes good CSR depends on the context within which the company is operating, both in terms of industry and geographical location (Commission of the European Communities, 2002).

Regardless of the profit-motive or long-term success, external stakeholders are holding companies accountable for their social and environmental responsibilities and highlight the '*potentially large financial risks for any firm whose conduct is deemed unacceptable*' (Porter and Kramer 2006, p.2). Unethical behaviours of companies can have a negative impact on financial performance and CSR agendas seeks to mitigate the risk of customer dissatisfaction with company operations (McGuire *et al*., 1988; Prothero *et al*., 2010). Straughan and Roberts (1999, p.558) recognise there is an ever increasing list of concerns that fall within the sphere of environmental responsibility:

> *'With increased social and political pressure, companies have moved beyond simply addressing pollution and waste disposal to looking for alternative package composition and design, alternative product formulations, and cause-related promotion in an effort to keep in-step with the environmental movement'.*

This '*environmental movement*' (Straughan and Roberts, 1999, p.558) has resulted in the notion that people's lives are '*rationalized*' from a green perspective (Hobson, 2002) while Prothero *et al*. (2010) claim that green products and initiatives are now becoming mainstream, fashionable and trendy. Influential political figures and celebrity endorsements of '*going green*' has somewhat aided the social and cultural acceptance of pro-environmental messages (Brockington, 2008). Thus, companies, who rely on consumption of their products and services for their survival, can simply no longer ignore the importance of sustainability, both for the long-term sustainability of their production and their market sustainability among their ever-increasing environmentally-aware consumers.

Issues with '*green-washing*' CSR activities dominate the critical sphere of CSR research (Banerjee, 2008; Alves, 2009), although criticism in recent years is somewhat less severe (Prothero *et al*., 2010). Green washing relates to *'the act of misleading consumers regarding the environmental practices of a company or the environmental benefits of a product or service'* (TerraChoice, 2009, p.1). Porter and Kramer (2006) argue that the dominant assumptions of CSR programs are too

disconnected from core business activities. The greatest benefit to both society and to business is for companies to approach CSR in a strategic manner:

> *'CSR should not be only about what businesses have done that is wrong – important as that is. Nor should it be only about making philanthropic contributions to local charities, lending a hand in time of disaster, or proving relief to society's needs – worthy though these contributions may be. Efforts to find shared value in operating practices and in the social dimensions of competitive context have the potential not only to foster economic and social development but to change the way companies and society think about each other. NGO's, governments, and companies must stop thinking in terms of "corporate social responsibility" and start thinking in terms of "corporate social integration".'*
>
> (Porter and Kramer, 2006, p.13)

This suggestion moves the concept of CSR activities from being merely cosmetic public relations campaigns, to a more integrated, mutually beneficial form of CSR where each company tackles social or environmental issues that are directly within their operating sphere (Porter and Kramer, 2006). Belz and Peattie (2012) reiterate the key to a successful corporate sustainability agenda is to integrate sustainability strategies with organisational strategies. This integration is often aided by the use of environmental management and audit systems and the adoption of international standards for the management of operational sustainability (Peattie, 1999; Belz and Peattie, 2012). The ISO 14000 family of environmental management standards was introduced in 1998, joining the already well-established ISO 9000 quality management standards. The ISO 14000 standards allow organisations to identify, control, and report the environmental impact of their activities, products or services. It allows companies to improve their environmental performance continually and implement a systematic approach to setting environmental objectives and targets (Belz and Peattie, 2012). Additional standards of CSR were introduced in 2010, ISO 26000, which complement the environmental management standards. Although these standards report on the internal quality of management processes, they are nonetheless representative of the attention social and environmental responsibility and sustainability is receiving in the business world. Elkington (1994, p.99) proposes that companies have '*little option but to get involved'* and the challenge facing companies is to configure new ways of considering all stakeholders so as they

benefit not only in terms of corporate citizenship but also in terms of competitive advantage.

2.3.1 Environmental Marketing

There are distinct differences between corporate social responsibility (CSR) and environmental marketing. CSR focuses on the corporate-level and interests of all stakeholders whereas environmental marketing focuses on the product-level and the customer (Belz and Peattie, 2012). Kilbourne and Beckmann (1998) comprehensively reviewed environmental related research published in major marketing journals from 1971-1997. They present several research streams in this time period: characterization of environmentally conscious (green) consumers; energy conservation; packaging laws; recycling; and green advertising. Between 1971 and 1995, they suggest that the progress made in this area was mainly managerialist in nature and focused on micromarketing issues such as individual demographics, attitudes, personality, knowledge and behavioural intention (Kilbourne and Beckmann, 1998). Roberts (1995) identified the increased attention to social causes, such as cause-related marketing campaigns, received during the early 1990s among socially responsible consumers. Marketing in the environmental domain presents the consumer with labels such as *'natural, organic, fair trade, free range, ethical, eco, biodegradable, recyclable, environmentally friendly, green, carbon neutral, carbon footprint, socially responsible'* (Emery, 2012, p.5).

Post 1995, environmental research in the marketing domain began to change from a micro-focus to a macro-focus. Research streams looked at general environmental beliefs and values and institutional factors (Kilbourne and Beckmann, 1998). More recently focus has shifted towards sustainable marketing and how to deal positively with the ecological environment, and consider the needs and requirements of future generations (Murphy, 2005). Ottman (2011, p.2) echoes this concern for sustainable living and suggests that nowadays most consumers are *'some shade of green'* out of concern for their own immediate health and/or that of their children. McDonald and Oates (2006) further underline how recent interest in climate change, health scares, and active pressure on organisations to account for their environmental performance

has heightened the interest in environmental marketing. Ottman (2011) suggests that health-related issues such as water quality, hazardous waste, air pollution, water availability, global warming, and overpopulation are a priority for consumers today and thus, the greening of lifestyles is of increasing concern for consumers. Whether this *concern* translates into *action* in the form of sustainable consumption will be discussed later.

2.3.2 Evolution of Responsible Marketing

There are a multitude of concepts relating to marketing and the environment. Van Dam and Apeldoorn (1996) clarify these concepts and varying titles given to marketing in a pro-environmental context. Under the umbrella term of *'environmental marketing'* they present three concepts of marketing (van Dam and Apeldoorn, 1996, p.46):

1. Ecological marketing
2. Green marketing
3. Sustainable marketing

Ecological marketing refers to marketers recognising and taking responsibility to avert impending ecological crisis (Fisk, 1974). Green marketing focuses on market demand and legislative requirements towards improved, more efficient, environmentally friendly product offerings (Peattie, 1999). While sustainable marketing is presented as the crux of addressing sustainable development (van Dam and Apeldoorn, 1996, p.46). The marketing discipline has received much criticism for encouraging consumption that has led to waste generation, pollution, and the deterioration of natural resources, all of which are destroying the planet. In its defence, marketers have, in various forms, attempted to remedy the negative consequences of the marketing practice through the promotion of '*green*' products and promotional messages encouraging consumers to consume less (Peattie, 1999; Shaw and Newholm, 2002; McDonald *et al*., 2006; Emery, 2012).

Ecological marketing developed during the 1970s in response to both the positive and negative impacts of marketing on the environment and natural resources (Fisk, 1974). Ecological marketing, as the name suggests, is primarily concerned with ecology: energy depletion; non-energy natural resources; and pollution (Belz and Peattie, 2012). Due to its focus on the environment, ecological marketing only focused on those industries which were the biggest culprits for resource depletion and pollution including oil, chemicals and the motor trade. Thus, ecological marketing emerged as a response to the worst examples of environmental damage, with the majority of companies not regarding environmental problems as a fundamental concern but rather as a *'constraint and a cost factor, and as concerning regulatory compliance rather than markets or marketing'* (Belz and Peattie, 2012, p.27). Nonetheless, the 1970s sparked the emergence of ethically-driven concepts relating to business operations with the arrival of The Body Shop in 1976 and Ben and Jerry's in 1978. Both of these pioneering companies embraced environmental and social values and paved the way for more conventional companies to adopt some form of ethical values into their operations and relations with consumers.

Green marketing emerged in the 1980s and 1990s due to increased attention environmental issues were receiving in the corporate world. It was perceived in the early 1990s that a rapid increase in green consumerism was signalling a dramatic and expected shift in consumption towards greener products (Prothero, 1990). A need for *'sustainable branding'* was required (Ottman, 2011, p.43). At this time, environmental issues were becoming an important topic with the public and regulation was increasing (Belz and Peattie, 2012). Marketing environmental features was perceived as a source of competitive advantage in the market and extended beyond a small segment of industries to include markets such as tourism and financial services (Peattie, 1999). Green marketing techniques focused communication messages to the '*green consumer*' segment (Elkington, 1994). Green marketing can be defined as:

> *'the greening of the different aspects of traditional marketing. This generally involves the production of "green" products for sale to "green" consumers who are admonished to recycle the waste from their consumption'.*
>
> (Kilbourne, 1998, p.642)

However, throughout the 1990s, known as *'The Earth Decade'* (Peattie, 1999, p.131), consumer research continued to suggest that the green consumer, who was stated as willing to pay a premium for greener products, was somewhat a consumer myth (Carrigan and Attalla, 2001; Peattie and Crane, 2005). Although consumers claim to have concern and positive intentions to purchase ethically, this was not consistently reflected in actual behaviours (Carrington *et al*., 2010; Eckhardt *et al*., 2010). In light of this, green marketing has been criticised as a reactive response to increased environmental legislation and not adopting a true, proactive societal view of sustainability (Davies, 1991; van Dam and Apeldoorn, 1996).

> *'A major difference between ecological and green marketing is that the societal and moral motives of the former are replaced in the latter by marketing pressures. In ecological marketing, environment friendliness is a matter of moral decency; in green marketing, it is a marketing tool'.*
>
> (van Dam and Apeldoorn, 1996, p.52).

Further to this, green marketing has been subject to a backlash from consumers with increasing reports of '*green washing*' (Crane, 2000; Peattie and Crane, 2005). Peattie and Crane (2005, pp.360-1) identify five indicators as to why green marketing has failed to garner increased sales of green offerings and substantially progress sustainability: 1) green spinning – a reactive approach by corporations focused on reputation and risk management; 2) green selling – an opportunistic response by corporations of adjusting promotional campaigns on the belief that "*green would sell*"; 3) green harvesting – corporations recognising cost saving but having no long-term commitment; 4) Enviropreneur marketing – corporations focusing on product-led rather than consumer-led initiatives; and 5) compliance marketing – corporations having an opportunistic approach to promotion of green credentials based on regulation or legislation. Peattie and Peattie (2009, p.261) argue that green marketing has been ineffective and claims that progress towards sustainability

requires *'more radical solutions than just the development of new products'*. There must be a new role for sustainability marketing as sustainable behaviours are *'currently not adopted as they are not seen as normal, and relevant only to a niche group of 'green consumers"* (Rettie *et al*., 2012, p.421).

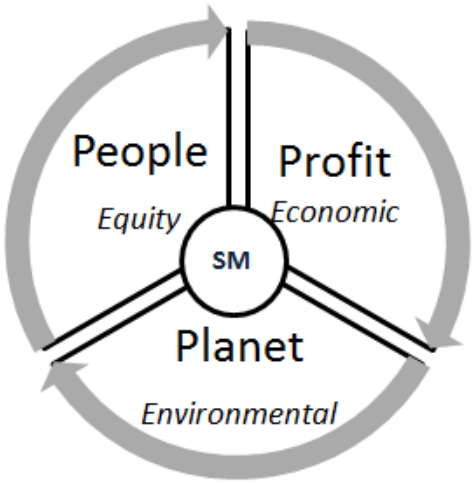
The failure of green marketing can be attributed to misconceived marketing practices which have been ineffective and have provoked consumer cynicism (Peattie and Crane, 2005). It is argued that the only way forward for green marketing is to adopt a holistic, consumer-focused approach (Peattie and Crane, 2005). Ottman (2011) echo much of Peattie and Crane's (2005) suggestions while emphasising the importance of aligning with third parties that perform independent life-cycle accounts, certify claims, and award eco-labels. One particular eco-label is the EU's Eco-Label, a pan-European voluntary label, which identifies products and services that have a reduced environmental impact throughout their life-cycle. The label promotes environmental excellence based on criteria developed by scientists, NGOs and stakeholders (European Commission, 2013). Logos, trademarks and symbols for green product labels and certification seek to bolster consumer trust of products and ensure the obliteration of green washing claims (Crane, 2000; Peattie and Crane, 2005; Ottman, 2011). Other examples of these labels include Blue Angel (an environmentally friendly label in Germany) and Energy Star (a global standard for electronic equipment). However, despite the awareness of these labels, their market impact is relatively insignificant. In the mid-1980s, as producers and retailers realised the sales potential of green labeling, environmental labels and marketing strategies proliferated. Since many were meaningless, this has left many consumers bemused and cynical about ethical product claims (Harrison *et al*., 2005).

Nonetheless, green marketing has had a progressively positive influence on the purchase choices of *some* consumers and has helped refine consumption patterns to include ethical products, especially among ethical-minded consumers (van Dam and Apeldoorn, 1996; Freestone and McGoldrick, 2008; Peattie, 2009). However, such green marketing campaigns have only reached a niche target market – so called '*green consumers*' – and have struggled to impart a long-term impression on

mainstream consumers (Carrigan and Attalla, 2001; Szmigin *et al*., 2009; Rettie *et al*., 2012).

Sustainable marketing described by van Dam and Apeldoorn (1996) as the crux of realising sustainable development, adopts a macro-marketing perspective in contrast to both ecological and green marketing which have a micro-marketing focus. The realisation of sustainability, through sustainable marketing, depends on accepting the *'limitations of marketing philosophy and acknowledge the necessity of regulatory constraints to the market mechanism'* (van Dam and Apeldoorn, 1996, p.53). These authors argue for regulation in the market system which both ecological and green marketing neglect. The regulation argument is well documented within the literature (Fisk, 1974; Blake, 1999; Prothero *et al*., 2011). Decade-long discussions centre on whether regulation and/or education will result in a greater uptake of sustainable behaviours (Prothero *et al*., 2011). Nonetheless, sustainable marketing (also referred to as sustainability marketing) embraces regulation and adopts a corporate acceptance and promotion of collective commitment to essential adjustments of institutional settings and price signals in favour of sustainable development (Emery, 2012). Belz and Peattie (2009, p.30) define sustainability marketing as *'building and maintaining sustainable relationships with customers, the social environment and the natural environment'* and is embraced by Rettie *et al*. (2012, p.422) as including *'both commercial marketing of green products and services, and social marketing of pro-environmental behaviours'*. Sustainability marketing is conceived as having the greatest potential on sustainable behaviours of consumers (Peattie and Peattie, 2009; Rettie *et al*., 2012). The sustainable marketing (SM) paradigm is placed by Emery (2012, p.22) at the intersection of the triple bottom line components (Elkington in Henriques and Richardson, 2004) (See Figure 2.3).

Figure 2.3 Sustainable Marketing (SM) and the Triple Bottom Line



Source: Emery (2012, p.22)

Emery (2012, p.22) argues that sustainability marketing rightly focuses on not only environmental concerns but *'correctly recognises that the success of business is intertwined with environmental, social/ethical, and economic performance'* and is thus more appropriate in addressing the multitude of concerns that are fundamental to the concept of CSR (Elkington, 1994). A definition of sustainable marketing presented by Emery (2012, p.24) accurately portrays the relationship between CSR, marketing and sustainability:

> *'Sustainable marketing is a holistic approach whose aim is to ensure that marketing strategies and tactics are specifically designed to secure a socially equitable, environmentally friendly and economically fair and viable business for the benefit of current and future generations of customers, employees and society as a whole'.*

The task of articulating sustainable marketing is not without substantial barriers. The current institutional design encourages production and consumption, which can be perceived as unsustainable (Emery, 2012; Ehrenfeld and Hoffman, 2013). For

sustainable marketing to succeed there must be changes on an institutional level so as to support the production and market realisation of sustainable products long-term and to more than just niche green consumers (Peattie and Peattie, 2009; Adams and Raisborough, 2010; Rettie *et al*., 2012).

2.3.3 Social Marketing and Sustainability

Societal and social variants of the environmental marketing domain hold a significant position in the literature (Emery, 2012). Lazer (1969) and Kotler and Levy (1969) discuss the societal obligations of organisations: *'marketing must serve not only business but also the goals of society'* (Lazer, 1969, p.3). The societal approach to marketing takes into account not only the needs, wants, and interests of the consumers, but also the needs of society and balances the two to create an increased level of wellbeing for all. Societal marketing encompasses more than just environmental concern, in contrast to ecological marketing which holds protection of the natural environment at its core, by embracing other issues such as health and social equity (Kotler and Levy, 1969; Lazer, 1969). Social marketing, in a similar way, holds quality of life at its core and is often associated with public health campaigns (Bandura, 1998; Stead *et al*., 2005; Hastings, 2007). Social marketing was first coined by Kotler and Zaltman (1971, p.5) as:

> *'the design, implementation and control of programs calculated to influence the acceptability of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research'.*

However this definition has received some criticism (Andreasen, 1994). Recently, Dann (2010, p.151) redefined social marketing as:

> *'the adaption and adoption of commercial marketing activities, institutions and processes as a means to induce behavioural change in targeted audience on a temporary or permanent basis to achieve a social goal'.*

Primary uses of social marketing campaigns were for the purpose of anti-smoking, obesity, immunization, anti-litter and disease prevention (Andreasen, 2002; Stead *et al*., 2005; Hastings, 2007). Peattie (2009) argues that social marketing has the potential to contribute to the behaviour change of those consumers who currently do not prioritise sustainable consumption. Support for Peattie's claim is echoed by Barr *et al*. (2011, p.712) as they assert that social marketing may promote sustainable consumption effectively as it *'places emphasis on incremental, practical and achievable changes to practices relevant to a specific target audience'*. Therefore, by applying practical steps to behaviour change some of the major barriers to the adoption of sustainable consumption may be overcome, increasing the likelihood of consumers to change their consumption practices. It may be argued that much of the green marketing efforts are preaching to the converted, as products that have a low environmental impact are usually targeted at green consumers (Adams and Raisborough, 2010). These consumers are already acutely aware of the impact their behaviour has on the environment and have already taken actions that benefit the environment or society (Szmigin and Carrigan, 2006). Therefore, the challenge that faces social marketing in the environmental marketing domain is to effectively target those consumers who seem to be not yet interested in, or engaged with, sustainability (Peattie, 2009). Rettie *et al*. (2012) support the social marketing approach to sustainable behaviour change as it focuses on positioning pro-environmental behaviours as the norm and socially accepted.

Social marketing may be able to assist in uncovering the barriers to the adoption of sustainable behaviour and perhaps have a greater impact on consumers' everyday behaviours than commercial green marketing (Peattie and Peattie, 2009). An alternative marketing mix that focuses on social propositions, costs of involvement, accessibility and communication with the consumer instead of product, price, place, and promotion respectively, may help marketers to specifically focus on sustainable consumption from the consumer's point of view rather than focus on the product offering (Peattie and Peattie, 2009). This answers the call for a more holistic, consumer focused approach to sustainability (Peattie and Crane, 2005; Emery, 2012). Therefore, perhaps the future of sustainability is to reposition it not as something that only concerns the ethical, green consumer but something that is

normal and concerns all of society (Rettie *et al*., 2012). Anti-smoking campaigns have successfully repositioned smoking from being *'a social norm to something widely unacceptable and unfashionable'* (Peattie and Peattie, 2009, p.267) and perhaps this may be mirrored for unsustainable consumption practices. Changing social perspectives and acceptance of behaviours in society through social marketing may allow consumers to successfully adopt sustainable living practices (Bandura, 1998; Peattie, 2009; Emery, 2012; Rettie *et al*., 2012). Therefore, the future role of marketing in society may not be one of consumption promotion (which has largely been blamed for our over-consumption and subsequent impact on the planet) but one of sustainability promotion. This may take the form of sustainable marketing which embraces regulation and adopts corporate acceptance and promotion of commitment to sustainable behaviour, or it may take the form of social marketing which focuses not only on goals of business but on the goals of society in encouraging behaviour change for the betterment of our common world.

2.4 The Role of Governments

The Intergovernmental Panel on Climate Change (IPCC) (2014) argues that human influence on the climate system is clear. Ireland preserved a relatively unharmed environment until the late twentieth century due to its lack of heavy industry but this has dramatically changed in the time since. Over-consumption in the areas of waste, energy, water, and transport has substantially contributed to environmental degradation in the past few decades, in particular during the 1990s and 2000s (Ireland's Celtic Tiger period) (Pape *et al*., 2011). Climate change mitigation, in the form of human intervention to reduce the sources of greenhouse gas emissions, is now crucial (Stern, 2007). Academic thought on policy and regulation in support of pro-environmental behaviour is well discussed in the literature (Fisk, 1974; van Dam and Apeldoorn, 1996; Blake, 1999; Pape *et al*., 2011; Prothero *et al*., 2011). Arguments both for increased regulation (van Dam and Apeldoorn, 1996; Stern, 2007) and decreased regulation (Fisk, 1974) govern much discussion on the challenge of behaviour change in light of sustainability. Tensions have emerged over the relative responsibility of individuals, communities, business, environmental groups and governments in achieving long-term pro-environmental action (Eden,

1993; Harrison *et al*., 1996; Blake, 1999). Governments have been accused of '*side-stepping the real forces behind consumption issues'* (Hobson, 2002, p.113). It is contended that rather than focussing on manufacturing and production issues at corporate-level, governments are targeting citizens to follow a sense of duty or responsibility at an individual-level (Barr *et al*., 2011). Jackson (2005) argues that governments must take a more active role to: ensure that incentive structures and institutional rules support pro-environmental behaviour; enable access to pro-environmental choice; engage citizens in initiatives that empower; and exemplify the desired changes within government's own policies and practices. Given that political conditions and policy frameworks '*fundamentally shape everyday household consumption*' (Pape *et al*., 2011, p.25), governments should hold the responsibility for providing the right situation where citizens can act in a pro-environmental manner (Jackson, 2005).

In the absence of regulation as a catalyst for sustainable production and consumption, education is endorsed (Evans *et al*., 1996; Prothero *et al*., 2011; Walshe, 2013), as is the voluntary uptake of socially-conscious consumer behaviour (Leonard-Barton, 1981; Roberts, 1995; Szmigin *et al*., 2009). Voluntary behaviour change is enthused by the provision of information (Sammer and Wüstenhagen, 2006; Freestone and McGoldrick, 2008; Oates *et al*., 2008). The provision of information, although it may increase pro-environmental *awareness*, does not always result in pro-environmental *behaviour* (Blake, 1999; Carrington *et al*., 2010; Carrington *et al*., 2014). It is suggested by Lorenzoni *et al*. (2007) that targeted and tailored information provision must be supported by wider structural change if sustainability is to be realised in the daily lives of citizens. Efforts towards sustainable consumption can be categorised as either voluntary or compulsory. Voluntary change involves consumers becoming more aware of their behaviour and their impact. Sustainable farming, water and energy conservation, recycling and reusing consumables, and reducing motor use, are all examples of how consumers may voluntarily reduce their individual impact on the environment (McDonald *et al*., 2006; Prothero *et al*., 2010). However, voluntary change, which will be discussed in greater detail later, is not a widespread phenomenon (Szmigin *et al*., 2009; Carrington *et al*., 2010). This is where compulsory change, in the form of policies

and legislation, has played an important role in reducing carbon emissions of nations (Barr *et al*., 2011; IPCC, 2014). An example of such a change is the plastic bag levy, introduced in Ireland in March 2002. This levy dramatically reduced plastic bag use among Irish consumers and in turn reduced carbon emissions for Ireland. The use of plastic bags dropped by 94% within weeks of the legislation being introduced and within a year the use of reusable bags was the norm (Convery *et al*., 2007; Rosenthal, 2008). Environmental policies and legislation on a global and European level are continuing to garner support both socially and politically (Prothero *et al*., 2011). The majority of environmental policy and legislation in Ireland has been driven predominantly by international initiatives in the environmental field (Pape *et al*., 2011). The following section will discuss the various public policies and pan-European legislation that govern environmental behaviours of individuals, households, schools and communities.

2.4.1 United Nation Agreements

The 1992 United Nations Conference on Environment and Development (UNCED) (known as the *Earth Summit*) ignited a change in perceptions regarding the environment and sustainability. The *'Earth Summit'* encouraged countries to reduce their impact on the environment, with a key message of *'nothing less than a transformation of our attitudes and behaviour would bring about the necessary changes'* (UNCED, 1992, p.2). The Earth Summit took place in Rio de Janeiro, Brazil, 20 years after the first UN conference on the Human Environment which took place in Stockholm in 1972. Following the Stockholm conference, governments set up the United Nations Environment Programme (UNEP) which acts as a global catalyst for environmental protection. However, between 1972 and 1992, very little was done on a global scale to integrate environmental concern into strategies for action. Environmental deterioration, ozone depletion, water pollution, natural resource depletion and global warming continued at an increasing rate (UNCED, 1992, p.2). The 1987 Brundtland Report acted as a catalyst for the United Nations (UN) and gave rise to in the UNCED convention in 1992. Agenda 21, a non-binding voluntary agreement on sustainable development, was the main document to emerge out of the UNCED 1992. Agenda 21 clearly states the causal links between wasteful and inefficient post-industrial consumption patterns and global environmental

change and aimed to prepare the world for the challenges of the future (UNCED, 1992; Hobson, 2002).

However, the standards set out in the Earth Summit were not enough to call governments and citizens into action. Appeals were made to strengthen the global response to climate change. The 1997 Kyoto Protocol, linked to the United Nations Framework Convention on Climate Change (UNFCCC), was adopted which legally committed countries to reduce carbon emissions. This marked the beginning of real efforts made by governments and citizens to reduce their environmental impact (Prothero *et al*., 2010). The first commitment period to the Protocol was 2008-2012 and the second, which is currently running, 2013-2020. In Doha, Qatar, on December 2012, the *'Doha Amendment to the Kyoto Protocol'* was adopted which updated the Kyoto Protocol and included a revised list of greenhouse gases. During the first commitment period 37 industrialised countries and the European Community committed to reduce greenhouse gas emissions to an average of 5% of 1990 levels. For the second commitment period, countries committed to reducing emissions by at least 18% of 1990 levels (UNFCCC, 2014). The UN is working on establishing a new international agreement by 2015. This agreement, which will be implemented by 2020, will take decisive steps towards averting irreversible changes of the global climate system (UNFCCC, 2014).

2.4.2 European Union Policy

The European Union (EU) has played a vital role in the agreements of the UN conventions and is committed to climate change mitigation. Under EU law, care of the environment has to be considered at all stages of decision-making and is taken very seriously by all EU member states. Protection of natural habitat and resources has been further cemented in the EU by the Lisbon Treaty. The European Commission has set out a roadmap for sustainability to 2050. The first target for the EU, enforced through legislation, is to: reduce greenhouse gas emissions by 20% of 1990 levels, in line with the UN Framework targets; to increase energy consumption from renewable resources by 20%; and to improve the EU's energy efficiency by 20%. The overall aim of the European Union is to become a low-carbon community

(European Union, 2015). The EU sets out to achieve this target through a series of Environment Action Programmes. Currently, the 7th Environment Action Programme, adopted by the European Parliament and the Council of the European Union in November 2013, titled *'Living well, within the limits of our planet'*, is the European Commission's environment action programme for 2020. Within this plan, the EU has agreed to:

> *'set up its efforts to protect our natural capital, stimulate resource-efficient, low-carbon growth and innovation, and safe-guard people's health and well-being – while respecting the Earth's natural limits'.*
>
> (European Commission, 2013b, p.1).

Ireland, as an EU member state, signed up to the Kyoto Protocol to reduce carbon emissions. The Environmental Protection Agency (EPA), an independent public body established under the Environmental Protection Agency Act 1992, monitors and ensures that Ireland's environment is protected and free of any deterioration or neglect (EPA, 2015). In 2012, the Irish Government outlined the strategy in its framework for sustainable development *'Our Sustainable Future'*, which sets out long-term objectives for progressing sustainable development and fostering a green economy in Ireland. This programme is guided by the EU's programme *'Living well, within the limits of our planet'* and focuses on the challenges Ireland face in the wake of targets set out by the UN and the EU for 2020.

The key question for the effectiveness of environmental policy is whether it has had a positive impact on the state of the environment. The European Environmental Agency (EEA) is assigned to help the EU member states in making informed decisions regarding the improvement of their environment, integrating environmental considerations into economic policy, and to move the EU towards sustainability. The EEA reports periodically on the state of the environment in the EU (EEA, 2014). Since 1970, the EU has agreed over 200 pieces of legislation to protect the environment. The European Commission can hold member states

accountable if they do not implement legislation correctly. The European Commission reiterates the long-term goal of achieving sustainability:

> *'Environmental policy aims to strike a balance between our need to develop and use the planet's natural resources, and the obligation to leave a healthy legacy for future generations'.*
>
> (European Commission, 2013a, p.8).

However, policy agendas in the area of sustainability cannot remain stagnant and since the 1990s the nature of European environmental policy has changed in parts from regulation to the use of *'new policy instruments'* (Cahill, 2010, p. 7) such as taxes, charges, emissions trading, voluntary or negotiated instruments and information devices such as eco-labels (Sammer and Wüstenhagen, 2006). In Ireland, several bodies such as the Sustainable Energy Authority of Ireland (SEAI), the Heritage Council, and Comhar are responsible for promoting energy efficiency, conserving the island's natural resources and acting as a forum for discussion on national sustainable development policy, respectively. An Taisce, a non-governmental organisation (NGO), promotes environmental conservation, acts as a monitor of the application of EU legislation at local level and runs the Green-Schools programme (known internationally as Eco-Schools) that promotes environmental awareness and action in schools. Together, policies and legislation set out by the UN, the EU, national and local governments are facilitating the progression of sustainable development. This form of behaviour change is not voluntarily taken up by citizens but through agreement of binding targets, aims to significantly change behaviours of corporations and consumers.

2.5 The Role of Consumers

Sustainability, poised as the possibility that human life on Earth can be infinite, relies on considered human behaviour (Jackson, 2005; Ehrenfeld and Hoffman, 2013). The scale of modern day consumption is environmentally damaging, therefore individuals must try to reduce their consumption levels significantly while also

maintaining meaning and quality of life (Strong, 1997; Jackson, 2005). However, the premises around which many construct their lives in the modern world are based primarily on consumption (Baudrillard, 1998; Belk *et al*., 2005; Peattie, 2009; Ehrenfeld and Hoffman, 2013). The increasing influence of our '*consumer society*' (Baudrillard, 1998; Peattie, 2009) has created a socially-constructed reality for the modern-day consumer (McDonald *et al.*, 2006; Szmigin and Carrigan 2006). Consumption was once used to satisfy basic individual needs whereas now it is used as: a means through which relationships within society are structured; individual happiness is pursued; an expression of status; and, a measure of wealth and success (Peattie, 2009). Our modern culture of *'I shop, therefore I am'* ultimately impedes sustainability and all it encompasses. Consumers may have ethical intentions but are '*blinded by the seduction of consumer goods*' (Eckhardt *et al*., 2010, p.427). People are attached to material consumption in a wide variety of ways, either playing a functional or symbolic role in their lives (Cherrier *et al*., 2012). Consumers may often be '*locked in*' to unsustainable patterns through a complex mixture of institutional, social, or psychological factors (Jackson, 2005).

Therefore, viewing the consumer as a rational autonomous being underestimates the '*powerful constraining forces embedded in the dominant system of codification, symbolic representations, and social norms'* (Cherrier *et al*., 2012, p.398). This socially embedded setting allows consumers to increase their welfare by increasing their consumption:

> *'…this individual rationality to enjoy the fruits of consumption leads to a collective overconsumption, which generates such unwanted and negatively valued side effects as excessive waste and environmental deterioration'.*
>
> (van Dam and Apeldoorn, 1996, p.48)

Individual, goal-oriented consumers are attributed much of the blame for sustainability issues in the literature as they attempt to satisfy their personal, social and ecological needs through marketplace offerings (Cherrier *et al*., 2012). This '*insatiable desire for more'* by consumers is encrypted in both the ideological

foundation and institutional structure of the market (Jackson, 2005, p.24). If our global economy is already consuming more than the Earth can provide, how can we alter our current situation?

One answer to this question is to encourage consumers to be more environmentally conscious in their consumption. Environmentally conscious consumption is defined by Moraes *et al*. (2012, p.104) as:

> *'consumer behaviour that is predominantly driven by consumers' environmental concerns and their attempts to reduce or limit their environmental footprints, including efforts to make their own, reduce, reuse, and recycle consumer goods and produce'.*

Ethical consumption considers societal and animal welfare issues, environmental concerns, corporate responsibility, labour practices, and globalization (Harrison *et al*., 2005). Ethical consumption is a '*more encompassing term'* than green consumption, addressing consumption as a medium for political and moral action (Moraes *et al*., 2012, p.104). Efforts made by corporations through their strategies and marketing campaigns, along with governmental and legislative measures, is only the first step in cultivating a sustainable world.

The responsibility of truly changing the dominant social paradigm (DSP) has been ascribed to consumers and their behaviours (Kilbourne and Beckmann 1998; Jackson, 2005; Ehrenfeld and Hoffman, 2013). While there is no consensus on what constitutes the DSP in Western industrial societies, it can be regarded as the dominant or prevailing paradigm that is held by not necessarily the majority of society but by the dominant groups in society (Kilbourne, 1998). Milbrath (1984, p.7) defined the DSP as consisting of *'…the metaphysical beliefs, institutions, habits, etc. that collectively provide social lenses through which individuals and groups interpret their social world'.* The DSP serves to legitimize and justify prevailing institutions that serve the interests of these dominant groups and consequently, serves as a mechanism through which specific social or political strategies may be

justified. Climate change, caused by a change in the composition of the atmosphere, has occurred due to carbon emissions, in the most part from human activities and ultimately this *'enormous wall of consumption lies at the heart of the climate change problem'* (Helm in O'Hear, 2011, p.238). Ehrenfeld and Hoffman (2013) argue that the reason the world is in such bad shape is because the DSP no longer fits the world and as long as we continue to operate according to its structure, we will continue to yield consequences that threaten sustainability.

Peattie (2001) suggests that issues with sustainable consumption are cultivated by unsupported assumptions about consumers and the environment. He argues that integrating *'the green challenge into the existing way of marketing'* is flawed and perhaps a new way of challenging the existing paradigm is required (Peattie, 2001, p. 188). As Belz and Peattie (2012, p.12) argue:

> *'Despite the widespread agreement about the need to change the nature of economic development, the existing dominant social paradigm and the trajectory of social, economic and technological development have proved remarkable resistant to significant change'.*

Ultimately, it is debated that if we continue to measure success based on our Gross Domestic Product (GDP) and value *'the materialist vision of the 'good life''* (Ehrenfeld and Hoffman, 2013, p.30) our environment and its resources will continue to suffer indefinitely (Kilbourne and Beckmann 1998; Foster, 2008). The recent recession has had some impact on changing the current thinking on credit-led consumption, which can do much to reduce the levels of consumption and thus, the impact of consumers on the environment (Carrigan and de Pelsmacker, 2009; Prothero *et al*., 2010). However, the question remains whether the recession will have a lasting effect on consumption levels and whether the desire for the *'good old days'* of materialistic consumption will return (Ehrenfeld and Hoffman, 2013, p.68). Nonetheless, sustainable consumption by consumers is positioned as the holy grail of sustainability.

There is a distinction made in the literature between '*ethics of consumption*' and '*ethical consumption*' (Harrison *et al*., 2005). When discussing '*ethics of consumption*', consumption itself is the object of moral evaluation e.g. sustainable consumption, environmental issues, voluntary simplicity etc. In contrast, '*ethical consumption*' represents consumption as a medium for moral and political action e.g. consumer boycotts, corporate social responsibility, Fairtrade campaigns etc. The ethics of consumption question the morality of consuming whereas ethical consumption is the idea of consuming judiciously for a social and/or environmental advantage (Harrison *et al*., 2005). In addition, McDonald and Oates (2006) suggest taking a holistic view of consumer behaviour within the sustainability discussion, contending that we combine both green purchasing and green disposal as a means to understanding green consumer behaviour. The authors suggest extending the scope to include concerns relating to transport, water, energy, ethical purchasing and community related activities (McDonald and Oates, 2006). Therefore, the purchase or consumption of a product or service is only the beginning of the problem regarding sustainability. Furthermore, Shankar (2000, p.28) discusses consumption as a '*tripartite concept that involves acquisition, usage and disposal*' whereby the usage or '*experience of using the product*' is profoundly important in gaining a deeper understanding of consumption in people's lives. Shankar's (2000) discussion on consumption of popular music enlightens our understanding of how we consume products and the importance those consumption experiences have on both understanding consumption itself and its role in our lives. Consumption is referred to in this thesis in light of both these views on consumption (Shankar, 2000; McDonald and Oates, 2006) which includes the purchase/behavior decision, the usage experience of such products/behaviours in an everyday context, and their disposal, if relevant.

The following section offers a synopsis of the literature that has formed the sustainable consumption debate since it began in the early 1970s. A synopsis of the extensive consumer segmentation categories that have dominated research in this area will be presented. Consumer awareness of the sustainable consumption discourse and its influence on behaviour change will be discussed. Academic debate on how to motivate and change consumer behaviour has had a great deal of attention

in the literature as they seek to close the attitude-intention-behaviour gap of consumer behaviour. A review of sustainable consumption in relation to household consumption and how progression of sustainability can have an effect at this level will be discussed. The barriers and constraints on sustainable consumption will open up the discussion on how to negotiate behaviour change among consumers going forward.

2.5.1 Sustainable Consumption

Increasing literature and public policy on sustainability calls for *'responsible consumer choices'* to advance the sustainability agenda (Adams and Raisborough, 2010, p.256). Environmental policy on climate change requires an immediate need to improve environmental performance which has primarily involved encouraging behaviour change among consumers. It is therefore necessary to understand consumer behaviour in a sustainable consumption context (Oates *et al*., 2008). As the basis of marketing philosophy is to orientate business decisions around the wants and needs of consumers, the search and identification of the '*green consumer*' has dominated green marketing research (Peattie, 2001).

In an attempt to define characteristics of pro-environmental consumers, many studies have segmented the market according to demographic, socio-economic and psychographic qualities (Peattie, 2001; McDonald *et al*., 2012). Initial segmentation identified the '*ethical consumer*' or '*voluntary simplifier*', their motives, feelings and behaviours as a means to encourage change by others. The ecologically conscious consumer has been identified under variables such as age (Leonard-Barton, 1981; Van Liere and Dunlap, 1981), gender (Van Liere and Dunlap, 1981; Roberts, 1995), income (Anderson and Cunningham, 1972; Roberts, 1995), education (Leonard-Barton, 1981; Roberts and Bacon, 1997), place of residence (Van Liere and Dunlap, 1981), political orientation (Roberts, 1996), perceived consumer effectiveness (Roberts, 1995; Lord and Putrevu, 1998), and environmental concern (Van Liere and Dunlap, 1981; Roberts and Bacon, 1997). Szmigin *et al.* (2009) highlight that previous studies have looked at ethical consumption in areas such as Fairtrade coffee, animal welfare, and ethical trade-offs but with a rise in ethical alternatives in

the market and consumer consciousness increasing, an understanding of why consumers choose ethical alternatives and why so-called ethical consumers have inconsistencies in their behaviour has become an important aspect of consumer research (Devinney *et al.*, 2010).

Two consumption patterns have been identified in this context: *maintaining* and *reducing* (Shaw and Newholm, 2002). Maintaining consumption levels while being ethical involves consumers purchasing energy-efficient products, buying fair-trade and relying on technological advancements to alleviate the burden their consumption has on natural resources. These consumers maintain their current consumption levels but replace unsustainable products with their ethical alternatives. Green consumers are generally referred to as consumers who choose eco-friendly alternatives over their mainstream counterparts (Oates *et al*., 2008). The conceptualisation of a citizen as a '*citizen-consumer*' (Sagoff, 1988) is seen to aid a prosperous society through individual consumer sovereignty and a civic duty to support the economy. Consumers are encouraged to feel a duty as a citizen to promote consumerism. Therefore, incorporating environmental concern into the preferences of consumers is seen as a plausible means to promote the green consumption agenda (Hobson, 2002; Wells *et al*., 2011). Reducing consumption levels on the other hand relate to consumers actively reducing their material resource usage and disposal. This is a form of ethical consumption that relates to those consumers who have adopted an overall simpler lifestyle in contrast to the high-consumption lifestyle that is often targeted as being the cause of many environmental issues. Reducing consumption levels is the ultimate form of sustainable consumption whereby rather than replacing non-environmental products with their eco-friendly counterparts, this type of consumption pattern refers to '*doing without'* or minimising overall consumption (Shaw and Newholm, 2002).

Similarly to Shaw and Newholm's (2002) *maintaining* consumption pattern, Szmigin and Carrigan (2006) in utilizing Holt's (1995) typology of consumption practices, view ethical consumption as *integration*. This metaphor '*highlights the methods used to enhance the value of ethical choices within peoples existing consumption choices*

and as a reflection of their identity' (Szmigin and Carrigan, 2006, p.610). This interpretation of sustainable consumption suggests that an awareness of ethical concerns in their environment and the motivation to act on such awareness enhances a consumer's sense of self-identity. This is essentially an act of distinguishing themselves from others (Szmigin and Carrigan, 2006) and representative of '*self-actualisation*' within Maslow's hierarchy of needs. Other studies have also shown that socially conscious consumers have scored high on self-actualisation (Brooker, 1976; Etzioni, 2004). Consumers that use consumption as a means to enhance their self-identity may also do so to portray a positive social image which in turn has encouraged the distortion between intentions and behaviours that have become so prominent in the ethical consumption literature (Freestone and McGoldrick, 2008; Eckhardt *et al.*, 2010).

The argument for ethical consumption to be recognized as embedded in everyday consumption practices rather than positioning it against so called *'unethical consumption*' is well discussed (Barnett *et al*., 2005, p.10). Consumption in the everyday is *'bound up with the forms of care and concern that shape everyday social relations of domestic family life*' (Barnett *et al*., 2005, p.9). Thus, to cast ordinary consumption as '*unethical*' threatens to alienate ordinary consumers rather than encourage and empower them to change their views on consumption and their overall impact on the environment (Barnett *et al*., 2005). This form of integrating ethical concerns into everyday consumption practices is in contrast to the *reducing* consumption patterns (Shaw and Newholm, 2002) which involve consuming less either through sustainable travel methods, growing your own food or buying second-hand clothes (Shaw and Newholm, 2002). The depictions of consumer types in the literature are many and varied and constitute a large part of the research in this area (Elign, 1981; Leonard-Barton, 1981; Etzioni, 1998; Barr & Gilg, 2006; Prothero *et al*., 2010; McDonald *et al*., 2012).

2.5.1.1 Approaches to Segmentation

The main argument for segmenting the green consumer market is to identify and understand the motives of ethical consumers. This segmentation allows marketers to

learn from these ethical consumers and encourage behaviour change for other consumers. However, research in this area, based on demographic and socio-demographic segmentation methods, has produced conflicting and inconclusive results (Roberts, 1996; Peattie, 2001). Age, gender, and education level have all reported both positive and negative correlations with pro-environmental behaviour in several studies (Van Liere and Dunlap, 1981; Samdahl and Robertson, 1989; Schahn and Holzer, 1990). An alternative perspective on segmenting the market is based on consumer beliefs rather than the mass market approach of demographic segmentation (McDonald and Oates, 2006). There are also more recent indications of a domestic division of labour when it comes to recycling but there are joint activities that both males and females participate in, with males more likely to recycle as part of a joint arrangement rather than being the sole person responsible in the household. Further, it is contended that the person who initiates the activity will become the sustainer of that activity (Oates and McDonald, 2006). Interestingly, Ottman (2011) discusses the generational differences between Baby-Boomers, Generation X, Generation Y and Generation Z and suggests the differing perceptions on sustainability issues between these generations.

Baby-Boomers (born 1946-1964) led the concerns for the environment beginning in the late 1960s and early 1970s. Concerns over oil, energy production, pollution and clean water gave way to the milestone celebration of the first Earth Day in 1970 and the emergence of environmental legislation (Ottman, 2011). A study of older consumers was conducted by Carrigan *et al*. (2004, p.411) and found that this segment of consumers have a '*strong sense of moral responsibility'* reflected by their ethical purchasing behaviour. Generation X (born 1964-1977) were raised in a time where television broadcasts exposed them to global issues such as the Live Aid concert in 1985 and the Rio-Summit in 1992. This generation see environmental concerns through a lens that *'aligns social, educational and political issues'* (Ottman, 2011, p.5). Generation Y (born between early 1980s – early 1900s) are likely the new leaders of the modern-day green movement as tech-savvy individuals and increasingly distrustful of the government and authority. This generation educate and communicate through internet source, social networking, and blogging (Ottman, 2011). Lastly, Generation Z (born between late 1990s to currently) is perhaps the

first generation to be raised in an environmentally conscious world where green activities, behaviours and products are somewhat part of their everyday lives. Ottman (2011) suggests that this generation perceive solar powered homes, separating paper and plastic from trash, and hybrid cars as the norm. They are educated in school on the effects of climate change and sustainable consumption, and in some cases are actively engaging with sustainability through the Green-Schools (Eco-Schools) programme. Can these presumed environmentally conscious citizens naturally change the DSP over time? What can be garnered from Ottman's (2011) discussion is that all generations, regardless of their introduction to environmentally conscious concerns, should have some awareness of the need for pro-environmental behaviour and in varying degrees, may be engaged in pro-environmental activities.

2.5.1.2 A Consumer Typology

McDonald *et al*. (2012) distinguishes between segmentation which involves grouping consumer types according to age, gender, income etc. and a typology of consumers which distinguishes consumers based on their reported behaviours, intentions, values etc. A typology of consumers is offered in Table 2.1. This table is not conclusive but rather represents a selection of labels given to consumers within the sustainable consumption literature. There are some overlaps in characteristics between consumer types, which will be discussed. For clarification purposes I have grouped the consumer types into three parent categories:

- The Green Consumer-Citizen
- The Conscious Consumer-Citizen
- The Mainstream Consumer-Citizen

The first category includes consumer types who prioritise, in varying degrees, environmental or social issues in their day-to-day consumption practices. The second category represents consumer types who, to a lesser degree and more selective in nature, include environmental or social concerns in their consumption choices. The

final category represents consumer types who are more mainstream in their consumption decisions and essentially do not seem to include environmental or social concerns in their day-to-day consumption practices.

Table 2.1 Ethical Consumer Typology

Category Name	**Consumer Title**	**Author(s)**
The Green Consumer-Citizen	*Socially Conscious Consumer*	Webster, 1975; Roberts, 1995
	Ecologically Conscious Consumer	Straughan and Roberts, 1999
	Citizen-Consumer	Sagoff, 1988
	Voluntary Simplifier	Leonard-Barton, 1981; Elign, 1981
	Crusaders	Leonard-Barton and Rodgers, 1980
	Strong simplifiers	Etzioni, 1998
	Holistic simplifiers	Etzioni, 1998
	Ethical Consumer	Harrison *et al.*, 2005
	Green Consumer	Ottman, 1993
	Exceptors	McDonald *et al*., 2012
	Committed	Barr & Gilg, 2006
	The Collective Green Citizen	Prothero *et al*., 2010

The Conscious Consumer-Citizen	*Conformists*	Leonard-Barton and Rodgers, 1980
	Downshifters	Etzioni, 1998
	Beginner Voluntary Simplifier	McDonald *et al*., 2006
	Apprentice Simplifiers	McDonald *et al*., 2006
	Partial Simplifiers	McDonald *et al*., 2006
	Conscious Consumer	Szmigin *et al*., 2009
	Translators	McDonald *et al*., 2012
	Selectors	McDonald *et al*., 2012
	Occasional	Barr & Gilg, 2006
	The Collective Green Consumer	Prothero *et al*., 2010
The Mainstream Consumer-Citizen	*Conservers*	Leonard-Barton and Rodgers, 1980
	Accidental simplifiers	McDonald *et al*., 2006
	Non-Voluntary Simplifier	McDonald *et al*., 2006
	Mainstream	Barr & Gilg, 2006
	Non-Environmentalists	Barr & Gilg, 2006
	The Individual Green Citizen	Prothero *et al*., 2010
	The Blind Green Consumer	Prothero *et al*., 2010

Much of the early work in this area looked at the first category of consumers which are seen to be the ideal ethical consumers (Webster, 1975; Leonard-Barton and Rodgers, 1980; Elign, 1981; Leonard-Barton, 1981; Roberts, 1995). More recently the focus has shifted to those consumers who seem to be on the fringe of ethical consumption and are generally regarded as having an awareness of environmental concerns but not consistently including these concerns in their consumption decisions (Barr & Gilg, 2006; McDonald *et al*., 2006; Szmigin *et al*., 2009; Prothero *et al*., 2010). The final category of consumers are considered as either uninformed, uninterested, or practice sustainable consumption but not out of concern for the environment (Barr & Gilg, 2006; McDonald *et al*., 2006; Prothero *et al*., 2010). The variation in characteristics between the numerous consumer types within the three selected parent categories is acknowledged. Voluntary simplifiers and ethical consumers have a heightened awareness of social and environmental concerns while non-voluntary simplifiers or mainstream consumers are positioned as not being aware or concerned about environmental issues. Placed between these two extremes are beginner voluntary simplifiers and conscious consumers (McDonald *et al.,* 2006; Szmigin *et al.,* 2009). It is important to note that a clear cut-off point between consumer groups is not likely or currently accepted. Rather the groups:

> '*should not be conceptualized as distinct, static, or coherent statements of lifestyle, but treated as overlapping, fluid, and inconsistent streams of purchase and/or nonpurchase decisions'.*
>
> (McDonald *et al.*, 2006, p.531)

The three parent categories used in this thesis to clarify the extensive segmentation of consumers in this context will be discussed further to highlight the significance of this segmentation research in progressing what we know about how and why people behave in a sustainable manner or indeed, perhaps why they don't.

2.5.1.2.1 The Green Consumer-Citizen

The Green Consumer-Citizen category represents those consumers who prioritize environmental and social concerns in their consumption decisions. This group

includes voluntary simplifiers, ethical consumers, green consumers, collective green citizens, among other titles listed in Table 2.1. The term '*ethical consumer*', although primarily viewed in the literature as a consumer who refines their consumption rather than reduces it, is often used interchangeably with '*green consumer*' and both are used as a general label for a consumer that behaves in a pro-environmental or pro-social manner. Used in this way, this consumer label may include voluntary simplifiers, downshifters, beginner voluntary simplifiers, conscious consumers or any of the consumer terms offered in Table 2.1. As research in this area expanded, several labels were given to consumer types, depending on behavioural attributes and motivational factors. Therefore, it is important to note the term ethical or green consumer is used most widely as a general term but taken in its true form there are several differences between the consumer segments.

Voluntary simplifiers are conveyed as *'individuals who have freely chosen a frugal, anticonsumer lifestyle that features low resource use and environmental impact'* (McDonald *et al.*, 2006, p.515). Voluntary simplifiers do not rely on material sources to contribute to their overall happiness (Leonard-Barton, 1981; Etzioni, 1998). These consumers may simplify their life not because of a negative feeling towards modern day consumption and materialism but to reestablish a simpler, family-orientated life (Craig-Lees and Hill, 2002) or due to stress and pressure experienced in modern day lifestyles (Zavestoski, 2002; Szmigin and Carrigan, 2006). This simplification is chosen out of free will rather than being *'coerced by poverty, government austerity programs, or being imprisoned'* (Etzioni, 1998, p.620). Voluntary simplifiers are seen as ecological activists and have a strong level of personal obligation to reduce their energy consumption (Leonard-Barton and Rodgers, 1980). This consumer type is likened to '*Crusaders*' who regard themselves as role models and believe they have a responsibility to educate others about the limitations of the world's natural resources (Leonard-Barton and Rodgers, 1980). The main contention in the literature is that this way of living is based on a voluntary, active decision to live and consume environmentally (McDonald *et al.*, 2006). Voluntary simplifiers make a lifestyle choice to lead a simpler life and this choice may have been enabled by a high level of education and available wealth (Craig-Lees and Hill, 2002; Zavestoski, 2002).

Voluntary simplicity, as a lifestyle choice is different to those in society who are forced to live on less due to poverty (McDonald *et al*., 2006).

The underlying motives driving voluntary simplicity are inferred as environmental, spiritual, self-orientated (Craig-Lees and Hill, 2002) and internal values (Shaw and Newholm, 2002). Voluntary simplicity, due to its sometimes extreme form of non-consumption, is almost greater in scope and ideals than sustainable consumption itself. However, voluntary simplicity has been framed in the literature as *'a lifestyle that will provide a natural framework for sustainable-consumption practices'* (McDonald *et al*., 2006, p.518). Etzioni (1998) further subcategorizes voluntary simplicity suggesting that reduction in consumption may take various consumer forms such as: downshifters; strong simplifiers; and holistic simplifiers. Strong simplifiers make a conscientious effort to reduce their consumption (Etzioni, 1998). These consumers give up their high-paying stressful careers for a more, laid-back lifestyle which often is accompanied with less income. These consumers substitute their socio-economic status for lifestyles akin to writing and volunteer work (Etzioni, 1998). Holistic simplifiers are primarily driven by the simple living philosophy. These consumers adjust their entire life patterns and the reason for such a change is driven wholly by a philosophy rather than a reaction to modern lifestyles (Etzioni, 1998). Schaefer and Crane (2005) propose that rather than viewing voluntary simplifiers as following the rational choice model of simplifying their lifestyles due to an acute awareness of the environment and freely making a '*choice*' to reduce their impact on natural resources, to instead view this segment of consumers as actively constructing green identities and lifestyles through their (non)consumption. This notion is embedded in the social and cultural view of consumption (Dolan, 2002; Carrigan *et al*., 2011) and may shed light on the notion of self-identity impacting on a consumers propensity to accept and adopt sustainable behaviours (Schaefer and Crane, 2005).

Although ethical consumers are categorized as being very similar to voluntary simplifiers it is debated that voluntary simplifiers and ethical consumers are *'fundamentally two sides of dialectic between consumption and non-consumption'*

(Szmigin and Carrigan, 2006, p.608). Although these caring and ethical consumers exist, they are likely to remain a minority (Carrigan and Attalla, 2001). Prothero *et al.* (2010) also identify the '*Collective Green Citizen'* who engages in green consumption from an ecological perspective. These consumers may be members of farm cooperatives or purchase Fairtrade produce and are inherently concerned about human impact on the environment. Prothero *et al*. (2010, p.154) views these consumers as '*ontological agents of social change*' as they recognize the need for a transformation of consumer behaviour culture if sustainable development is to be fully achievable. As voluntary simplifiers restrict their consumption and ethical consumers simply refine their consumption, these consumer segments are not all necessarily anti-consumerists and vary in their degree of consumption reduction (Etzioni, 1998; Shaw and Newholm, 2002; Szmigin and Carrigan, 2006).

The extent to which '*Ethical Consumers*' adhere to their ethical consumption ideals may be based on their level of ethical awareness, concern and action (Freestone and McGoldrick, 2008). Ethical consumers may have *'political, religious, spiritual, environmental, social or other motives for choosing one product over another'* (Harrison *et al.*, 2005, p.2). The first commercial research into the ethical or green consumer in the United Kingdom was in the 1980s and since then there have been various insights into the types of consumers that purchase products based on their ethical credentials (Newholm and Shaw, 2007). Szmigin and Carrigan (2006, p.609) contend that *'ethical consumers do not deny consumption but rather choose goods that reflect their moral, ethical and social concerns'* thus, a refinement of consumption rather than a reduction occurs (Shaw and Newholm, 2002). The consumption choices of this consumer group, mostly consisting of ethical products, may also represent a construction of a particular type of self-identity by the individual (Schaefer and Crane, 2005) and accordingly be regarded as '*Material Greens'* (Connolly and Prothero, 2003, p.286).

Recent studies claim that rather than '*conceiving ethical consumers as a niche'* there are various degrees of complexity among consumers and their ethical decision making and that even within the ethical consumerism market, consumers display

different traits and motives for consuming (Newholm and Shaw, 2007, p.255; Devinney *et al*., 2010). '*Exceptors*' as defined by McDonald *et al*., (2012, p.454), have a *'sophisticated understanding of sustainability'* and are inherently change-seeking. These consumers are willing to make consumption decisions based on their ecological responsibilities but their behaviours are not always ethical. This group are labelled '*Exceptors*' as there is at least one aspect of their consumption that represents a *'relatively small but conscious lapse into mainstream consumerism'* (McDonald *et al*., 2012, p.454). There is emerging doubt that when consumers are surrounded by a '*consumer society*', despite their best intentions, cannot live up to the ideals of voluntary simplicity (Peattie, 2009; Devinney *et al*., 2010). This has given rise to the notion that the ethical consumer is a myth and as such, no ideal ethical consumer exists (Devinney *et al*., 2010). Ethical consumers or voluntary simplifiers who may have exceptional intentions to ensure that ethical concerns guide their purchases and behaviours are inevitability subject to the increasing power consumer society has on the socially constructed needs of the modern-day consumer (Szmigin and Carrigan 2006; Peattie, 2009).

2.5.1.2.2 The Conscious Consumer-Citizen

The Conscious Consumer-Citizen category consists of consumers such as beginner voluntary simplifiers, downshifters, conscious consumers, selectors, collective green consumers, among others listed in Table 2.1. Conscious consumers and beginner-voluntary simplifiers are concerned with ethical consumption, making conscious efforts to purchase products that have ethical and environmentally-friendly features and behave in an environmentally friendly manner. However, they do not embrace the simple lifestyle akin to voluntary simplifiers (McDonald *et al.*, 2006; Szmigin *et al.*, 2009). Beginner voluntary simplifiers are portrayed as being rather heterogeneous and are proposed to encompass several subcategories: apprentice simplifiers, partial simplifiers and accidental simplifiers (McDonald *et al.*, 2009). Apprentice simplifiers are those consumers who have the potential to become voluntary simplifiers. These consumers are *'in the midst of a lifestyle change'* as they progress from non-simplification to voluntary simplicity (McDonald *et al.*, 2006, p.526). Partial simplifiers, as the name suggests, are consumers who adopt only certain aspects of voluntary simplicity such as using energy-saving light bulbs and

purchasing from local shops. However, these consumers will almost never convert to complete voluntary simplicity. These consumers are akin to downshifters (Etzioni, 1998) who merely change their consumption patterns for certain luxury items. These consumers are financially capable of living a high-consumption lifestyle but practice a moderate form of voluntary simplicity whereby they voluntarily give up some of their day-to-day luxuries such as expensive clothes or cars for less expensive substitutes. Downshifting also accounts for when consumers give up elaborate and expensive dinners out for simple wholesome dinners in (Etzioni, 1998). This type of simplification is reinforced by Elgin (1981) who suggests consumers are motivated to simplify their life in order to regain control, not merely to reject materialism but to find greater meaning in their lives.

'*Conscious consumers*', distinct from beginner voluntary simplifiers as they are not at the beginning of becoming a voluntary simplifier, are conscious and concerned about their own consumption levels (Szmigin *et al.,* 2009). These flexible consumers balance the desire to remain within a consumer society while paying respect to their environmental and social responsibilities. Their inherent flexibility allows these consumers to manage the dissonance between their consumption and non-consumption of ethical alternatives. In a similar way '*Conformists*' (Leonard-Barton and Rodgers, 1980) dutifully recycle and cut down on meat consumption but do so mainly out of guilt or peer pressure rather than an inherent desire to be environmental. Conscious consumers may always remain conscious of sustainable and ethical concerns but will rise and '*lower the volume of their conscious consumer voice'* as they see fit (Szmigin *et al.*, 2009, p.225). This flexibility accompanied with the moral obligation to purchase certain goods allows conscious consumers to make decisions and easily justify them without encountering dissonance between their consumption and non-consumption of ethical products in different times and spaces (Szmigin *et al*., 2009). McDonald *et al*. (2012) identify three types of consumer groups: Translators, Exceptors and Selectors. Translators are presented as green in some aspects of their lives and grey in others. This partial behaviour change is stimulated by a particular awareness of a specific need to change; typically encouraged by opinion leaders or word of mouth. Translators are *'open to change, although they are not deliberately change seeking'* (McDonald *et al*., 2012, p.453).

Similarly, Selectors are not devoted to sustainability but act in a green or ethical manner in one aspect of their consumption but grey in all other consumption practices. These selectors are positioned as the largest group in society and *'select an aspect of sustainable consumption on which to focus'* such as being avid recyclers but otherwise lead *'consumption-oriented lives'* (McDonald *et al*., 2012, p.455).

Conscious consumers are also akin to the '*Collective Green Consumer'* who engages in environmental acts of consumption for the collective benefit of communities and society (Prothero *et al*., 2010). They are aware of the needs to preserve the planet and take some action to mitigate the impact of consumption on the natural environment. These consumers may buy a hybrid car or switch their brand choice to a greener alternative (Prothero *et al*., 2010). The decisions of conscious consumers may be influenced by their environment as most consumers behave and make choices *'as members of households, families, social networks and communities*' (Barnett, 2007 in Szmigin *et al.*, 2009, p.225). Therefore, although internal values and concern may motivate consumers to purchase ethical goods, these decisions are made within a wider social context. Influences in one's environment may have a larger impact than individual opinions which in turn may help understand why positive choices are not always made (Shaw and Clarke, 1999). Conscious consumers therefore utilize their '*inherent ability to change, adapt and/or react to decision making environments'* as they accommodate other demanding factors in their lives such as their family needs, desires and concerns (Szmigin *et al.*, 2009, p.226).

2.5.1.2.3 The Mainstream Consumer-Citizen

The Mainstream Consumer-Citizen category consists of such consumers as accidental simplifiers, non-voluntary simplifiers, and individual green citizens, among others listed in Table 2.1. These consumers are said to be '*either indifferent, unaware or opposed to simplifier values'* (Szmigin *et al.*, 2009, p.225) and are identified as mainstream consumers. Non-voluntary simplifiers, as portrayed by McDonald *et al.* (2006, p.515), are in contrast to voluntary simplifiers by *'completely dismissing ethical or environmental features of products and services they consume'*

and essentially do not participate in any sustainable consumption practices such as recycling, buying fair trade or organic or using public transport. The title '*Non-Voluntary Simplifier*' may refer to a consumer that is not a '*Voluntary Simplifier*', or it may refer to a consumer who simplifies their life but not on a voluntary or conscious basis. As voluntary simplifiers allow environmental concerns guide their behaviours, non-voluntary simplifiers may be likened to the '*Blind Green Consumer*' (Prothero *et al*., 2010). The blind green consumer engages in green consumption acts but not out of concern for the environment but rather motivated by personal circumstances such as financial constraints. These consumers are, in essence, the accidental simplifiers which McDonald *et al.,* (2006) identifies. These consumers live a simplifier lifestyle primarily due to economic reasons (McDonald *et al.*, 2006; Prothero *et al*., 2010).

In a similar way '*Conservers*' are categorized as people who perhaps grew up in an environment where waste aversion was paramount. These consumers may have been exposed to poverty or someone in their household experienced poverty and thus, a frugal attitude was instilled (Leonard-Barton and Rodgers, 1980). The '*Individual Green Citizen'* identified by Prothero *et al*. (2010), again similar to the accidental simplifier (McDonald *et al*., 2006), is characterized by consumers purchasing organic products for the betterment of their individual health and reducing waste for economically advantageous reasons. These consumers, although making behaviour change that is favourable, may never convert to full voluntary simplicity as the motivations for their behaviour change is embedded in personal benefit rather than environmental benefits (Prothero *et al*., 2010). Thus, self-interest may always reside first rather than environmental concern. Downshifters (Etzioni, 1998), as mentioned previously, may be motivated to lead a simplifier lifestyle as a coping mechanism due to a previous stressful lifestyle and may also be identified as accidental simplifiers (McDonald *et al.*, 2006).

Mainstream or '*unethical*' consumers may be termed '*non-simplifiers*' as consumers who do not simplify their lifestyles or may consist of consumers that either practice excessive consumption or do not consider the implications of their consumption

choices. This group of consumers who, for whatever reason, do not allow sustainable or ethical marketing campaigns guide their consumption choices are in effect hindering the advancement of sustainable consumption on a global scale (McDonald *et al.*, 2006). It is also suggested that non voluntary-simplifiers are one homogenous group that are *'impervious to change'* (McDonald *et al.*, 2006, p.530). Craig-Lees and Hill (2002) identifies work, security, health and happiness as important factors in non-voluntary simplifiers' lives. These consumers seem to link status to their goods but also appreciate value of the goods they purchase. Interestingly, parallel to voluntary simplifiers, non-voluntary simplifiers prefer products that provide them with *'emotional, mental, and aesthetic pleasure'* (Craig-Lees and Hill, 2002, p.206). These consumers that have a low ethical awareness and low ethical purchase intent are labeled as '*oblivious*' (Carrigan and Attalla, 2001, p.573). However, these consumers remain an unknown quantity with very little known about them. It is not clear whether these mainstream consumers are willing to shop ethically, or whether social or ethical considerations have no influence on their consumption (Carrigan and Attalla, 2001).

2.5.2 Motivating Behaviour Change

Climate change is fundamentally linked to energy consumption. This condition instills a need for far-reaching change in values, behaviour, and institutions towards a paradigm of lower consumption (Lorenzoni *et al*., 2007). Consumer behaviour is critical to the impact society has on the environment; the actions and choices that people make have direct and indirect implications for the environment (Jackson, 2005). However, changing the day-to-day behaviours of individuals is a difficult issue to address (Peattie, 2010; McDonald *et al*., 2012). Research over the past 40 years has segmented the green consumer market with an aim to understand and direct lower levels of consumption. However, there is considerable contention that this segmentation process and the following interventions have not brought about the desired change in behaviour (Peattie, 2010; McDonald *et al*., 2012). There is an implicit assumption within the literature that individuals want to help the environment and are just lacking the '*know how*' and once they receive information on what pro-environmental actions they can take it *'awakens a latent sense of*

responsibility' (Hobson, 2002, p.103). Relying on the contention that consumers have an inherent responsibility for the environment may be inaccurate and unreliable (Hobson, 2002).

The consumer society of our modern-day world is socially constructed to consume (Baudrillard, 1998; Peattie, 2009) and relies on the dominant social paradigm (DSP) to support rationalized consumption (Carrigan and Attalla, 2001; Ehrenfeld and Hoffman, 2013). Kilbourne (1998) argues that the DSP approach to solving the environmental problems will *'consistently fail from a global perspective'* and as such, economic growth, political reformism, and technological rationality are lacking the capability of alleviating the problems that they have created (Kilbourne, 1998, p.652). It is argued that the '*shallow*' approach to achieving sustainable consumption, such as public awareness campaigns, will not suffice in motivating behaviour change as it does not account for the entrenched nature of everyday practices which are situated *'within contexts and infrastructures not conductive to living sustainably*' (Hobson, 2002, p.103).

Efforts to motivate sustainable consumption have been extensive and to some degree successful (Jackson, 2005; Freestone and McGoldrick, 2008; Adams and Raisborough, 2010). Behaviour change is seen by academics and policy makers as playing a crucial role in sustainability, but understanding how, why and where behaviour change occurs is an important antecedent to making substantial progress (Jackson, 2005). An important aspect of uncovering what motivates behaviour change is to garner a greater understanding of how consumers make decisions in a consumption context. In this endeavor, several social-psychological theories have been used in the literature to model and explain decision-making and behaviour change: Rational Choice Theory (Homans, 1961; Elster, 1986); Expectancy-Value Theory (Ajzen and Fishbein, 1980); Structuration Theory (Giddens, 1984); Norm Activation Theory (Schwartz, 1977); Theory of Reasoned Action (Ajzen and Fishbein, 1980); and Social Cognitive Theory (Bandura, 1991, 1999). The two most prominent theoretical approaches have been Hunt and Vitell's (1986) general theory of marketing ethics and Ajzen's (1985, 1991) attitude-intention-behaviour model.

These two models rest on the fundamental premise that individual intentions are consistent with ethical judgments. However, as will be discussed in greater detail later, there is clear evidence of attitude-intention-behaviour gaps where consumers ethical attitudes and intentions do not always result in ethical behaviour (Carrigan and Atalla, 2001; Chatzidakis *et al*., 2006; Carrington *et al*., 2010; Carrington *et al*., 2014). Many of the behaviour change models are based on the premise that individuals behave in a rational, self-interested, economic manner (Jackson, 2005). Rational choice theory contends that individuals are rational beings and choices are made in the pursuit of self-interest (Ajzen and Fishbein, 1980). However, Simon (1957) argued that in decision-making situations individuals face uncertainties about outcomes and incur costs in acquiring information thus limiting the extent to which rational decision-making is possible. When applied to pro-environmental behaviour change, the rational actor concept encounters additional problems:

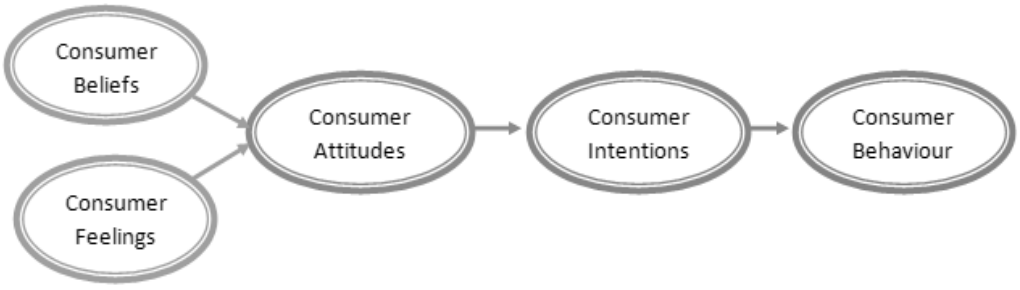
> *'Environmental issues in particular raise new kinds of uncertainties for consumers because in many cases the impacts of our actions are distanced from us, either in space or time'*.
>
> (Jackson, 2005, p.35)

The complexity and uncertainty surrounding pro-environmental behaviour change and the assurance that your behaviour is '*making a difference'* has led many to question the validity of using the rational actor model (Jackson, 2005; Iyer and Cherrier, 2007; Kashyap, 2007; Blanchemanche *et al.*, 2010). This skepticism is bolstered by empirical research into the process of behaviour change among consumers which highlights the weaknesses and inconsistencies of relying on consumers to rationally change their behaviours (McDonald and Oates, 2003; Belk *et al*., 2005; Auger and Devinney, 2007; Shaw *et al*., 2007; Carrington *et al*., 2010). Much of the research in this area focuses on the consumers' ability to process information which will then awaken that '*latent sense of responsibility*' for the environment (Hobson, 2002, p.103). The role of information in the marketplace, with the aim of appealing to the rational actor to change their behaviour, dominates much of the research on environmental awareness and action.

2.5.2.1 Environmental Awareness

Underlying much of the literature on green consumer behaviour is the conceptualisation of consumers as rational actors who base their well-informed purchase decisions on their values and beliefs (Dolan, 2002; Schaefer and Crane, 2005; Freestone and McGoldrick, 2008; McDonald *et al*., 2009). Sustainable consumption is widely understood in terms of information-processing and choice-provision. This is based on traditional psychological and marketing conceptualisations of consumption; uncover individual psychological processes which lead to individual consumption choices (Ajzen and Fishbein, 1980; Schaefer and Crane, 2005). The study of consumer motivations towards purchasing sustainable products suggests that '*respondents motivational attitudes are a function of their stage of ethical awareness, concern and action'* (Freestone and McGoldrick, 2008, p.445). Figure 2.4 outlines how consumer beliefs and feelings in the formation of attitudes, impacts on consumer intentions and consumer behaviour within this paradigm. Efforts have traditionally concentrated on the provision of information as a means to educate consumers, influence behaviour and gain support for policy (Sammer and Wüstenhagen, 2006; Lorenzoni *et al*., 2007; Oates *et al*., 2008; McDonald *et al*., 2009).

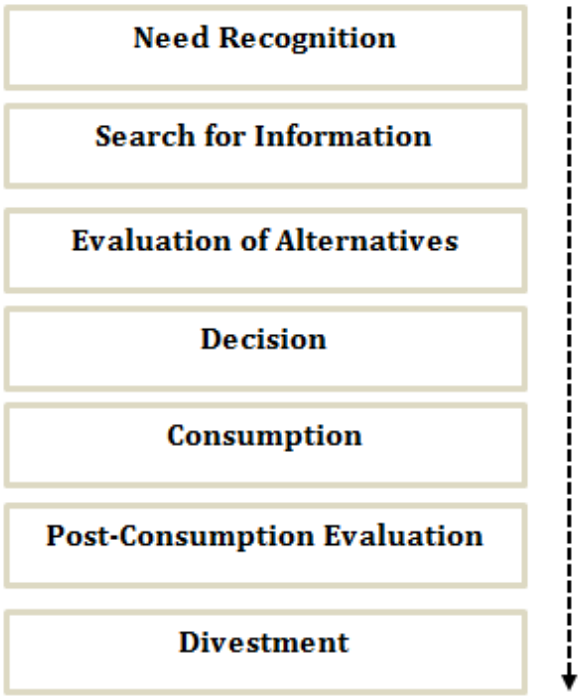
Figure 2.4 A Model of Consumer Behaviour



Source: Blackwell *et al.* (2006)

This concept of consumer behaviour suggests that consumer feelings and subjective judgments directly influence the formation of consumer attitudes which in turn impact on consumer intentions and consequently consumer behaviour (Blackwell *et al*., 2006, p.375). How consumers translate their attitudes and intentions into actual behaviour can be illustrated with the use of decision-making models. Decision-making models in consumer behaviour literature are characterised by several steps, outlined in Figure 2.5. This view of a buyer-decision process is based on Ajzen and Fishbein's (1980) information-processing model of consumer choice. This model suggests that a consumer will move through a number of cognitive and behavioural steps which lead to behavioural intentions and, ultimately, to behaviour. Time spent on each stage will vary significantly from one purchase decision to another depending on the level of involvement required, e.g. the purchase of a new car versus a more routine purchase of household products such as light bulbs (Oates *et al*., 2008).

Figure 2.5 Consumer Decision Process Model



Source: Blackwell *et al.* (2006)

One of the most widely researched aspects of this consumer decision process model is the search and use of information in making purchase decisions or behaviours (Carrigan and Attalla, 2001; Sammer and Wüstenhagen; 2006; Oates *et al*., 2008; McDonald *et al*., 2009). The sources of information used by consumers vary from corporate marketing communications to word of mouth. However, some authors suggest a greater number of sources consulted by the consumer may complicate the decision making process rather than enhance it (Carrigan and Attalla, 2001; Oates *et al*., 2008). McDonald *et al*. (2009) also contend that a consumer may use varying sources of information regarding products from differing sectors. For example, they acknowledge that very green consumers take account of a wide range of criteria when purchasing fast moving consumer goods such as Fairtrade, organic, environmentally-friendly cleaning products, but rely almost solely on brand recognition for small electrical appliances (McDonald *et al*., 2009).

Likewise, Oates *et al*. (2008) discuss information seeking tendencies for three groups of consumers (voluntary simplifiers, beginner voluntary simplifiers and non-voluntary simplifiers) in relation to their purchase of technological products and services. They suggest that voluntary simplifiers rely on independent sources of information such as green publications and pressure groups rather than on corporate communications. This group of consumers demonstrated a more complex decision making process than the other two consumer groups, suggesting that they use information strategically to guide their consumption decisions. It is also believed that the strong environmental values and attitudes these consumers maintain may drive the need for comprehensive information about product attributes and their environmental impact. McDonald *et al*. (2012) further highlight that '*Exceptors*' are the most information-seeking and knowledgeable group of consumers but they are inherently critical and distrustful of corporate and governmental communications preferring to rely on independent publications such as *The Ethical Consumer* magazine.

Beginner voluntary simplifiers are seen to use a combination of information sources from corporate communications, personal recommendations, and interaction with

sales people while incorporating some ethical considerations of the product or service. Beginner voluntary simplifiers were identified as being aware of the existence of green publications such as *The Ethical Consumer* magazine but did not consult these publications prior to making a decision (Oates *et al*., 2008). The final group of consumers, non-voluntary simplifiers use information sources in a limited manner by simply taking recommendations from a friend or family member or utilising immediate information resources that did not require any effort in searching or seeking out required data. Oates *et al*. (2008), based on their findings, suggest that there is a need to emphasize and communicate CSR policies to all green-consumer segments and not to solely focus on those consumers who would be more likely to seek out information. Beginner voluntary simplifiers prove to be on the fringe of acquiring and using such information in their decision-making processes and the opportunity to capture this vast audience should not be missed (Oates *et al*., 2008).

However, as highlighted by McDonald *et al*. (2009) individuals may not use the same information sources or decision-making measures across product sectors. This is coherent with Peattie's (1999) earlier contention that each transaction should be treated differently as consumers are not consistent in their behaviours. McDonald *et al*. (2009) contend that even if a consumer is *green* in one aspect of their consumption, it does not necessarily indicate that they are consistently *green* in all other consumption contexts. This is explained by the argument that consumers are:

> *'informed as much by the industrial, political, and social structures of the sector that produced them as they are by the values, practices and aspirations of the individual. In other words, consumption is not an act determined by the consumer in isolation'.*
>
> (McDonald *et al*., 2009, p.139)

This argument has interesting connotations for the role of information in consumer decision making. On one hand it reiterates the importance of extending information to green consumers and those consumers labelled as beginner voluntary simplifiers or *'conscious consumer-citizens'* in an aim to increase awareness and influence purchase decisions, even on a transaction by transaction basis (Peattie, 1999).

However, if consumers are inconsistent in their behaviours across product sectors, what are the practical implications for sustainability and how does consumer awareness of pro-environmental choices actually influence behaviour change? Fundamental questions regarding the foundations of individual consumer responsibility and choice in a sustainable consumption context are raised (Schaefer and Crane, 2005). Perhaps a focus on the social and cultural aspects of consumption should be considered along with a greater role by industry infrastructures and governmental bodies (Dolan, 2002; Schaefer and Crane, 2005; McDonald *et al*., 2009). Nonetheless, information is deemed to be very important for ethically minded consumers who actively seek out ethical products and boycott unethical companies (Iyer and Kashyap, 2007).

However, other consumers also have access to this information but do not act accordingly. Information for these consumers is not used as a pivotal tool in guiding their behaviour. Information may make purchase decisions more difficult for some consumers as *'having so much knowledge today on consumer products can actually detract from, rather than enhance choice'* (Carrigan and Attalla, 2001, p.566). Consumers experience feelings of being overwhelmed by masses of information and responsibility attached to making purchase decisions (Boulstridge and Carrigan, 2000; Carrigan and Attalla, 2001). Young *et al.* (2010) contend that '*being green'* needs time and space in consumers' lives and for some individuals their lifestyles are too hectic to contend with masses of information. In lieu of considered decision making processes that involve significant information search, consumers may rely on point of purchase assurances such as energy rating labels to make their green purchase decisions easier (Young *et al*., 2010). It is proposed that by easily purchasing a Fairtrade labeled product or an eco-label consumers can relieve themselves of the hassle of searching through information and thus avoiding the complexity of ethical consumption (Sammer and Wüstenhagen, 2006; Adams and Raisborough, 2010). It is recognized that:

> *'information about ethical and unethical actions has an asymmetrical influence on attitudes such that vices detract from attitudes more than virtues enhance them'.*
>
> (Carrigan and Attalla, 2001, p.563)

Therefore, consumers are more likely to react to bad press about a company than respond to good press with positive purchase behaviours. The rational actor suggests that if people are adequately informed they will act in a rational manner in making ethical decisions (Vitell *et al.*, 2001). However, rational choice does not account for incalculable uncertainty which may alter a consumer's decision and when consumers cannot decipher precisely how to change their behaviour, they may simply rely on habit (Blanchemanche *et al.*, 2010).

2.5.2.1.1 Sources of Information

The case of environmental awareness motivating behaviour change is supported in the literature through individuals acquiring information that originates from either government communications or marketing campaigns. However, Schlegelmilch *et al*. (1996) query how environmental attitudes are formed suggesting that sources of information from an immediate social context in the form of family and friends may influence attitudes among consumers and thus have a bearing on environmental action. Schaefer and Crane (2005) also contend that information acquirement and processing has limitations and cannot be relied on to substantially change consumers' behaviours. The social and cultural view has less emphasis on:

> '*how people perceive, evaluate, and select different consumption options and more on the function that consumption has in their lives, both individually and as members of social groups'*.
>
> (Schaefer and Crane, 2005, p.83)

Young *et al*. (2013) additionally argue that attitude change is not necessarily a pre-requisite for behaviour change. Rather than relying on individual responsibility to conserve the planet, it is suggested that a more collective and socially bound commitment to sustainability may encourage a greater uptake of pro-environmental

behaviours (Schaefer and Crane, 2005; Peattie, 2010). Working within the DSP to change consumer perceptions may be the substantive task for industry and government policies to achieve sustainable behaviour (Kilbourne, 1998; Schaefer and Crane, 2005) Schaefer and Crane (2005, p.85) continue to suggest:

> *'studying the problematic nature of sustainability from a social and cultural theoretical perspective on consumption may offer significant insights that may supplement and expand those offered by the traditional perspective, both in terms of showing problematic issues and barriers to the project of greening consumption and in terms of enriching our understanding of what sustainable consumption is and/or might be and where roles and responsibilities for achieving this might lie'.*

The extant literature on behaviour change and sustainable consumption focuses on the individual and their rational choices and does not, for the most part, account for the relations between individuals in this context (Dolan, 2002; Peattie, 2010; Carrigan *et al*., 2011). Consumption practices are usually situated within a wider social context and thus treating decision-making as a positivistic act abandons the cultural and social norms that surround everyday practices of consumers (Schaefer and Crane, 2005; Adams and Raisborough, 2010; Peattie, 2010; Carrigan *et al*., 2011; Southerton, 2012). Behaviour change, towards pro-environmental action, may be encouraged on an individual-level or focus on the role of a collective group (White and Simpson, 2013). Either way, environmental awareness plays a strategic role (Hobson, 2003; Oates *et al*., 2008). The individual relies on information to guide their decisions (Freestone and McGoldrick, 2008; McDonald *et al*., 2009). Increased environmental awareness among governments and industry may be essential in igniting pro-environmental policies that support the necessary cultural shift towards sustainability (Dolan, 2002; Schaefer and Crane, 2005). Nonetheless, it remains that information campaigns that successfully convey information to individuals may not necessarily change individuals' behaviours. Verplanken and Wood (2006) argue that habits, which dominate much of consumers' everyday behaviours, are very difficult to change and awareness campaigns that appeal to consumers may change attitudes but, due to the entrenched nature of habits in their everyday lives, fail in their quest to change actual behaviours (Hobson, 2003; Southerton, 2012).

> *'Consumers everyday lifestyle habits limit the effectiveness of downstream interventions that do not address the performance contexts and social structural factors that maintain habits. Habits are a form of automaticity in responding that develops as people repeat actions in stable circumstances'.*
>
> (Verplanken and Wood, 2006, p.91)

Down-stream interventions include information campaigns and self-help programs. Verplanken and Wood (2006) argue that the only circumstance in which information campaigns can effect behaviour change is when the environmental cues that individuals rely in their everyday lives are disrupted. The most favoured circumstance is when there is naturally occurring change in the individuals lives such as changing jobs or moving house. Individuals are more vulnerable in these circumstances as their environment is changing and thus, interrupting their habits in this situation proves to be most successful in changing old habits. They label this as "*downstream-plus-context-change*" interventions (Verplanken and Wood, 2006, p.91). In addition to downstream interventions Verplanken and Wood (2006) also discuss McKinlay's (1993) concept of '*upstream*' interventions which prevent unwanted behaviours occurring rather than trying to remedy the consequences of unsustainable behaviours after they have occurred.

Upstream interventions involve large-scale macro-level changes that facilitate the performance of desired behaviours. For example, if consumers are presented with a structured method of segregating their recycling and household waste and it is applied as a specific requirement of waste collection companies, there is greater likelihood that behaviour change will occur rather than simply providing households with information about the advantages and disadvantages of different waste disposal options (Hobson, 2003; Verplanken and Wood, 2006). Downstream interventions, such as information campaigns about green products, aim to alleviate the negative outcomes of consumption, whereas upstream interventions, such as improving bus network efficiency to encourage less reliance on cars, aim to prevent such outcomes in the first place (Verplanken and Wood, 2006). It is argued that the optimum way of changing consumers' behaviours is to use '*downstream-plus-context-change*' or '*upstream*' approaches (Verplanken and Wood, 2006). This emphasizes the social

aspect of behaviour and the natural existence of consumption within consumers' lives (Schaefer and Crane, 2005). This context-approach to behaviour change may have more potential than the original format of relying on rational consumers to change their behaviour in response to the provision of information (Verplanken and Wood, 2006).

2.5.2.2 Environmental Action

Environmental citizenship calls on individuals to know, care and act with concern for the environment (Hawthorne and Alabaster, 1999). Within this environmental citizenship model individuals are expected, rather than just acting in accordance with their rights and privileges, to activate their responsibilities and duties towards the environment (Hobson, 2002). This advances the notion of the citizen-consumer to incorporate environmental awareness and concern into their everyday consumption practices. Consumers, as citizens, have a responsibility to see that actions and policies take account of the environment and the consequences such policies may have on the country, economy, and future generations (Hawthorne and Alabaster, 1999). In this context, citizens are not just consumers but social actors that have a responsibility to guide the sustainability agenda:

> '*an environmental citizen is someone who has internalized information about environmental problems, creating a sense of personal responsibility and duty that is then expressed through consumption and community actions'*.
>
> (Hobson, 2002, p.102)

The creation of citizens as social actors, taking responsibility for their actions, is established through information dissemination in the form of education and public awareness initiatives (Hawthorne and Alabaster, 1999). This sense of consumer responsibility is absent from many of the models of consumer behaviour which have measured consumers attitudes and intentions, such as the Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA) (Ajzen and Fishbein, 1980; Ajzen, 1991). Wells *et al*., (2011, p.811) contend that the absence of '*sense of responsibility'* on the individuals' part from these studies has skewed the results of

intentions imparting on actual behaviour. The moderating role of perceived consumer effectiveness (PCE) is discussed by Lord and Putrevu (1998). PCE relates to consumers' confidence in their ability to impart a difference in relation to climate change and the environment. It is contended that PCE is a marker for active pro-environmental behaviour but is developed over a long period of time (Lord and Putrevu, 1998).

The Theory of Reasoned Action (TRA) is a theory of attitude-behaviour relationships which link attitudes, subjective norms, behavioural intention and behaviour in a fixed causal sequences (Ajzen and Fishbein, 1980). Within the TRA there are two antecedents to consumer behaviour: individual attitudes and social norms. However, the TRA has been criticized due to the fact that is only applicable to behaviours that are under '*volitional control'* (Shaw *et al*., 2007, p.31). In response to its apparent weakness, Ajzen added a dimension of '*perceived behavioural control*' which gave rise to the model of the Theory of Planned Behaviour (TPB) (Ajzen, 1985, 1991). Within the TPB there are three antecedents to consumer behaviour: 1) individual attitudes; 2) perceptions of societal pressure; and 3) perceived behavioural control. TPB is one of the most widely used models in the literature (Shaw and Clarke, 1999; Fukukawa, 2002; Shaw *et al*., 2007). This model is based on the notion that intentions predict behaviour and personal values, moral norms and internal ethics form the base for consumers' intentions. Thus, behaviour in a specified situation is *'a direct function of behavioural intention, which in turn is a function of attitude and subjective norm'* (Chatzidakis *et al*., 2006, p.693). The main premise of the TPB and TRA is that beliefs determine attitudes, attitudes lead to intentions, and intentions inform behaviour. In addition to attitudes, social norms and behavioural-control have been found to moderate intentions and behaviours (De Pelsmacker and Janssens, 2007; Carrington *et al*., 2010). However despite numerous studies on the TPB reporting high instances of consumers' intentions to purchase ethically, actual ethical behaviour or consumption is not as apparent (Rettie *et al*., 2012; Carrington *et al*., 2014). Therefore, there is an intention-behaviour gap between the intended consumption patterns of consumers and their actual behaviour (Auger and Devinney, 2007; Carrington *et al*., 2010; Eckhardt *et al*., 2010).

2.5.2.2.1 Intention-Behaviour Gap

Research based on the foundation that positive attitudes and intentions towards ecological concerns is an accurate measurement of individuals' propensity to act has exposed conflicting and inconsistent results (Chatzidakis *et al*., 2006; Shaw *et al*., 2007; Eckhardt *et al*., 2010). The positivist perspective used across green consumption research has led to significant bias towards research examining cognitive and rational aspects of consumer behaviour (Ajzen, 1991; Chatzidakis *et al*., 2006; Auger and Devinney, 2007). Although studies have claimed there is a demand for ethical alternatives this interest has not filtered through to the checkout (Belk *et al*., 2005; Auger and Devinney, 2007; Carrington *et al.*, 2010). Ethical consumers do not always '*walk their talk*' (Carrington *et al*., 2010, p.141). Methodological issues have arisen as some attribute the inconsistencies of consumers' intentions and behaviours to a flawed research method – it is argued that the traditional survey method may be overstating the importance of ethical issues to the behaviours of consumers (Auger and Devinney, 2007; Devinney *et al*., 2010). This has given rise to extensive interest in the '*attitude-intention-behaviour gap*' or the '*value-action gap*' (Darier and Schule, 1999; Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Carrington *et al*., 2010; Carrington *et al*., 2014). These '*gaps*' between stated attitudes and intentions to consume or behave in a sustainable manner and the actual behaviour of individuals has gained a good deal of attention in recent literature and gives rise to the suggestion that the ethical consumer is a myth (Davies *et al.*, 2002; Chatzidakis *et al.*, 2006; Eckhardt *et al.*, 2010; McDonald *et al*., 2012).

Understanding the gap between what consumers say they will do/purchase and what consumers actually do/purchase is an important academic, managerial and social objective (Carrington *et al*., 2010). These inconsistencies have suggested that the notion of a true '*ethical consumer*' is indeed a myth (Carrigan and Attalla, 2001; Nicholls and Lee, 2006; Eckhardt *et al*., 2010; Moraes *et al*., 2012). It is contended that the ideology of an '*ethical consumer*' is false and misplaced and despite high ethical intentions, no consumer acts in an ethical manner for each of their consumption choices (Peattie, 1999). Does this finding have implications for the use of environmental *concern* in sustainable consumption studies, if stated concern does not have positive implications for behaviour? Social desirability bias has been found

to distort measures of ethical consumers' intentions (Carrigan and Attalla, 2001; Auger and Devinney, 2007). McDonald *et al*. (2012, p.450) claim that most consumers *'can be viewed as suspended in some kind of tension between grey and green'* and ultimately, no one individual is a true green consumer. These inconsistencies may be understood when consideration for the physical and social environment within which the consumer is placed is accounted for (Dolan, 2002). Consumer behaviour models of attitude-intention-behaviour may have falsely isolated decision-making from the external effects of the environment and ignoring these contextual elements has contributed to false representations of consumer behaviour (Schaefer and Crane, 2005; Carrington *et al*., 2010).

Acknowledging this, Moraes *et al*. (2012) contend than rather conceptualizing the intention-behaviour discrepancy as a '*gap*', a more realistic impression is '*coherent inconsistencies*' (Moraes *et al*., 2012, p.109). This conceptualisation suggests that rather than a clear-cut '*gap*' between intentions and behaviours, the inconsistencies are coherent to individual consumers' ideas and practice of sustainable consumption (Moraes *et al*., 2012). This is supported by Jackson (2005) and Verplanken and Wood (2006) notions that consumers are '*locked in*' to their consumption patterns and not necessarily making rational consumer choice decisions. Subsequent research on the intention-behaviour gap has yielded interesting results. The rationalization of consumer inconsistencies between intention and behaviour has been considered (Chatzidakis *et al*., 2006; Eckhardt *et al.,* 2010). Chatzidakis *et al*. (2006) address the attitude-behaviour gap in relation to the concept of neutralization. Neutralization is a process whereby consumers justify or rationalize their behaviour '*as a means of coping with decision conflict and insulating themselves from blame and guilt'* (Chatzidakis *et al*., 2006, p.693). Conscious, flexible consumers balance the desire to remain within a consumer society while paying respect to their environmental and social responsibilities. Their inherent flexibility allows conscious consumers to manage the dissonance between their consumption and non-consumption of ethical alternatives (Szmigin *et al*., 2009).

Eckhardt *et al*. (2010) suggest that simply making information available to individuals, or using moral appeals to encourage behaviour change will not likely result in the non-consumption of irresponsible products or behaviours. Therefore, consumers are likely to find a convenient way of justifying their consumption choices (Eckhardt *et al.*, 2010). The intention-behaviour gap has been explained through three distinct justification strategies: *'economic rationalization, institutional dependency, and developmental realism'* (Eckhardt *et al.*, 2010, p.429). Economic rationalization is used by consumers to explain their inconsistencies in behaviour as their financial situation does not allow for positive choices to be made in coherence with their ethical concerns (for example, buying price premium ethical alternatives). Institutional dependency is used by consumers to explain their lack of accountability. Consumers see the enforcement of ethical choices a responsibility of the government and thus justify their inconsistencies (Eckhardt *et al.*, 2010). This is reinforced by Carrigan and Attalla (2001) as they suggest that consumers may rely on legality and thus, acting within the law is sufficient to be perceived as socially responsible. Does this finding suggest that authority and environmental structure has a strong bearing on sustainable consumption? If organisations and governments take on the responsibility of sustainability more consistently, will consumers simply depend on these institutions to guide their everyday behaviours? Developmental realism is the final justification used by consumers as they see the practices in the developing world as merely how the world works. They simply rely on this belief to abolish any feelings of guilt towards their lack of ethical consistency (Eckhardt *et al.*, 2010). It may be possible here that consumers are only interested in ethics if they have a vested interest in them personally (Carrigan and Attalla, 2001).

Furthermore, the consumption process is negotiated by a series of trade-offs between ecological and mainstream objectives as availability and brand may moderate the relationship between intentions and behaviours (McDonald *et al*., 2012). Much of the sustainable consumption research is based on a purchase or transaction but Peattie (2001) suggests that researchers have been looking in the wrong place. He argues that '*hunting for the green consumer should perhaps be focusing more attention on homes, recycling depots and hire shops'* rather than supermarket checkouts (Peattie, 2001, p.189). Peattie (2001) contributes to the debate on the myth

of the ethical consumer in his views and suggests that perhaps in looking to define the green consumer *'marketers have perhaps been hunting for a myth'* which may contribute to the reasons for the reported intention-behaviour gaps of consumer behaviour (Peattie, 2001, p.192). The models of decision making most widely used in the sustainable consumption context, the Theory of Planned Behaviour (TPB) and the Theory of Reasoned Action (TRA), have been rejected by some on the grounds that they have a poor ability to explain behavioural intentions (Shaw and Shiu, 2003). In addition to this, it is proposed that ethical consumption may be based on emotion which cannot be accounted for in attitude-behaviour models but rather requires an interpretative approach in order to fully understand consumer ethical behaviours and nurture sustainable consumption behaviour (Eckhardt *et al.*, 2010). Reported factors that may impede ethical consumption include: price sensitivity; personal experience; ethical obligation; lack of information; quality perception; inertia; cynicism; and guilt (Bray *et al.*, 2011). Cynicism was used as a means of justifying a lack of ethical consumption purchases with *'a feeling that ethical claims were just another marketing ploy, commanding higher prices by taking advantage of consumer goodwill'* (Bray *et al.*, 2011, p.603). These factors contribute to the '*Ethical Purchasing Gap*' of ethical consumer behaviour as they suggest reasons for the reported intention-behaviour gap (Davies *et al.*, 2002). Although consumers may have good ethical intentions, if they are cynical about the ethical credentials of a product or they are too price sensitive, an ethical choice will not be made. Understanding the effect these factors have on consumers considerations of ethical purchases and/or behaviours may help convert consumers intentions into active ethical consumption (Bray *et al.*, 2011).

2.5.2.2.2 Social and Cultural Context

In so far as remedying the environmental damage the industrialized world has created, Kilbourne (1998) argues that economic, political or technological fixes, constructed within the DSP, will not suffice and what is needed, if green marketing and pro-environmental policies are to succeed in changing behaviours, is to reconcile the DSP with the New Environmental Paradigm (NEP) (Kilbourne, 1998). Dunlap and van Liere (1978) frame the environmental debate within a NEP which encompasses a new way of seeing the world. A scale was developed based broadly

on the existence on ecological limits to growth, importance of maintaining the balance of nature, and rejection of the anthropocentric notion that nature exists primarily for human use (Dunlap, 2008). However, there has been little adoption of the NEP as the DSP continues to reign. Dunlap (2008, p.15) argues that:

> *'In the short term, reestablishing momentum towards societal adoption of an NEP will depend on political change, in particular the institutionalization of leadership that relies on and promotes scientific understanding on ecological conditions, rather than environmental skepticism. In the long term, it will rest on the ability of scientists, citizens and policy makers to recognize and acknowledge the reality of ecological deterioration. In a sense, we are in a midst of a paradigm war'.*

Dunlap (2008, p.15) contends that the skepticism that has developed around the significance of global warming is due to the *'anti-environmental message of conservative elites'* and if society is to move past this perception, a paradigm shift towards a more ecological viewpoint is required. Approaches so far have been mainly managerialist in nature (Kilbourne, 1998) and without the incorporation of the essential concepts of both the DSP and the NEP, progress will remain insufficient and contradictory (Kilbourne, 1998). Progressive steps on this front are reported by Prothero *et al*. (2010) as they contend that consumers are changing the DSP, either consciously or unconsciously. Their profile of consumer-citizens suggests that individuals are, on various levels and through various belief systems, beginning to change the DSP through their everyday practices. Some consumers, such as the '*Collective Green Citizens*', are consciously changing their consumption acts whereas the '*Blind Green Consumers*' are unconsciously performing sustainable acts. The authors suggest that the everyday consumption practices of consumers, which are in transition, have the capacity to change the DSP towards a greater consideration of sustainability (Prothero *et al*., 2010). This may, in time, give rise to the new consumer-citizen who exchanges its materialist consumption practices for a more holistic form of consumption which incorporates concerns for their family's health and well-being and concerns for the environment (Prothero *et al*., 2010).

The positivistic, individual-focus of behaviour change that has received much attention in the literature may be futile in realizing wide-spread sustainable consumption and what may be needed is a focus on the social and cultural aspects of consumption (Dolan, 2002; Schaefer and Crane, 2005; Peattie, 2010). Barnett *et al*. (2005) argue that the widely used consequentialist or deontological approaches to sustainable consumption cannot be relied on to bring about behaviour change. Individual calculations of their impact or consequence on the environment or their sense of duty to future generations will not bring about the desired behaviour change for sustainability. An approach that is more sensitive to the ordinary practices of consumers embedded in everyday consumption contexts may yield a more practical means to progress sustainability (Barnett *et al*., 2005; Schaefer and Crane, 2005).

Consumption, viewed from a social and cultural foundation, is more hedonistic in nature and focused on self-identity and a means of communication in a social sphere rather than the rational actor model of information-choice oriented consumption (Cherrier *et al*., 2012). Consumption as a socially and culturally meaningful activity is how the DSP currently regards its existence (Kilbourne, 1998; Schaefer and Crane, 2005). Consumption is currently relied on for a prosperous society (Jackson, 2009). Therefore, viewing consumption as socially and culturally embedded although raises many issues, as society is currently socially and culturally constructed to *increase* consumption, is argued as more realistic than constructing consumption within the rational, information-led models (Dolan, 2002; Barnett *et al*., 2005; Carrigan *et al*., 2011; Cherrier *et al*., 2012). Viewing consumer needs as socially and culturally constructed, the power to control and act upon those needs, rather than rationally decided, relies on historical, political, and social conditions of the daily lives of individuals and therefore '*needs should only be conceptualized as part of the cultural system'* (Cherrier *et al*., 2012, p.401). Similarly, McDonald *et al*. (2009, p.139) conceptualize green consumption as a process whereby consumers *'make sense of themselves and relationships with others'* all the while behaving within the constraints of societal structures and norms. McDonald *et al*. (2012, p.446) continue to suggest a *'richer picture of the green consumer'* is required.

The contextual approach to sustainable consumption and understanding consumer lifestyles focuses on the role of human agency in equal measure to the role of social structure (Spaargaren, 2003; Barr *et al*., 2011; Rettie *et al*., 2012). Social structures consist of sets of rules, social norms, routines, institutions, and meanings and are treated as central to the analysis of consumer behaviour, not as an external variable (Jackson, 2006). Spaargaren (2003) presents a Social Practices Model of consumer behaviour which places the behavioural practice as the unit of analysis rather than the individual. Spaargaren (2003) argues that conceptualising consumer behaviour as practice based rather than individual based is more constructive and promising for effective behaviour change. Inconsistencies between consumers stated attitudes and intentions and their actual behaviour weakens the concept of an '*ethical consumer'* who acts ethically in all situations (Chatzidakis *et a*l., 2006; Bray *et al*., 2011). The social practices model allows consumers to vary their behaviour in relation to a particular practice (Spaargaren, 2003). Therefore, the social practices model seeks to comprehend why an individual may act ethically in the majority of their everyday practices but seems to insulate some practices from environmental considerations (Spaargaren, 2003). Sustainable practices are mediated by practice and spaces of consumption (Barr *et al*., 2011).

Consumption can be viewed in many forms, including: rational choice and information processing; sociological/anthropological view of consumption; hedonistic consumption; construction of self-identity through consumption; and consumption as communication (Schaefer and Crane, 2005). Table 2.2 offers a synopsis of prevailing views on consumption and its relationship with sustainability. This table is a condensed version of the table offered by Schaefer and Crane (2005, pp.80-81).

Table 2.2 Views of Consumption and Relationship with Sustainability

Views of Consumption	**Underlying Assumption**	**Relation to Sustainability in literature**	**How to achieve Sustainable Consumption**
Rational choice and information processing	Consumers as rational, utility-maximizing decision-makers; focus on the individual consumer	Strong – main basis for "green" consumption literature	Environmental concern leads to inclusion of environmental criteria in individual consumer decision-making
Sociological/ anthropological view of consumption	Consumption embedded in social and cultural practices; focus on the role of consumption in people's lives as individuals and groups	Weak – often seen as in opposition to , or neutral toward, concept of sustainability	All consumption has important social roles and purposes; sustainable consumption needs to take into account cultural and social aspects of consumption
Hedonistic consumption	Consumption brings pleasure, often through act of shopping itself, through use or consumption or through possession	Often seen in direct opposition to more frugal lifestyles advocated by environmentalists	Pleasure may stem from environmentally benign goods and from alternative shopping environments
Construction of self-identity through consumption	Consumption as means to construct psychological and social identity	Literature tends to be neutral on links to sustainability	Active construction of sustainable self-identities and lifestyles
Consumption as communication	Consumption as code for communication of	Literature tends to be neutral on links to sustainability	Shared experiences of sustainable lifestyles in families,

	status, taste, self-identity, and social relationships		groups, and communities; group identities and pressures promote more sustainable consumption patterns

Source: Schaefer and Crane (2005, pp.80-81)

The multiple views on consumption and the reasons behind why individuals consume may assist in understanding the inconsistencies of consumers' behaviour. Segmenting the market based on the rational choice model has been responsible for the intention-behaviour gap and perhaps a focus on consumption that is more than just a rational choice has proved more successful in uncovering the motivations of consumers (Schaefer and Crane, 2005; Barr *et al*., 2011). Examining consumer practices identifies differences in behaviour depending on the context within which the practice occurs, regardless of whether it is the one practice – consumers may recycle when at home but not while on holiday (Barr *et al*., 2011). Schaefer and Crane (2005) offer a broader set of views of consumption in relation to sustainability and perhaps taking an alternative perspective on consumption may help to understand the present inconsistencies in consumers' behaviour.

Rather than viewing '*the ethical consumer'* as a fixed character, acting rationally and in the best interest of others at all times in their purchase decisions, Adams and Raisborough (2010) aims to contextualize consumers in the '*everyday*' so as to gain a more holistic view of the complexity of the ethical decisions that are made by consumers in reality. It is proposed that consumers *'negotiate understandings of the relationship between ethics and consumption in practice in a complex and uneven co-mingling of doubt, skepticism, and positive regard'* (Adams and Raisborough, 2010, p.258). The rationales presented in the literature to explain the intention-behaviour gap of ethical consumption remain ambiguous and complex. McDonald *et*

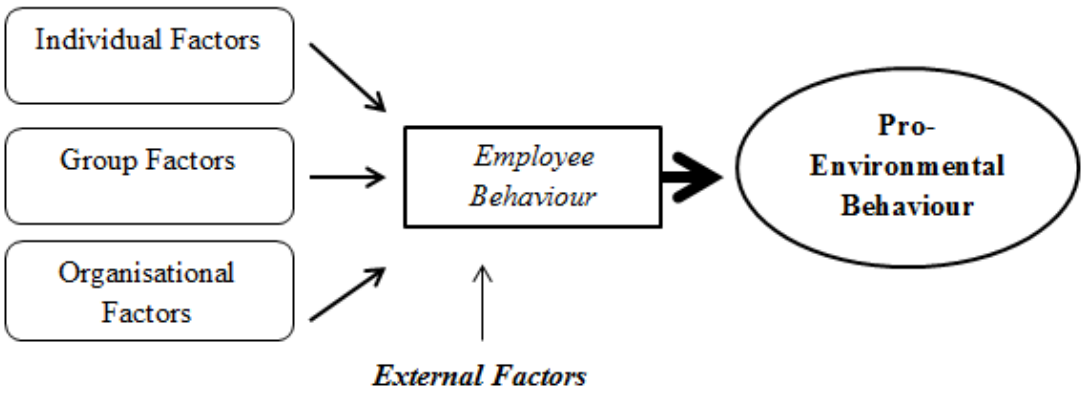
al. (2009) study of self-identified ethical or green consumers across a range of products find that, although consider themselves to lead ethical lifestyles, do not consistently purchase ethical goods. In the purchase of small electrical goods even the most self-confessed ethical consumers prioritize brand over sustainability.

Despite consumers' ethical beliefs, modern-day consumers cannot comprehend going without so much of the technological advancements that have made life more comfortable. These socially constructed norms shape the environment in which ethical consumption takes place (McDonald *et al.*, 2009). Peattie (2001) suggests that rather than trying to understand the purchaser we need to try to understand the purchase/act and its relation to green consumption. An alternative approach to understanding green consumer behaviour is bound by two key variables: degree of confidence in the environmental benefit and the degree of compromise involved in the act (Peattie, 2001). Products that score high on degree of confidence and low on degree of compromise are '*Win-Win purchases*' such as Café Direct coffee and recycled paper products. On the other hand, products that score high on degree of compromise and low on degree of confidence are labelled '*Why Bother? Purchases*', such as eco-friendly cars or non-disposable nappies (Peattie, 2001, p.192). Taking a product transaction-led rather than consumer attitude-led approach to sustainable consumption may impart a greater understanding of the discrepancies reported on consumers' attitudes or intentions and their actual behaviour (Peattie, 2001; McDonald and Oates, 2006).

Young *et al.* (2013) developed a pro-environmental behaviour framework comprising of individual, group, organisational and contextual factors that impact on various pro-environmental behaviour changes. A condensed version of the framework is presented in Figure 2.6. This framework was developed in relation to pro-environmental behaviours in the workplace. This framework suggests that there are four broad categories that play a role in employee behaviour change: 1) individual factors relating to environmental awareness and attitude; 2) group factors referring to feedback and financial incentives; 3) organisational factors including environmental infrastructure and management support and training; and 4) external

factors which refer to environmental actions at home and policy and economic context (Young *et al*., 2013).

Figure 2.6 Process Framework of Macro Determinants for Employee Pro-environmental Behaviour



Source: Extract from Young *et al*. (2013)

This broad concept of the antecedents of environmental behaviour change in the workplace may be valuable in assessing other behaviour contexts. It is argued within this framework that a change in attitude is not necessarily as vital as other studies have suggested in predicting or encouraging behaviour change. Young *et al*. (2013, p.12) suggest that:

> *'once employees know why and how to switch off machines at the end of shifts they may do so even without having pro-environmental attitudes, because of the work structure, systems, culture and rewards for doing so'*.

This moves away from the notion that raising environmental consciousness encourages behaviour change and places behaviour change as occurring within the social and cultural boundaries of an individual's context (Dolan, 2002; Schaefer and

Crane, 2005; Young *et al*., 2013). Smith and O'Sullivan (2012) also considered environmentally responsible behaviour in the workplace and found that environmental leadership and environmentally friendly facilities were barriers to acting in an environmental friendly manner in the workplace despite carrying out these behaviours at home. This ties in with Young *et al*. (2013) acknowledging external factors such as environmental behaviours in the home impacting on employee behaviour but is moderated by other factors such as environmental infrastructure in the workplace.

Therefore, consumers may be environmentally friendly at home and not carry this eco-ethic to other contexts such as the workplace due to the lack of facilitating factors (Smith and O'Sullivan, 2012). This again highlights the weakness of environmental attitudes guiding environmental behaviour. As Peattie (1999, 2001) suggested, consumers behave differently on a purchase-by-purchase basis therefore, is it possible that individuals behave on a context-by-context basis? The role of context is further emphasised by Verplanken and Wood (2006) in their discussion of habitual consumer behaviour. They suggest that environmental cues stimulate an automatic behavioural response from individuals when the act occurs in a context within which individuals have built up habits over time (e.g. in the home or workplace). The strength of the habit formed by individuals is suggested as a predictor of whether or not information-led interventions will be effective in changing behaviours or if policy-level intervention is required. A synopsis of effective interventions to change weak or strong habits is presented in Table 2.3.

Table 2.3. Effective Policy Interventions to Change Weak versus Strong Habits

Behaviour to be changed	**Interventions Downstream of the behaviour**	**Interventions Upstream of the behaviour**
Weak or not habitual	Information/education to : • Increase self-efficacy • Change beliefs/intentions • Motivate self-control • Form implementation intentions	Education • Economic incentives • Legislation and regulation • Environmental design • Technology development • Normative approaches
Strong habitual	Downstream-plus-context-change	Economic Incentives • Legislation and regulation • Environmental design • Technology development • Normative approaches

Source: Verplanken and Wood (2006, p.96)

Overcoming individuals' reliance on habits and routines (Hobson, 2003; Southerton, 2012) is a difficult challenge for behaviour change enthusiasts and policy makers. Carrigan *et al*. (2011) explored the influence small organisations can have on catalyzing sustainable consumption within communities. Their study focused on retailers in Modbury, a small town in Devon, UK, who unilaterally declared independence from plastic bags. The retailers refused to '*sell, give away, or*

otherwise provide them to anyone' and successfully changed the plastic bag usage of the entire community (Carrigan *et al*., 2011, p.517). Viewing consumption as embedded within social relations and norms, motivating sustainable behaviour may require:

> *'making individual behavioural change toward sustainability a matter of facilitating change in individual behaviour as well as in social norms and relations between organizations and consumers'*.
>
> (Carrigan *et al*., 2011, p.516)

The notion of *facilitating* behaviour change rather than just relying on *motivating* the better nature of the individual to consume in a pro-environmental manner is beginning to yield interesting results (Carrigan *et al*., 2011). Paying closer attention to the habits, social processes, contexts and structures within which consumer behaviour occurs has been acknowledged as a neglected aspect of many of the studies in the ethical/green consumption context (McDonald *et al*., 2006; Chatzidakis *et al*., 2007; Carrigan *et al*., 2011). Rather than focusing on information-led intervention campaigns, which Verplanken and Wood (2006) suggest tries to change consumers attitudes and behaviours without due consideration for the socio-structural factors which sustain individuals everyday habits, upstream interventions which alter structural conditions, such as the case of plastic bag availability in Modbury, may be more effective for deeply entrenched, everyday consumer behaviours (Verplanken and Wood, 2006).

2.5.2.2.3 Sustainable Households

The sustainable consumption debate has mainly focused on the individual, consumer-level as a unit of analysis (Dolan, 2002; McDonald *et al*., 2006). With the lack of politically applied environmental limits to growth and consumption, the solution to sustainability has been focused on individuals taking responsibility for their own environmental impact (Sutcliffe *et al*., 2008). However, much debate on intention-behaviour gaps of consumer behaviour has suggested that relying on consumers to change their behaviour is too optimistic and instead, focusing on

consumers as participants in a much wider social and cultural context may yield more worthwhile and interesting results for behaviour change (Schaefer and Crane, 2005; Verplanken and Wood, 2006; Young *et al*., 2013; Leary *et al*., 2014). Many studies have focused on sustainable consumption patterns within the home as a means to uncover the motivations and mechanisms that enable sustainable consumption (Barr and Gilg, 2006; Druckman and Jackson, 2008; Tudor *et al*., 2011; Pullinger *et al*., 2013; Barbosa and Veloso, 2014). The household context is important for environmental reasons as the contribution of household consumption to the environmental load of the economy is substantial (Moll *et al*. in Jackson, 2006). Approximately 70-80 per cent of national energy use and greenhouse gas emissions:

> '*may be related either to household activities directly or to activities required to deliver goods and services to households and to manage the waste flows generated by households*'.
>
> (Moll *et al*. in Jackson, 2006, p.68)

Consumers, both as individuals and as members of households, are relied upon to purchase ethically and dispose of materials effectively (Tudor *et al*., 2011). Viewing consumption as socially and culturally embedded is argued as more realistic than constructing consumption within the rational, information-led models (Dolan, 2002; Barnett *et al*., 2005; Carrigan *et al*., 2011; Cherrier *et al*., 2012). McDonald *et al*. (2009, p.139) conceptualize green consumption as a process whereby consumers *'make sense of themselves and relationships with others'* all the while behaving within the constraints of societal structures and norms. Therefore, the study of individuals as members of households may provide richer explanations of behaviour and how to enable behaviour change in this social setting.

For ethical consumption, Peattie (1999, 2001) contends that rather than trying to label the consumer, it is more accurate to view each individual's consumption as a series of transaction decisions that may be inconsistent. This portfolio of purchases concept calls into question the reliability of the ethical motives that drive

consumption. It is suggested that the inconsistency of behaviours may be due to *'conflicting external influences such as peer pressure, cultural norms, or media demands'* (McDonald *et al*., 2006, p.530). The social and cultural concept is supported by Dolan (2002) and Schaefer and Crane (2005). Peattie (1999) proposes that individuals or families build up portfolios of purchase decisions, and these decisions may not be consistent (McDonald *et al*., 2009). McDonald *et al*. (2012, p.450) further contend:

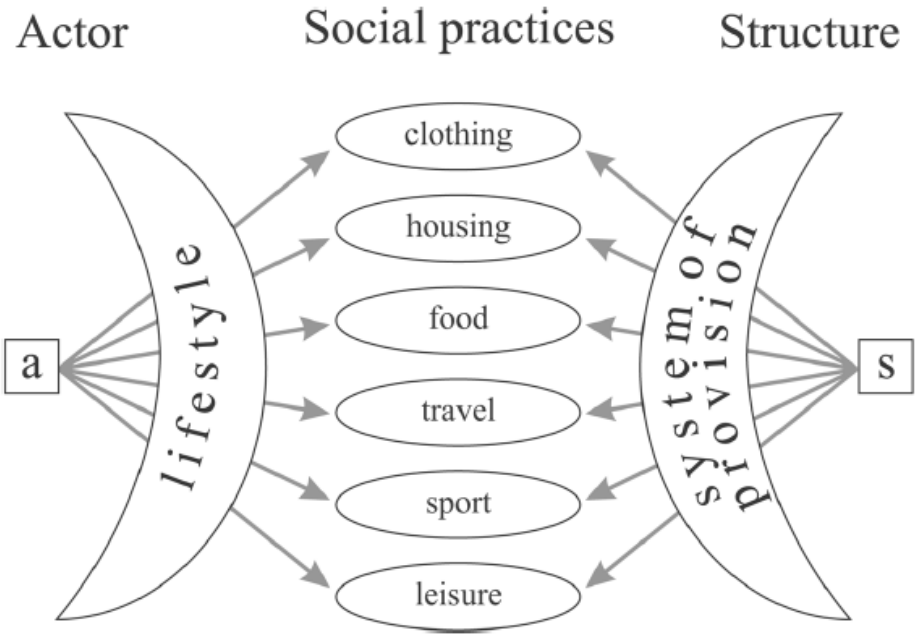
> *'we need to consider individuals as part of the immediate households and extended networks to which they belong and through which they negotiate their daily patterns of consumption, and examine each act or decision as part of an ongoing pattern of such acts and decisions'.*

Recognising the individual as complex and inconsistent in their decision-making processes (Eckhardt *et al*., 2010; Moraes *et al*., 2012) is synonymous with the concept of consumption embedded in the structure of household decisions, social norms, industry structure, policy and regulatory frameworks (McDonald *et al*., 2012).

From a research perspective, the home context easily allows for the study of daily practices of consumption and from the perspective of the individual, it represents a relatively convenient way of making pro-environmental lifestyle changes (Barr *et al*., 2011). In addition, using environmental footprint analysis can give individuals and households a more accurate measurement of their impact on the environment and inspire or encourage behaviour change (Sutcliffe *et al*., 2008). Barr and Gilg (2006) contend that sustainable behaviour practices of recycling and water and energy conservation within the home are the most practiced and easily adopted pro-environmental behaviours. Ethical purchasing was least popular with consumers whereas recycling, as a *'highly structured and long-standing environmental action'*, was the most popular pro-environmental behaviour (Barr and Gilg, 2006, p.917). This finding suggests that for most consumers, environmental action in the form of recycling, has become '*embedded within everyday experiences and lifestyles in and around the home*' (Barr and Gilg, 2006, p.918). Individual-focused consumption

research centres on behavioural economics and psychology whereas sustainable household consumption has been conceptualised through the use of sociological research such as practice theory (Giddens, 1984; Pullinger *et al*., 2013). Practice theory focuses on the everyday practice of individuals, how particular practices are performed and the personal and contextual factors which shape those individuals' actions (Giddens, 1984; Spaargaren, 2003; Pullinger *et al*., 2013). Spaargaren (2003) argues that conceptualising consumer behaviour as practice based rather than individual based is more constructive and promising for effective behaviour change. Spaargaren's (2003, p.689) social practices model outlined in Figure 2.7 demonstrates the importance of social practices in relation to the actor and the structure.

Figure 2.7 The Social Practices Model



Source: Spaargaren (2003, p.689)

This model is based on Giddens (1984) structuration theory. Structuration theory models how agency and social structure interact. It attempts to model the

interconnection between ordinary, everyday behaviours and long-term, large-scale evolution of social structures (Giddens, 1984; Jackson, 2006). This theory helps us understand the underlying processes of society. Jackson (2006) contends that in addition to being constrained by social norms and expectations, individuals find themselves controlled by wider social structures which are created and recreated very slowly over time. These social structures, which are deeply embedded and routinized, are performed on a subconscious level with very little conscious regard for their significance (Jackson, 2006).

Within the social practices model (Spaargaren, 2003), the responsibility of the individual towards behaviour change is evaluated in direct relation to social structure. Therefore, the disposition of the individual towards pro-environmental social change is considered in union with the levels and modes of green provisioning (Spaargaren, 2003). Pullinger *et al*. (2013, p.498) contend:

> *'By focusing first and foremost on what people do, how and why they do it, and what they use when doing it, the approach reveals the often inconspicuous and habituated enactments of everyday practice, the links between these enactments and available technologies and infrastructures…and other cultural and social images and conventions shaping practice in homes'*.

This draws attention to the everyday practices of individuals and how they are not only influenced by individual values and attitudes but also by various systemic, technological and social factors (Spaargaren, 2003; Pullinger *et al*., 2013). The social practices view does not deny the individual cognitive deliberation, individual tastes, and preferences but rather works in union with established social structures. Recognition of these structures and their impact on behaviour is necessary to garner a more holistic understanding of consumer behaviour. Social '*norms and expectations, institutional structures, cultural signals and the sheer forces of routine and habit*' play a vitally important role in guiding everyday behaviours (Jackson, 2006, p.378).

The socialisation of individuals within households can have a facilitating or restricting effect on behaviour and within this context, the behaviour of an individual is *'not a direct consequence of their own orientation to sustainable consumption but a negotiated household outcome'* (McDonald *et al*., 2012, p.458). Individuals may be more inclined to let pro-environmental concerns guide their practices within the household context as these practices are stable and routinized (Hobson, 2002; Barr *et al*., 2011). In this context, individuals can be effective agents of change as they easily embed sustainability principles into their habits and routines (Spaargaren, 2003; Barr *et al*., 2011).

2.5.3 Barriers to Behaviour Change

Sustainable consumption literature consists of deliberation over the respective roles of internal, psychological factors such as attitudes and beliefs, and external, situational factors such as infrastructures and social norms (Jackson, 2006). It is obvious thus far that, although consumers may have access to information and indeed have positive intentions to act in a pro-environmental manner, these intentions do not always translate into sustainable consumption (Darier and Schule, 1999; Carrington *et al*., 2010; Bray *et al*., 2011). It is suggested that there is no '*green consumer'* as *'consumers are green in relation to some activities and not others*' (Rettie *et al*., 2012, p.439). Factors such as effort or inconvenience (Carrigan and Attalla, 2001; McDonald and Oates, 2006), information (Barr *et al*., 2001), inertia (Bawa, 1990; Boulstridge and Carrigan, 2000), limited availability (Nicholls and Lee, 2006) and personal constraints (Bray *et al*., 2011) are most cited in the literature as reasons to why individuals do not engage with sustainable consumption practices. McDonald and Oates (2003) identified some contributing factors as to why consumers do not participate in kerbside recycling: insufficient papers; lack of space; bring schemes; shared bins; and charity schemes, among others (McDonald and Oates, 2003, p.375). Bray *et al*. (2011) suggest factors that impede ethical consumption as: 1) price sensitivity; 2) personal experience; 3) ethical obligation; 4) lack of information; 5) quality perception; 6) inertia in purchasing behaviour; 7) cynicism; and 8) guilt. Young *et al*. (2010) argue that time and space mediate the likelihood of consumers '*being green*' and calls on comprehensive sustainable

production and consumption policies from government and not to merely rely on green advice to consumers to bolster behaviour change.

Understanding social constraints to lowering carbon footprints as a '*glass floor*', Cherrier *et al*. (2012) argue that there is a bottom limit or inevitable barrier to behaviour change, consisting of '*structural forces, sign values, or social imaginaries'* (Cherrier *et al*., 2012, p.405). The glass floor is the expression of the consumer society as a constraint to lowering individual's or society's carbon foot print (Cherrier *et al*., 2012). Jackson (2005) supports the inclusion of social and cultural constraints on consumers as a barrier to behaviour change. Some sustainable behaviour practices are not currently accepted or carried out by the majority as they are perceived as '*not normal*' (Rettie *et al*., 2012, p.421).

The traditional view of relying on ethical or green consumers as agents of change is outdated and misguided (Young *et al*., 2010). The multitude of barriers presented in the literature highlight the complexity of consumers' reasons for participating or withdrawing from sustainable behaviours. Ultimately, consumer society is currently driven by material goods which positions us further away from the prospect of sustainable consumption (Jackson, 2006). Lorenzoni *et al*. (2007), arguing that voluntary behaviour change has had little or no impact on individual behaviour, conducted research in the UK exploring perceived individual and social barriers to engaging with climate change. Individual barriers are outlined in Table 2.4 while the social barriers are outlined in Table 2.5.

Table 2.4 Individual Barriers to Engaging with Climate Change

INDIVIDUAL BARRIERS	**DESCRIPTION**
Lack of knowledge	Confusion and lack of knowledge about the causes, consequences, and potential solutions to climate change
Uncertainty and skepticism	Perceived scientific controversy about climate change and express uncertainty about seriousness
Distrust in information sources	Distrust media information and perceive as exaggerated and sensationalized
Externalization of responsibility and blame	Government and industry are thought to be responsible for taking the lead
Belief in technology	Perception that technology will solve the problem of climate change
Belief that climate change is a distant threat	A problem of the future and only affects other countries and people
Low prioritization of climate change	Prioritizes other more immediate concerns such as family or finances
Reluctance to change lifestyles	Being or living more sustainably might threaten current standard of living, be inconvenient, and cost more
Fatalism	Some argue that is it too late to do anything about climate change
"Drop in the ocean" feeling	The scale of the problem leads some to feel individually helpless

Source: Lorenzoni *et al*. (2007)

Table 2.5 Social Barriers to Engaging with Climate Change

SOCIAL BARRIERS	DESCRIPTION
Lack of political action	Lack of action taken by local, national and international governments has created a distrust in governments to take responsibility
Lack of action by business and industry	Believe that industry do not and will not act sustainably but in the interest of profit
Free-rider effect	Individuals refrain from taking action because they perceive that others are not acting either
Social norms and expectations	Current social norm of expectation to consumer. Green living seen as undesirable, "weird" or "hippy"
Lack of enabling initiatives	Existing infrastructure and economy locks people into current behavioural patterns

Source: Lorenzoni *et al*. (2007)

The individual and social barriers identified here by Lorenzoni *et al*. (2007) highlight the major constraints on consumers' ability to engage with climate change interventions which ultimately have implications for reducing carbon emissions. Considering the constraints on consumer behaviour change it is argued:

> *'targeted and tailored information provision should be supported by wider structural change to enable citizens and communities to reduce their carbon dependency'.*
>
> (Lorenzoni *et al*., 2007, p.445)

2.5.3.1 Consumer Choice

This leads to the issue of consumer choice. Consumer choice is different from provision, as it is perceived and socially differentiated (Kirkup *et al.*, 2004). Dependent on a consumer's specific circumstances and distinct characteristics, a broad set of provisions may be reduced '*to a limited set of perceived real choice'* (Kirkup *et al.*, 2004, p.514). Despite broad provisions consumers conceptualise their choice-set individually as constraints on consumers shopping behaviours such as the inconvenience of shops to their locality and price restrictions for the purchase of organic goods impact on *'consumers' actual choices, as compared to their ideal, or preferred, choices'* (Memory *et al.*, 2005, p.406). Therefore, consumers may prefer to choose ethical alternatives however their circumstances restrict their actual consumption. This may explain why consumers' intentions do not match their behaviours (Memory *et al.*, 2005; Carrington *et al.*, 2010). Consumer choice and behaviour is perhaps restricted or bound by circumstances outside of consumers' actual control. Consumers may have positive intentions to purchase ethically but they cannot take any action on their preferences due to constrictions on their choice set (Memory *et al.*, 2005). Consumers may not be making trade-offs within their consumption choices but are bound by the real choices that they are presented with, not by the preferred choice that they would like to make in an ideal world. Jackson (2005, 2006) argues that consumers are not free agents in the consumption process to exercise their rational choice but rather:

> *'find themselves "locked into" unsustainable patterns of consumption, either by social norms that lie beyond individual control, or else by the constraints of the institutional context within which individual choice is executed*'.
>
> (Jackson, 2005, p.29)

This realisation suggests that to break down the barrier to behaviour change, the concept of choice must be more carefully considered and if a solution is to be developed, it must rest on intervention and change at the societal level rather than simply appealing to the better nature of consumers (Jackson, 2005, 2006). Social psychology literature suggests that social norms, social identities and social learning are vital variables in mediating individual attitudes and behaviours (Jackson, 2006).

To assess real choice as a barrier to change, rather than preferred choice, may allow consumers or marketers to better align their options (Kirkup *et al.*, 2004). Scales that measure ethical consumption attitudes or opinions to ethical consumerism are flawed by the fact that consumers' preferences and consumers' choices are not correlated. Thus, marketing communications to encourage change and sustainable consumption may be aimed at consumers that do not have the means to change their choices even if they wanted to (Kirkup *et al.*, 2004).

Flexibility and dissonance, as discussed by Szmigin *et al*. (2009), is present in one extract from Memory *et al*. (2005) as one consumer confesses that *'definitely I try and avoid….Nestle products…but KitKats are so nice'* (Memory *et al*., 2005, p.407). Perceptions of ethical choices also vary as some individuals may consider it unfair to equate developed countries with developing countries as their choices and standards are different and cannot be compared, *'you don't have the choice'* reasons one interviewee when discussing the purchase of fake handbags (Eckhardt *et al.*, 2010, p.432). The level of available income to purchase such a product doesn't allow for the inclusion of ethics or ethical products that ultimately cost more. These are not even in their choice set and therefore, not considered (Eckhardt *et al.*, 2010). Consumers may also self-exclude or avoid choosing ethical alternatives as they fit their choices around their lifestyles (Kirkup *et al.*, 2004; Adams and Raisborough, 2010). As ethical decision-making suggests a good or a '*right*' purchase, some consumers *'may choose to remain consciously or subconsciously ignorant'* to ethical dilemmas so as to avoid internal conflict (Eckhardt *et al.*, 2010, p.427). Other consumers may have a desire to be seen as '*good*' people and therefore, justify the behaviours which endorse their sense of self-identity (Craig-Lees and Hill, 2002; Eckhardt *et al.*, 2010).

The complexity surrounding consumer choice of ethical alternatives has given rise to much discussion (Brandstätter *et al.*, 2006; Cherrier, 2007). Many conflicts consumers face are solved by making trade-offs (Brandstätter *et al.*, 2006) and in addition to making tradeoffs between economic and social benefits, consumers may evaluate common features in a way that supports their already established

preferences (Chernev, 2001). Here, some product features are seen as desirable or '*attractive*' by certain consumers and undesirable or '*unattractive*' by other consumers. The reason-based view of consumer choice implies that *'consumer evaluations of product attributes are often moderated by their ability to generate reasons for and against choice alternatives'* (Chernev, 2001, p.476). In an ethical consumption context this may be translated as environmentally-conscious consumers perceiving electric cars as attractive and performance-conscious consumers perceiving them as unattractive. This mechanism allows consumers to easily justify their decision which in turn eases the guilt of not prioritizing ethical or socially responsible alternatives (Chernev, 2001; Eckhardt *et al.*, 2010).

2.5.3.2 Habit and Routine

An additional barrier to behaviour change is the entrenched nature of individuals' habits in their everyday practices (Southerton, 2012; Barbosa and Veloso, 2014). Verplanken and Wood (2006) highlight how contexts can encourage repeated behaviour and despite best efforts of interventions, the established habit in that context will reign:

> *'habit learning is a cognitive and motivational process in which the control of action is outsourced to the environment so that sequences of prior actions are triggered automatically by the appropriate circumstances…the environment's automatic activation of well-practiced responses is a key to the persistence of habits despite people's best intentions'.*
>
> (Verplanken and Wood, 2006, p.93)

This may help understand the much debated intention-behaviour gap of consumer behaviour. Consumers may have the very best intentions to change their behaviour but their well-formed habits are preventing actual change occurring, as habits are repeated easily within specific contexts. An example of this concept in practice is if an individual had concern for water scarcity and had intentions to change their behaviour in relation to their own personal water use in the home. However, from an early age, this individual developed a practice of leaving the tap water run while they were brushing their teeth. This individual may be aware of this and may intend to

turn off the tap while they are brushing their teeth and turn it back on to rinse but, what occurs in this context is the individual performs in a habitual manner which is activated by the environment. The habit that was formed, and repeated overtime, inhibits behaviour change and the individual continues to let the tap water run while brushing their teeth. In this way, the context or the surroundings automatically trigger habitual responses (Verplanken and Wood, 2006). Similarly, the power of habitual behaviour has been highlighted in the context of car use. Rather than making a conscious decision whether to use a car as the primary mode of transport or not, individuals rely on their habitual behaviours (Verplanken *et al*., 1997) or personal norms (Tanner, 1999). It is important to recognize an environmental feature of modern day society that greatly impacts car use, is urban sprawl (Sanne, 2002). Cars become indispensable when considered in the context of access to public transport and distance to travel therefore, a '*conscious decision*' regarding the environmental impact of car use is idealistic when viewed within individuals personal circumstances (Verplanken *et al*., 1997; Sanne, 2002). The reality of behaviour for consumers in their everyday practices is that habits or routines are embedded in their social, structural and cultural lives (Dolan, 2002; Sanne, 2002; Verplanken and Wood, 2006). The task of changing consumer behaviour has been inconsistent and difficult partly because:

> *'many everyday actions are performed with a high degree of recurrence, periodicity and a degree of predictability; much action appears to be performed without reflexive deliberation; and many such actions are culturally shared, whether across whole societies or social groups'.*
>
> (Southerton, 2012, p.340)

Recognition of the role of habits and routines in consumers' everyday lives may help explain the value-action gap of consumers. The entrenched nature of consumer behaviour may explain why consumers state they have positive attitudes and intentions towards a pro-environmental behaviour but do not follow these positive intentions through to action (Verplanken and Wood, 2006; Southerton, 2012).

2.5.4 Negotiating Behaviour Change

Given the barriers to motivating voluntary behaviour change, the question of how to progress sustainability is put forward. With disappointing progress towards sustainability, what can consumers, organisations or governments do to ignite an interest and participation in sustainable consumption? Are we capable of creating a condition where the necessary pro-environmental behaviours are adopted by the majority of individuals? Jackson (2006, p.388) puts forward a proposition for negotiating behaviour change:

> *'Since identity and meaning are constructed socially, and since social norms and expectations constrain individual choice in quite fundamental ways, we can certainly make a good case for arguing that change must be seen as a social and cultural process. Behaviour change initiatives need to involve peer groups, local communities, society at large in a range of broadly discursive social processes, rather than attempting to effect change solely at the individual level through 'top-down' persuasion and exhortation'.*

This suggests that information provision or policy intervention will not suffice alone in changing consumer behaviour. It calls for a cultural rearrangement of how human progress is recognized, the meaning and value in human existence, perspectives on economic development, and consumer preoccupations with materiality and convenience (Jackson, 2006). Regulation and enforcement are often discussed as a solution to the barriers of behaviour change in this context (Darier and Schule, 1999; Sanne, 2002; Lorenzoni *et al*., 2007). Policy interventions are positioned as necessary to '*nurture, support, and sustain moral and social behaviours'* (Jackson, 2005, p.28). Stern (2000) argues that interventions to change consumer behaviour can be effective if carefully executed but by far the most effective way to change behaviours is by combining two or more behaviour change interventions. The most common behaviour change initiatives include: moral approaches; information-led educational approaches; monetary incentive structures; and/or community management in the form of shared rules and expectations (Stern, 2000). Stern's (2000) value-belief-norm model provides a framework for policy-making that incorporates both internal and external factors that Jackson (2006) called upon to effectively change consumer behaviour. The value-belief-norm model incorporates attitudinal factors, personal capabilities, contextual forces and habits or routine as

variables to behaviour change (Stern, 2000). This extends the attitude-behaviour model to include external forces that impact actual behaviour (Jackson, 2006). A means to solve the intention-behaviour gap may need to focus carefully on the environment/context as habits are triggered by the environment. Successful interventions need to focus on changing the environmental features that maintain these habits (Verplanken and Wood, 2006, p.95).

Darier and Schule (1999) claim that many UK consumers favour government intervention and regulation. Individuals assert that government regulations will *make* them act and view behaviour change only effective if it is done in a collective manner (Darier and Schule, 1999). Managing household consumption and disposal of waste would also benefit from legislation (Tudor *et al*., 2011). Lorenzoni *et al*. (2007) also connect stable behaviour change to policy initiatives. Their findings into the barriers of climate change engagement call on:

> '*a need for a comprehensive range of policy solutions to foster engagement amongst the public because of the diversity of barriers identified and the various levels at which they operate…developing sustainable solutions to climate change involves all societal stakeholders, including government, commerce and industry, interest groups and the wider public*'.
>
> (Lorenzoni *et al*., 2007, p.454)

Despite the criticism of information campaigns (Schaefer and Crane, 2005; White and Simpson, 2013) their role is unwavering in the initial engagement of consumers on the importance and impact of climate change for future generations (Lorenzoni *et al*., 2007). Information has, and continues to, play a central role in the behaviour change patterns of individuals who are inherently concerned about their impact on the environment and when offered new information these consumers are likely to act (Harrison *et al.*, 2005; Lorenzoni *et al*., 2007). However, as the intention-behaviour gap has identified, environmental awareness does not necessarily lead to environmental action for many other individuals (Barr *et al*., 2011). This is not to say that information is not important for these individuals. As Lorenzoni *et al*. (2007) identified, lack of knowledge is a major contributing factor to the absence of

consumer engagement in pro-environmental behaviour change. A commitment to environmental communication is paramount in order to sustain the interest in pro-environmental behaviour change initiatives, education, and policy creation (Lord and Putrevu, 1998; McDonagh, 1998). In order to keep the public continually engaged in the topic, a relay of information is important. However, the means in which this is delivered is crucial. It may be naive to communicate only through channels such as *The Ethical Consumer* magazine as this is perhaps a scenario of preaching to the converted. The readers of this magazine are already aware and concerned, and alter, in varying degrees, their behaviour accordingly (Szmigin and Carrigan, 2006; McDonald *et al*, 2012). The challenge then, in negotiating sustainable change in society, is to *adequately inform* and *engage action* so that the negative human impact on our planet can be mitigated. One promising means of *informing* and *engaging* society is through environmental education.

2.6 Environmental Education

Children are seen as '*tomorrow's opinion leaders and stewards of the earth*' (Uzzell, 1999, p.397). In light of this, there has been significant emphasis placed on environmental education (Duvall and Zint, 2007; Breiting and Wickenberg, 2010; Strife, 2010; Boyes and Stanisstreet, 2012; Walshe, 2013; Zsóka *et al*., 2013). Prothero *et al*. (2011) and Pape *et al*. (2011) called for an exploration of how education initiatives, such as Green-Schools, affect the way children (and their family and friends) think and act from a consumption perspective and whether their behaviour is representative of an acceptance of the NEP. Satchwell (2013, p.289) asks the question '*how might children become carbon literate citizens?*' His research suggests that children that take part in an environmental education programme at school consistently score higher in carbon literacy than children from non-eco schools (Satchwell, 2013). Education, both formal and informal, is helping to infuse an ecological worldview among younger generations (Dunlap, 2008; Lee, 2014). Targeting environmental education towards children at a young age may address the problems with entrenched behaviours and routines, which sustainable consumption debates have identified as a barrier to (adult) behaviour change (Hobson, 2002; Southerton, 2012). Creating an environment where children can learn and develop

new environmental skills over a period of time may go a long way in generating positive, pro-environmental habits in the adult consumers of the future (Oates and McDonald, 2006).

However, it may not be that simple. As discussed previously, cultural and social norms impact behaviour (Schaefer and Crane, 2005) and the identification of the knowledge-action gap is well documented (Belk *et al*., 2005; Carrington *et al*., 2010). This begs the question: given that infrastructure and social pressures influence behaviours, can these schoolchildren *sustain* their pro-environmental behaviours beyond the (green) school environment? Environmental educators '*focus their efforts on children, hoping to provide the next generation with the desire, commitment, and ability to create an ecologically sustainable future*' (Duvall and Zint, 2007, p.14) and this is a noble aim. However, we must consider the *sustainability* and *transferability* of this desire both for the short- and long-term.

Education is viewed as an '*upstream*' intervention for behaviour change:

> *'Educational interventions that change consumers' beliefs and understanding of their behaviours are most likely to have immediate impact on those who have not established habits…However, educational programs may have long-term effects that bring about change in performance environments, such as when education conveys new norms and values that infuse the decisions of policy makers'.*
>
> (Verplanken and Wood, 2006, p. 98)

It is suggested that even short educational courses on pro-environmental concepts may stimulate an increase in NEP score among children (Dunlap and van Liere, 1978; Dunlap, 2008). McDonald *et al*. (2012, p.463) suggest:

> *'policymakers need to embed sustainability into the school curriculum in order to give the next generation access to the kind of knowledge that will give some of them the foundation for action'.*

There is a strong contention that environmental education is the key to breaking down the barriers to the adoption of sustainable consumption and acceptance of the need for behaviour change (Lorenzoni *et al*., 2007). Focusing environmental efforts on children may progress sustainability by providing the next generation with the knowledge, skills and acceptability of sustainable consumption practices (Prothero *et al*., 2011), given that this knowledge and acceptability transcends the school environment. Kopnina (2013) suggests key components of an environmental consumption curriculum as being: general awareness of consumption (both global and local); social responsibility in regard to consumption; environmental awareness of consumed items; awareness of energy and water use; and environmental responsibility with regards to waste. She also argues for citizenship education and action competence mechanisms for youth education so as they can learn how to engage with the political debate on sustainable consumption (Kopnina, 2013).

Children are increasingly being recognised as a significant force in the market, as consumers, influencers of others, and as future customers (Nicholls and Lee, 2006). The concept of '*pester power*' is well documented in the literature (Horgan, 2005; Carey *et al*., 2008; Lawlor and Prothero, 2011). However, there is no research on *positive* pester power in this context. If children have the capability of influencing their parents to purchase toys and food, are they, or do they have the capability to positively '*pester*' their parents to behave sustainably? This may well be a mechanism for the transference of knowledge and acceptance of sustainable practices beyond the school boundaries and in turn spark a change in the social norm of overconsumption and wastefulness. Foster (2008, p.145) argues that sustainability is not a fixed destination but a *'continuous exploratory pursuit'* of ways to ensure that future generations have enough resources to sustain living. He argues for open-ended learning which will depend on social intelligence, which in turn depends on the environmental intelligence of individuals (Foster, 2008, p.146):

> *'Deep sustainability really consists, therefore, in the life-effort of men and women whose education has equipped them with enough knowledge, sensitivity, emotional range and moral imagination to act together as a genuinely learning community in modern conditions'.*

The task of environmental education going forward is to integrate it into the whole curriculum rather than occupying a corner of the curriculum that deals with ecology and the human environment (Foster, 2008). However, Satchwell (2013, p.297) suggests an important question of environmentally educated schoolchildren '*are their carbon literacy practices situated in school but not crossing the boundary into home or community?*' This echoes work on how the physical or social infrastructure may not support behaviours in differing contexts (Young *et al*., 2010). Satchwell (2013) recalls a narrative of a student in one of the schools as a "*compost champion*" and took his role quite seriously. However, the household he lived in did not have a composting system in place and therefore, his efforts to compost were confined to the school context. His infrastructure at home did not allow for him to practice his skills of composting. This has important implications for the transference of behaviours across contexts (Satchwell, 2013).

2.6.1 Reverse Socialisation

Resource depletion and pollution will have a wide range of effects on future generations. Smith (1998) discusses intergenerational justice and the roles and obligations of current generations for future generations. Traditional models of influence are based on adults imparting their knowledge on their children and taking a responsible role for their children's future (Ekström *et al*., 1987; Evans *et al*., 1996; Kerrane *et al*., 2012). Uzzell (1999, p.397) reasons that:

> *'it is adults who need to institute and engage in changed behaviours – adults who are parents but who are also consumers, industrialists, community leaders, educators and policy and decision makers in all walks of life'*.

However, it is not only adults that can impart socialised behaviour change (Wake and Eames, 2013). Children may well be more informed and up-to-date than their parents on certain topics, environmental issues being one such topic (Ballantyne *et al*., 2000; Ekström, 2007). Intergenerational learning can occur from child to adult as children influence adults' attitudes and beliefs by sharing their knowledge on the environment (Uzzell, 1999). Children may possess knowledge which their parents

lack and in sharing their knowledge, may influence their parents (Ekström, 2007). Reverse socialisation, based on Ward's (1974) concept of consumer socialisation, is defined as '*the process by which parents acquire consumer skills and knowledge from their children*' (Ekström *et al*., 1987, p.283). Consumer socialisation was defined by Ward (1974, p. 2) as '*the processes by which young people acquire skills, knowledge and attitudes relevant to their functioning as consumers in the marketplace*'. This essentially characterises ways in which children develop their consumption behaviour in a market. Although socialisation literature focuses on children and adolescence, it is acknowledged that socialisation is a lifelong process. Ekström *et al*. (1987, p. 283) continue to propose that:

> *'As a socialisation agent, a child influences the parents' behaviour by teaching them new knowledge and consumer skills. A child's influence can actually lead to internalised and lasting changes in values, self-concept and consumption behaviour on the part of the parents'*

This type of influence suggests that rather than the traditional view of parents influencing children in one direction, or socialising children, so too can children influence their parents. It is suggested that parent-child socialisation occurs whereby the parent and child are both teachers and learners (Ekström *et al*. 1987; Easterling *et al*., 1995). Given the potential of reverse socialisation, in the context of environmental awareness and concern, children may become '*catalysts for family environmental consumerism*' (Easterling *et al*., 1995, p.531). The likelihood of reverse socialisation occurring is suggested to rely on six influencing factors: family communication between parents and children; family structure; socio-economic characteristics; personal resources; product related factors; and satisfaction with family purchase decisions (Ekström *et al*., 1987). Communication within families and family structure has gained the most attention in reverse socialisation research (Easterling *et al*., 1995; Gentina and Muratore, 2012; Gentina and Singh, 2015). Contemporary families show an increasing level of personal agency and ownership among children (Lawlor and Prothero, 2011; Kerrane *et al*., 2012; Wake and Eames, 2013). In addition, children now have access to vast amounts of information on the environment from books, magazines, television programmes, and environmental education programmes (Easterling *et al*., 1995; Oates *et al*., 2013).

Easterling *et al.* (1995) propose that children's environmental *concern* acts as a motivator to educate and influence their parents. This notion of concern as a precursor to sustainable consumption has been extensively discussed in the (adult) sustainable consumption literature (Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Shaw *et al*., 2007). However, as discussions on the attitude-intention-behaviour gap has identified, behaviour in this context has proven to be much more complicated (Belk *et al*., 2005; Carrington *et al*., 2010, 2014; Devinney *et al*., 2010). Environmental resocialisation is said to occur where informed children, given a supportive communication pattern within the home, will serve as a catalyst to family attitude changes (Easterling *et al*., 1995, p. 341). Environmental resocialisation within the family in this case is suggested as merely informing or assisting in the knowledge aspect of consumer socialisation (Ward, 1974), but it is not made clear if this reverse socialisation actually impacts on family *skills* or *behaviours*. A broader explanation of ecological resocialisation is offered by Gentina and Singh (2015, p.2) as:

> *'adolescents' influence over their parents' behaviour with specific reference to environmental actions, e.g., reducing domestic electricity or water consumption, not littering, using modes of transportation other than cars, buying green items'*

This conceptualisation of ecological resocialisation bears resemblance to pester power imparted by children on their parents. In a marketing context, the concept of children influencing their parents is not novel. For several decades, marketing studies have looked at how children influence parents purchasing *behaviour* with most attention being paid to the significant influence of '*pester power*' (Horgan, 2005; Carey *et al*., 2008; Lawlor and Prothero, 2011). Here, children actively influence their parents' *behaviour* in relation to purchasing toys, confectionery and technology through the effective practice of pestering[4] (Carey *et al*., 2008; Lawlor and Prothero, 2011).

[4] A definition for 'pester' from the Cambridge Dictionary Online: *to behave in an annoying manner towards someone by doing or asking for something repeatedly*

Increasingly, the contribution of environmental education programmes on reverse socialisation/intergenerational influence is receiving attention (Ballantyne *et al*., 1998; Legault and Pelletier, 2000; Volk and Cheak, 2003; Duvall and Zint, 2007). The contention that schoolchildren may act as catalysts for environmental resocialisation among their family (Ekström *et al*. 1987; Easterling *et al*., 1995) has implications for environmental education programmes in which children learn and participate with in school. Environmental education programmes could be formulated to assist schoolchildren in becoming '*competent and motivated to act responsibly*' and in turn these schoolchildren may use this newfound skill and concern for the environment to influence others accordingly, in the form of reverse socialisation (Ballantyne *et al*., 1998, p.414). Ballantyne *et al*. (1998) discuss intergenerational learning from an interactionist approach, suggesting that as children learn and adopt new behaviours they may well influence and perhaps modify their parents' views and behaviours. Thus, generations will be '*socialised anew in the on-going process of interaction and negotiation*' between people in their surroundings (Ballantyne *et al*., 1998, p.420).

Environmental education programmes that expose children to environmental issues at a young age, encouraging them to learn and become informed about the environment as well as teaching them practical skills in behaving sustainably, may '*empower them to act as catalysts of environmental influence in their homes and communities*' (Ballantyne *et al*., 1998, p. 421). The real challenge here, if we are to reduce our overall impact on natural resources, is for these schoolchildren to impact on *behaviours* of homes and communities. Reverse socialisation, which primarily focuses in the literature on learning and parents acquiring knowledge from their children, will need to also look closer at either translating that knowledge into action or focus on how environmental education may have a direct impact on *skill* or *behaviours* in the home and wider community. A synopsis of the factors that facilitate intergenerational learning within a family is proposed by Duvall and Zint (2007) (See Table 2.6).

Table 2.6 Facilitating Intergenerational Learning

Facilitating Factor	**Description**
Children's perceived status within the family	Allow children to redefine their status as a viable contributor to environmental conversations and actions
Schools as a source of Environmental Information Within a Community	Schools may act as agents of social change at the community level
Parent involvement in Student Activities	Parents involvement in environmental education is vital for the effectiveness of intergenerational learning
Community Involvement in School Activities	Community involvement with the schools enables transfer of information throughout communities
Hands-on and Action-Oriented Activities for Students and Parents	Practical application enhances learning and possibility that the learning will be passed on to others
Adequate Time for In-Depth Exploration of Issues	Informing schoolchildren on procedural knowledge rather than background knowledge optimises the possibility of transfer of action-led information across contexts
A Focus on Local Issues	Making environmental problems local and real encourages a sense of ownership for both children and adults
Enthusiastic Teachers	Committed and interested teachers may have more of an impact on students involvement in environmental issues and this interest that has been instilled in school may be more likely cross contexts

Source: Duvall and Zint (2007)

These facilitating factors for intergenerational learning identify the weaknesses in many environmental education programmes. However, Duvall and Zint (2007) indicate that considering these factors in the development of an environmental education programme may well yield greater uptake of pro-environmental behaviours by individuals, households, and communities (Duvall and Zint, 2007). Other issues with environmental education programmes were outlined by Uzzell (1999). Uzzell identifies 5 main barriers to effective environmental education:

1. Environmental education is invariably based on a teaching and learning model which is top-down and centre to periphery
2. Environmental education does not lead to action competence
3. Environmental Education Lacks Authenticity
4. The track record of demonstrable success is changing the attitudes and values of children to the environment is questionable
5. The social, cultural and political context must facilitate participation and change

The first constraint suggests that children are passive recipients of information within a hierarchal structure. Uzzell (1999) argues that Moscovici's genetic model is more appropriate as it views knowledge not as simply given or directed towards one group but as socially constructed. This model suggests that all social groups, including children, can be agents of change. The second constraint presented by Uzzell (1999) highlights the discrepancy between awareness and action arguing that environmental education does not result in a change in action. He proposes that environmental education should concern itself with acquiring learning, developing concern, and solution finding. The goal of such a system is to produce '*better citizens*' (Uzzell, 1999, p.5). The third constraint questions the authenticity of the content of educational programmes. He suggests searching for the relationships between the schools and the local community and centre the actions of the school on these similarities so as schoolchildren learn and practice the '*reality that awaits pupils after school*' (Uzzell, 1999, p.6). The fourth constraint highlights the maintenance of acquired attitudes of schoolchildren regarding the environment; following an environmental education course schoolchildren's perceptions of the

severity of environmental issues declined to below pre-course level. The fifth and final constraint on environmental education focuses on the social environment of schoolchildren. The social, cultural and political context within which environmental behaviours occur is vitally important for sustaining and nurturing the positive behaviour change.

Whether children can be agents of change is perceived as context driven as '*attitudes in the home can play a crucial role in determining whether the child will be given the opportunity to act in a catalytic role'* (Uzzell, 1999, p.8). A past study by Legault and Pelletier (2000) suggests that the impact of an environmental education programme on children and their parents is relatively limited, while Ballantyne *et al*. (2000, p.13) suggests that environmental education programmes are encouraging children to '*share their learning*' and are bringing about a change in practices in the home. A notable feature of Ballantyne *et al*. (2000) study is that they used an environmental education programme that had an '*action*' component and they stress the importance such a component in providing positive experiences for the schoolchildren. These experiences are '*likely to lead to meaningful and relevant discussions with parents regarding environmental issues and the need for community action*' (Ballantyne *et al*., 2000, p.14). A call to understand the nature of influences in terms of environmental learning and actions between young people, parents and the community was voiced by Ballantyne *et al*. (1998). My study addresses this call in exploring the relationship between Green-School children and their parents in relation to behaviour practices in the home. This research does not take a communication or family structure approach, as other studies have, but rather takes a practice approach; exploring the development of environmental practices in the home, including whether these practices have been influenced by children in the home, in light of the reverse socialisation phenomenon discussed.

2.6.2 The Green-Schools Programme

The Foundation for Environmental Education (FEE) is a non-government, non-profit organisation promoting sustainable development through its environmental education programme Eco-Schools/Green-Schools (FEE, 2014). The Green-Schools

Programme (known internationally as Eco-Schools) is an environmental education programme that promotes and acknowledges long-term, whole school action for the environment. The Green-Schools programme is a voluntary participatory initiative that aims to introduce schoolchildren to environmental issues and concerns through education, active learning and participation in the school, and in the local community. The programme consists of environmental education, management and certification. It introduces children at a young age to the principles of the NEP (Prothero *et al*., 2011) and has, as an explicit aim, the multiplier effect of children extending their learned sustainable behaviour back into their homes and acting as influencers on their parents – a form of '*positive pester power*'. Globally, there are more than 11 million schoolchildren across 52 countries taking part in the Eco-Schools programme (FEE, 2014). The aim of Eco-Schools is to empower students '*to be the change*' our world needs in its goal of sustainability. This is to be achieved through action-oriented learning. Action-oriented learning is delivered through a seven-step programme where schoolchildren address and conquer issues in their school regarding sustainability issues of: waste; energy; water; transport; among others. The Green-Schools programme is positioned as an effective system that encourages and manages pro-environmental behaviours in the school, home, and wider community.

Green-Home is a similar voluntary scheme that encourages individuals to take positive environmental action in their households, although this scheme does not have the scope of the Green-Schools programme nor is it widely known about. It was developed as a framework to support and advise householders how to save money in their home while protecting the environment. The framework is developed in harmonisation with the Green-Schools programme in Ireland, focussing on four main themes of waste, energy, water, and transport. The aim of this voluntary programme is to extend the philosophy of the Green-Schools programme beyond the school gate and into the wider community (Green-Home, 2014). The framework offers tips, advice and action plans on how to operationalise the four main pro-environmental themes. The framework is available for use by individual householders or by social groups such as Tidy Towns. Hobson (2003) discusses a similar framework in the UK called '*Action at Home'* which is a six month voluntary programme that encourages

sustainable behaviour change within the home context. This programme is not a national information campaign as it targeted sequentially at specific locations. The programme is administered by local authorities who promote and offer in-house training and programme management support systems. Hobson (2003) contends that consumer behaviour change occurs in this context, with the help of Action at Home, due to individuals realising their old practices are having a negative impact and it enables them to develop new ways of behaving that '*make intuitive common sense*' (Hobson, 2003, p.108).

In an aim to increase exposure of the Green-Home programme it has been used as an outreach unit of Green-Schools where children who have completed the four green flags programme in their Green-School bring the green message home to their parents and family members to actively implement a behaviour change plan based around the themes of waste reduction, energy efficiency, water conservation, and responsible transport. Green-Home Awards were awarded to a total of 10 Green-Schools and one Tidy Towns committee in 2014 (Green Home, 2014). Green Home is a structured way in which children are *required* to bring the green message home. However, schoolchildren may naturally bring this green message home as part of what they are learning in school.

A study of Flemish Eco-Schools found that the Eco-Schools programme influenced students' environmental knowledge but did not influence environmental affect (Boeve-de Pauw and Van Petegem, 2011). Similarly, Morgensen and Mayer (2005) found that some Eco-Schools reported positive benefits in terms of environmental management but environmental education affect was not well accounted for. Acknowledging the internal and external factors (Jackson, 2006) that influence behaviour change Boeve-de Pauw and Van Petegem (2011) argue that an educational approach that targets the internal factors such as beliefs and attitudes could be key to achieving internalized pro-environmental behaviour. Taking stock of the substantial sustainability issues that face society Duvall and Zint (2007, p.23) argue:

> ‘*it is important to continue to investigate ways in which children can act as catalysts for promoting environmental knowledge, attitudes, and changed behaviours in their parents and throughout their communities*’.

Schoolchildren appear to be better educated and informed on environmental issues than their parents (Evans *et al*., 1996). The task now is to ensure their pro-environmental behaviours, which are successfully practiced in the school, transfer and sustain their life stages and social contexts.

The Green-Schools programme, in fostering behaviour change among children, may aid in the development of children as social agents of change or catalysts for sustainable consumption beyond the school gate. Equipped with the knowledge and skill set to be sustainable, schoolchildren, as consumers, business people and policy-makers of the future, may be the necessary driving force to move sustainable consumption more mainstream. In the short-term, these schoolchildren have the potential to affect the behaviours of their parents and families in the home context through reverse socialisation and in the long-term ensure the safeguarding of the environment and its resources. Environmental education programmes, such as Green-Schools, given that they *increase awareness* and *improve behaviour* in the school context, may have potential to multiply their benefits beyond the school gate. In light of this, it appears that environmental education may offer a viable, long-term solution to environmental problems (Evans *et al*., 1996).

2.7 Chapter Conclusion & Formulation of Research Question

This chapter considered the corporate, governmental and in particular, the consumer responses to achieving a more sustainable future. Sustainable consumption, in relation to consumer segmentation, motivating behaviour change, barriers to behaviour change and how to overcome these constraints, occupied a large part of this review. The potential role of education in stimulating behaviour change for individuals, schools, households and the collective community concluded this review. Sustainable consumption is complex and dynamic. The study of a vast array

of consumer types such as ethical consumers, voluntary simplifiers, and conscious consumers, has shed some light on the phenomenon of acting on moral and social obligations. These behaviours in turn create a more sustainable environment for all (Craig-Lees and Hill, 2002; Freestone and McGoldrick, 2008). However, inconsistencies in ethical consumption and the obvious lack of interest by some consumers reflect the complexities in moving sustainable consumption more mainstream. The choices consumers make regarding their purchases and behaviours have a huge impact on the growth of sustainable consumption (Memory *et al.*, 2005; Peattie, 2010). The rationales presented by Eckhardt *et al.*, (2010) suggest that providing information on the ethical stance of a product or by making a moral plea to consumers will not alter their unethical behaviour as consumers readily rationalize and justify their decisions. It is argued that consumers have very little concern regarding ethical issues in reality and that social responsibility and marketing ethics concern among academics and practitioners *'is both misplaced and misguided'* (Carrigan and Attalla, 2001, p.574).

The view of sustainable consumption as socially and culturally constructed (Dolan, 2002), practiced in the '*everyday*' (Barnett *et al*., 2005; Adams and Raisborough, 2010), and as integration (Szmigin and Carrigan, 2006) may prove useful. Sustainable consumption as a research area is continually evolving but lack of sustained behaviour change by consumers remains unexplained (Peattie, 2009). In achieving a sustainable society a greater understanding of how to transform conscious consumption into long-term sustainable consumption is required. It is important to understand *'how to structure consumption choices for the uninformed or unconvinced, in ways that offer progress towards sustainability'* (Peattie, 2009, p.112). In negotiating sustainable change in society, a focus on environmental education, such as the Green-Schools Programme, may go a long way in ensuring current and future generations are both informed in, and engaged with, sustainability issues. Some future research proposed in the literature includes: to gain a greater understanding the complexities of the '*conscious consumer*' (Szmigin *et al.*, 2009); to investigate what it means to be an ethical consumer within social relationships (Cherrier, 2007); to compare and contrast the differing ethical consumption discourses across cultures (Newholm and Shaw, 2007); to research the subject from

a consumer-orientated approach (Peattie, 2009); to research the potential influence of group norms and collective consumption initiatives and behaviours (Peattie, 2010); to research consumption patterns as they exist within the larger societal and global fabric (Prothero *et al*., 2011); and to research how environmental education programmes affects the way children (and their family and friends) think and act from a consumption perspective (Prothero *et al*., 2011). Considering these suggested research avenues and in the context of the comprehensive review of the literature previously outlined, the following research question explores the role of the Green-Schools programme on the progression of sustainable consumption in the home context. The following research question and objectives guide this thesis:

Research Question:

In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home?

Research Objectives:

i. How do pupils of Green-Schools conceptualise sustainability?
ii. Does a transfer of behaviours across social contexts occur – from school to home?
iii. How do households (of Green-School children) identify and practice sustainable behaviours?

Chapter 3

Methodology

3.1 Introduction

The previous chapter concluded by outlining the main research question: In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home? This question imparts certain assumptions about knowledge and entails the use of particular methods to have it correctly addressed. The underlying questions of this study are 1) how do pupils of Green-Schools conceptualise sustainability? 2) Does transfer of behaviours across social contexts occur? And 3) how do households (of Green-School children) identify and practice sustainable behaviours? These research aims require a certain type of methodology that will yield an in-depth understanding of the everyday, sustainable practices of participants. This chapter presents foundational perspectives on research philosophy and the methodological implications of the aforementioned research aims. The main objective of this chapter is to outline the methodological assumptions that underpin and inform this research study. Firstly, a range of epistemological perspectives are outlined, followed by a justification of the research approach used for this study. Secondly, the practical aspects of this research will be discussed including: sample selection; survey instrument; in-depth interviews; data saturation; transcription; and data analysis and coding. This will follow with details on the ethical considerations of the study. The chapter will conclude with a reflection on researcher identity, voice and bias.

3.2 Research Paradigms

> '*Questions of method are secondary to questions of paradigm, which we define as the basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways*'.
>
> (Guba and Lincoln, 1994, p.105)

Research paradigms identify frameworks which guide how research is conducted based on a researcher's philosophy, assumptions about the world, and the nature of knowledge (Collis and Hussey, 2009; Bryman and Bell, 2011). Guba and Lincoln

(1994) identify four competing paradigms: positivism; post positivism; critical theory; and constructivism. Three fundamental questions can identify which paradigm is adopted (Guba and Lincoln, 1994, p.108):

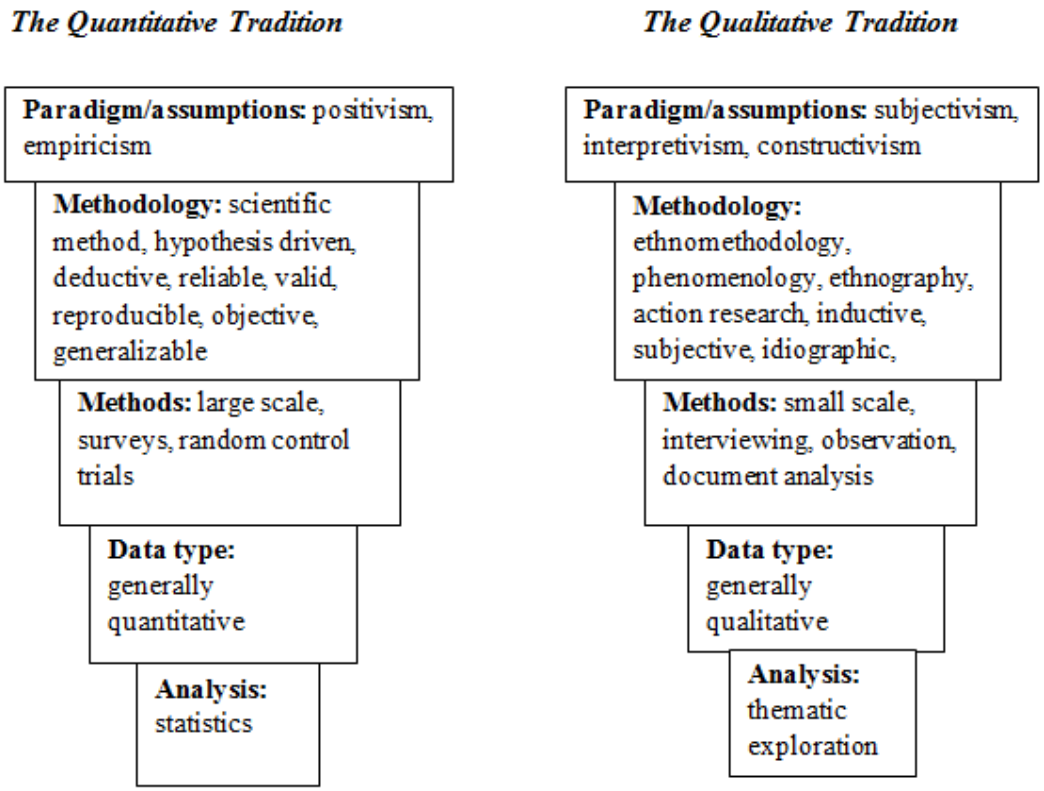
1. The ontological question – what is the form and nature of reality and, therefore, what is there that can be known about it?
2. The epistemological question – what is the nature of the relationship between the knower or would-be-knower and what can be known?
3. The methodological question – how can the inquirer (would-be-knower) go about finding out whatever he or she believes can be known?

The researcher needs to be clear about their worldview or belief system as this will prompt their ontological and epistemological direction and consequently guide appropriate method selection for the research in question. Thus, questions of method are secondary to questions of paradigm (Guba and Lincoln, 1994). It is necessary to firstly review the paradigms that shape method decisions.

Ontology, how we understand the social world, is concerned with the nature of reality and comprises of two forms: objective and subjective. The epistemological position known as positivism is based on a belief that social reality is objective and external to the researcher, thus there is only one reality (Bryman and Bell, 2011). In contrast, the epistemology of interpretivism is a belief that social reality is subjective and each person has their own sense of reality within their social context, thus there are numerous realities (Collis and Hussey, 2009; Bryman and Bell, 2011). For a researcher investigating a phenomenon there are two main research traditions that they may follow: quantitative and qualitative. Quantitative research is mainly objective in nature. Objectivity allows for the standardisation of measures and constructs are easily quantifiable (Saunders *et al*, 2009). On the other hand, qualitative research is mainly subjective in nature. The subjective meanings of individuals will impact on human behaviour and thus it is necessary to interpret these

perceptions and actions and their impact on the phenomena being studied (Saunders *et al*, 2009). Assumptions relating to both traditions are presented in Figure 3.1.

Figure 3.1 Assumptions Related to the Quantitative and Qualitative Traditions



Source: O'Leary (2010)

The quantitative tradition or positivism, viewed by Guba and Lincoln (1994, p.106) as the '*received view*', dominates much research while the qualitative tradition or interpretivist studies, which suggest an alternative way of understanding the social world, are more recently receiving interest (Denzin and Lincoln, 2008). Research in

the area of ethical or sustainable consumption relies both on quantitative studies (Shaw and Shiu, 2003; Barr and Gilg, 2006; Oates and McDonald, 2006; Shaw *et al*., 2007; Boeve-de Pauw and Van Petegem, 2011; Rettie *et al*., 2012; Pullinger *et al*., 2013) and on qualitative studies (Carrigan and Attalla, 2001; Nicholls and Lee, 2006; Oates *et al*., 2008; McDonald *et al*., 2009; Szmigin *et al*., 2009; Eckhardt *et al*., 2010; Barr *et al*., 2011; Bray *et al*., 2011; Moraes *et al*., 2012).

This research study adopts the latter paradigm of inquiry, arising from the qualitative tradition. Denzin and Lincoln (2008, p.14) explain further the essentials of a qualitative inquiry:

> '*The word qualitative implies an emphasis on the qualities of entities and on processes and meanings that are not experimentally examined or measured (if measured at all) in terms of quantity, amount, intensity, or frequency. Qualitative researchers stress the socially constructed nature of reality, the intimate relationship between the researcher and what is studied, and the situational constraints that shape inquiry*'.

This position of reality being '*socially constructed*' (Denzin and Lincoln, 2008) and subjective in nature can allow for the uncovering of how everyday behaviours in the home are developed. The epistemological position employed for this study is interpretivism. This in turn guides the methodology, methods, data type and analysis employed. Interpretive research is usually time- and context-bound (Bahl and Milne, in Belk, 2006). The interpretive approach best serves the research question and addresses the subjective nature of the research inquiry. Interpretivism refers to:

> *'those approaches to studying social life that accord a central place to Verstehen as a method of the human sciences, that assume that the meaning of human action is inherent in that action, and that the task of the inquirer is to unearth that meaning*'.
>
> (Schwandt, 2007, p.160)

Verstehen is a German term for '*understanding*' used by Wilhelm Dilthey (1833-1911) to distinguish the natural sciences from the human sciences (Schwandt, 2007).

Dilthey argued that the human sciences contrasted to the natural sciences as it understands meaning rather than develops causal explanations. Max Weber (1864-1920) distinguished two kinds of Verstehen:

> *'direct observational understanding, in which the purpose or meaning of human action is immediately apparent; and explanatory understanding, which required grasping the motivation for human behaviour by placing the action in some intelligible, inclusive context of meaning*'.
>
> (Schwandt, 2007, p.215)

The term was developed further by phenomenological sociologist Alfred Schutz (1899-1956). Schutz critiqued Max Weber's concepts of observational and motivational understanding (Schutz, 1967). Phenomenological sociology is a social theory constructed by Schutz to describe the '*structures of experience or the lifeworld*' (Schwandt, 2007, p.224). Lifeworld refers to the '*inter-subjective world of human experience and social action; it is the world of common sense knowledge of everyday life*' (Schwandt, 2007, p.177). Central to this theory is the clarification of how the lifeworld is actually created and experienced by individuals (Schutz, 1967). Schutz's interpretation of Verstehen is adopted for this study. The aim of this interpretive study is to understand the everyday practices or lifeworld as experienced by the participants.

Adopting a qualitative position for this research study, the discussion of appropriate methodology and subsequent research methods is required. Methodology, as a theory of how inquiry should proceed, involves analysis of the assumptions, principles, and procedures of a particular approach to inquiry (Schwandt, 2007). Methodology choice will in turn determine the methods that will be used to carry out research:

> *'Methodology is a particular social scientific discourse (a way of acting, thinking, and speaking) that occupies a middle ground between discussions of method (procedures, techniques) and discussions of issues in the philosophy of social science'.*
>
> (Schwandt, 2007, p.193)

Patton (2002, p.134) puts forward six core questions that will guide the selection of a suitable framework:

1. *What do we believe about the nature of reality?* (ontological debates concerning the possibility of singular, verifiable reality and truth vs. the inevitability of socially constructed multiple realities)
2. *How do we know what we know?* (epistemological debates about the possibility and desirability of objectivity, subjectivity, causality, validity, general-izability)
3. *How should we study the world?* (methodological debates about what kinds of data and design to emphasize for what purposes and with what consequences)
4. *What is worth knowing?* (philosophical debates about what matters and why)
5. *What questions should we ask?* (disciplinary and interdisciplinary debates about the importance of various burning questions, inquiry traditions, and areas of inquiry)
6. *How do we personally engage in inquiry?* (praxis debates about interjecting personal experiences and values into the inquiry, including issues of voice and political action)

Considering these questions sets the preparatory ground for which this study seeks to answer the aforementioned research questions. These points by Patton (2002) further influence the academic sophistication of the findings of this research and allow for the reader to appreciate the foundation from which this research study stems.

3.3 Research Strategy

The specific phenomena that I focused on for this study was sustainable behaviour and in particular, the everyday sustainable practices of households. My central research question was: In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home? The households used as

subjects in this study were to be that of '*conscious consumers*'. To ensure that these households were '*conscious*' of the consumer debate the sample selection involved Green-School-going children and a selection of their parents. The research strategy or methodology that was determined to best suit this research question was phenomenology with a mixed-method approach of inquiry, using a survey of Green-School-going children and in-depth interviews with their parents/guardians. According to Bryman's (2006) guidelines on using mixed methods, a combination of survey method and in-depth interview is one of the most commonly used mixed method strategies. The use of the survey method with Green-School children in this research is primarily for '*sampling*' and '*enhancement*' purposes (Bryman, 2006) and is therefore, supplementary to the qualitative, in-depth interviews with the parents of these schoolchildren. The selection of survey and in-depth interviews as my methods of inquiry complement the aims of this research. I presented my research strategy at several conferences prior to conducting research. The advice from peers at these conferences was used to refine my research strategy accordingly.

Within the qualitative research sphere there are several methodologies that may be adopted to research a particular subject of interest. According to Marshall and Rossman (2011, p.18) these methodologies can be viewed within three major genres:

> '*(1) society and culture, as seen in ethnography, action research, case studies, and often grounded theory; (2) individual lived experience, as exemplified by phenomenological approaches, some feminist inquiry, life histories and testimonio; and (3) language and communication – whether spoken or expressed in text – as in sociolinguistic approaches, including narrative analysis and discourse and conversation analysis*'.

The main research question relates most closely to the genre of '*lived experience*' and thus, this approach is adopted for this research study. Phenomenology is chosen as the most suitable methodology as it complements the interpretive paradigm accepted by the author. According to Patton (2002, p.104) a phenomenological study requires:

> '*methodically, carefully, and thoroughly capturing and describing how people experience some phenomenon – how they perceive it, describe it, feel about it, judge it, remember it, make sense of it, and talk about it with others*'.

Epistemologically, the phenomenological approach to research is based in a paradigm of subjectivity which emphasises the personal perspective leading to a '*fresh, complex, rich description of a phenomenon as it is concretely lived*' (Finlay, 2009, p.6). Phenomenology can either be conceptualised as a philosophy or a methodology depending on the epistemological and ontological position of the researcher. As a philosophical tradition, phenomenology was used by Husserl (1859-1938) and later used by Schutz (1967) in the social sciences. There are various forms of phenomenology namely transcendental; existential; and hermeneutic (Patton, 2002). The philosophy interpretation follows the work of Husserl (1970) and Heidegger (1962) while the methodology interpretation of phenomenology is advocated by Schutz (1967). The latter interpretation of phenomenology is adapted for this study. Schutz focuses on the type of phenomenology that '*is more oriented toward describing the experience of everyday life as it is internalized in the subjective consciousness of individual*s' (Schwandt, 2007, p.226). Thus, the epistemological underpinning of phenomenological studies is the assumption that knowledge is created by understanding the subjective meanings reported by individuals. As Patton (2002, p.105) affirms from Husserl's work '*his most basic philosophical assumption was that we can only know what we experience by attending to perceptions and meanings that awaken our conscious awareness*' and thus, confirming that knowledge is acceptable only in the form that meaning is attached subjectively to an act or thing that ultimately constitutes a person's reality (Patton, 2002).

The mixed method approach to research has become increasingly accepted in recent years (Tashakkori and Teddlie, 2003; Bryman, 2006; Bryman and Bell, 2011). It is not unusual for researchers to combine methods from both quantitative and qualitative paradigms within one study but priority is usually given to either one or the other method as '*qualitative research may be used as a preparatory stage to an essentially quantitative study, or vice versa*' (Devine and Heath, 1999, p.47). The

way in which the data is analysed and the resulting conclusions will determine whether the study is an overall quantitative or qualitative study. A mixed method research strategy may take the form of '*quantitative perspective with acceptance of qualitative data*' or '*qualitative perspective with acceptance of quantitative data*' (O'Leary, 2010, pp.128-9). Methods may not be accorded equal status in these cases but rather one approach is used to facilitate the other (Devine and Heath, 1999; Bryman, 2006). Bahl and Milne (in Belk, 2006) discuss how a mixed method approach may have been sidestepped in the past due to concern over remaining true to ones underlying assumptions. They argue that this concern is unnecessary as '*it is not the methods but how it is used that needs to be consistent with the philosophical assumptions*' (Bahl and Milne in Belk, 2006, p.198). A comprehensive list of justifications for using a mixed method approach is presented by Bryman (2006, pp. 105-7). Some of the justifications include:

1. *Triangulation* or greater validity – refers to the view that quantitative and qualitative research might be combined to triangulate findings in order that they may be mutually corroborated
2. *Completeness* – refers to the notion that the researcher can bring together a more comprehensive account of the area of enquiry in which he or she is interested if both quantitative and qualitative research is employed
3. *Sampling* – refers to situations in which one approach is used to facilitate the sampling of respondents or cases
4. *Diversity of views* – this includes two slightly different rationales – namely, combining researchers' and participants' perspectives through quantitative and qualitative research respectively, and uncovering relationships between variables through quantitative research while also revealing meanings among research participants through qualitative research
5. *Enhancement* or building upon quantitative or qualitative findings – this entails a reference to making more of or augmenting either quantitative or qualitative findings by gathering data using a qualitative or quantitative research approach.

A combination of survey method and in-depth interview is one of the most commonly used mixed method strategy (Bryman, 2006). Questions of what constitutes a phenomenological study are addressed by Finlay (2009). She asserts that:

> '*Phenomenological research is phenomenological when it involves both rich description of the lifeworld or lived experience, and where the researcher has adopted a special, open phenomenological attitude which, at least initially, refrains from importing external frameworks and sets aside judgements about the realness of the phenomenon*'.
>
> (Finlay, 2009, p.9)

Thus, adopting a mixed method approach within a phenomenological study is accepted so long as the methods are used to obtain a '*rich description of the lifeworld or lived experience*' (Finlay, 2009, p.9). The use of the survey method with Green-School-going children in this research is primarily for '*sampling*' and to some extent '*enhancement*' purposes (Bryman, 2006) and is therefore, supplementary to the qualitative, in-depth interviews with the parents of these schoolchildren.

The survey method with schoolchildren utilised in this study was situated within a broader phenomenological methodology and thus, was not used as a quantitative instrument. Rather, results from the survey were used and presented in a simple, descriptive manner. This descriptive approach to '*counting of objects or events*' (Wellington and Szczerbinski, 2007, p.117) serves to compress the survey findings into number format so as to gain a '*gist*' of the data (Wellington and Szczerbinski, 2007, p.119). Extracting an overall pattern of the data allows adequate insight for this particular study. Inferential statistics were not used for this study as the aim of the survey method was for sampling purposes (gain access to parents/guardians) and to garner some insight into the conceptualisation of sustainable practices by schoolchildren. This research-with-children approach, which aims to engage with children themselves in order to uncover their views and understandings about their worldview rather than solely consult their parents, is becoming increasingly popular

among researchers (Blatchford *et al*., 1990; Darbyshire *et al*., 2005; Nicholls and Lee, 2006; Christensen and James, 2008; Mazzoni and Harcourt, 2013). The survey method involving schoolchildren in this research was primarily used as a '*preparatory stage to an essentially qualitative study*', as endorsed by Devine and Heath (1999, p.47).

In-depth interviews are regarded as the most effective means of uncovering the lived experience of a particular group of participants that have had direct contact with a phenomenon (Patton, 2002). Goulding (2005, p.302) notes that the only legitimate source of data for a phenomenological study is the particular '*views and experiences of the participants themselves*' thus, in-depth, semi-structured interviews were used to uncover the lived experience of the parents of the schoolchildren. The semi-structured interviews for this study were directed by an interview guide (Bryman and Bell, 2011). This guide was centred broadly on the four main themes of the Green-Schools Programme: waste management; energy efficiency; water conservation; and transport reduction. This supports the practice-based approach to exploring behaviour (Spaargaren, 2003). Although an interview guide was used, the interview process was semi-structured in nature and thus, flexible, which allowed for participant input. This method was deemed appropriate in gathering a greater understanding of how people practice sustainable behaviour in their everyday lives. Phenomenological interviewing '*focuses on the deep, lived meanings that events have for individuals, assuming that these meanings guide actions and interactions*' (Marshall and Rossman, 2011, p.148). Through phenomenological in-depth interviews the '*essence*' of an experience is captured (Marshall and Rossman, 2011). The main goal of a phenomenological interview is to draw out, in the form of a conversation, a rich description of the phenomena as experienced.

3.4 Sample Selection

There are two general strategies for selecting a sample within research: 1) an empirical or statistical strategy known as probability sampling or 2) a theoretical or

purposive strategy known as non-probability sampling (Schwandt, 2007). The latter strategy features heavily in qualitative research and forms the base for the sampling selection for this study. Purposive sampling is used to recruit units that have direct relevance to the research question and thus are perceived as advancing the particular research aims (Bryman and Bell, 2011). Initial pilot interviews were conducted using convenience sampling. A total number of 10 participants took part in the pilot interviews. Convenience sampling was viewed as the best method of gathering information on the research topic prior to the decision to focus on Green-School children and their parents. This convenience sample included family and friends of the researcher and served as a means to identify environmental themes and practices that individuals were familiar with in their everyday lives.

Criterion sampling was then used to select a sample of participants for this study. For criterion sampling, specific criteria are required before a participant can be accepted as suitable (Marshall and Rossman, 2011). All survey participants had to be attending a Green-School and all interview participants had to be a parent/guardian of these children. Although purposive sampling usually assumes that the sample chosen has a rich knowledge base on the topic under study, which perhaps is true for the schoolchildren sample, but the parents/guardians may not be assumed to have a vast knowledge base on the subject as they are not in *direct* contact with environmental education. The parent sample were chosen as an important group to study as they ought to be '*conscious*' of the environmental debate (due to their children attending a Green-School) but may or may not engage in behaviours informed by that debate. This group of participants link directly to the research question. Due to the difficulty in establishing which individuals/households in society had some awareness of sustainability, this criterion strategy was deemed as most suitable to segment the general population. In order to increase the spread of the participants and to gain greater knowledge of the factors that impact their overall environmental behaviours a selection of schools with varying Green Flag status' and geographical locations were chosen. These schools were suggested by An Taisce based on the varying levels of Green Flag achievements within the required region of Cork city and county. Table 3.1 details the schools that were selected, the number of

children surveyed, and the number of parents interviewed from each participating school.

A range of schools with one, two and three Green Flags were chosen from An Taisce's database of Green-Schools. Each school was carefully selected to ensure that the geographical location and Green Flag status was consistent with the requirements of the study. The final selection consisted of seven schools. Two of these schools had one green flag; two had obtained two green flags; and three schools had obtained three green flags.

Table 3.1 Sample Selection

Code/ School	School Type	No. of Green Flags	No. of school – children surveyed	No. of parents interviewed	Location of school
C/ Carrigaline	Girls	1	16	2	Cork Commuter Town
B/ Bishopstown	Girls	2	13	3	City Suburb
S/ Skibbereen	Girls	3	13	1	Large Rural Town
CB/ Carrigaline	Boys	2	20	6	Cork Commuter Town
CTB/ Castletownbere	Co-ed	3	18	6	Small Rural Town
G/ Glasheen	Boys	3	16	3	City Suburb
BL/ Ballinlough	Boys	1	20	4	City Suburb

The sample of parents consisted of volunteers whom responded to a call for parents/guardians to participate in the study (See Appendix 1). It is important to remember that the willing participants may or may not be environmentally conscious but the fact that their child attended a Green-School should allow for some awareness of the sustainability debate. Participants of this study may advance the understanding of how individuals, whom have access to environmental information, negotiate their consumption decisions. This study does not specifically seek out to explore the future environmental intentions of these participants but is used explicitly to explore how members of households reportedly *behave* with regards to sustainability and how these behaviours have been developed within the home.

The survey was administered to 5th and 6th class pupils, with the majority aged 11 or 12 years old. The reason for choosing these class groups was firstly from a developmental psychology perspective. Cognitive development or capacity increases and develops with age. Based on Piaget's (1929) Theory of Cognitive Development, 11 and 12 year olds are in the concrete and/or formal operational stages of cognitive development (Sutherland, 1992). As the concrete operational stage occurs from 8-11 years of age, it is deemed appropriate, given their level of development, to survey children from the age of 8 upwards (Borgers *et al*., 2000). Surveying children in the concrete or formal operational stages of cognitive development ensures a greater comprehension of the task and topic in question and ensures the question and answer process of a survey is understood (Borgers *et al*., 2000). The stage of development of a child will influence performance in terms of understanding a question and its intended meaning. They are also required to retrieve relevant information from memory in adequately answering the question, either by way of selecting a box/category or by articulating their thoughts in qualitative answers (Borgers *et al*., 2000). The schoolchildren selected for survey in this study were deemed appropriate due to their position in relation to cognitive development. Secondly, the reason for choosing 5th and 6th class pupils is because An Taisce had used these classes for their research. And finally, these classes were chosen as they typically take responsibility for ensuring the school partakes and engages appropriately with the programme. As the senior classes in the school they are responsible for pro-environmental duties such as rota systems for emptying compost bins and ensuring the other

schoolchildren are complying with waste management, energy efficiency and water reduction policies in the school.

The initial stage of this research looked at the three girls schools. However, only six parents/guardians volunteered for interview. Thus, a second phase was required. The initial phase surveyed 5th class pupils with an average age of 11 years of age. This research was conducted in May 2012. Due to school holidays the second phase of the research could not run until September/October 2012. For consistency of age of the schoolchildren being surveyed it was deemed appropriate to survey 6th class pupils for the second phase of this research. If these pupils had been included in the initial phase they would have been in 5th class at the time. From the second phase of the research 19 parents/guardians volunteered for interview bringing the total to 25 parents/guardians interviewed. Each parent/guardian expressed some degree of awareness of the environmental debate, thus qualifying their interview script for use in the study.

3.5 Survey

The survey used for this research was adapted from a survey used by An Taisce in 2001. The An Taisce survey can be seen in Appendix 2. The survey used for this research can be seen in Appendix 3. The survey was adjusted from the original version to more appropriately suit the aims of this study and a pilot/pre-test took place with five 11 year olds prior to general administration. It is acknowledged that survey instruments are open to continuous improvement and a poorly constructed survey can have negative implications (O'Leary, 2010). The guide proposed by O'Leary (2010, pp. 183-186) was used in refining the original An Taisce survey in light of the aims of this study. The purpose of the survey for this research was for sampling and enhancement purposes (Bryman, 2006) and was used primarily for access to a parent sample and to gain some insight into the behaviour practices of Green-School children. The survey was not subject to statistical analysis for this particular study but if it were to be used in the future for such purposes, or indeed for future exploratory purposes, it may need to be refined, where appropriate.

The survey was administered to 5th and 6th class pupils of 1, 2 and 3 Green Flag status Green-Schools in the Cork city and county region. The main topics covered in the survey were:

- Thoughts on the Environment
- Learning and Discussing Environmental Issues
- Everyday Sustainable Activities in the Home
- Promoting Sustainable Behaviour

A number of questions also related to demographics such as gender, age, and habitation (city, town, village rural). Two qualitative questions aimed to garner a greater understanding of what the schoolchildren thought of the Green-Schools programme and what they felt was important in relation to sustainability and pro-environmental behaviour. The first qualitative question related to the question '*Do you think it is important for your school to have a Green Flag?*' If students answered '*yes*' to this question they were asked to give an explanation why they thought so. The final question in the survey was an open-ended question where participants were encouraged to document their concerns about the environment in general.

Questions which addressed schoolchildren's thoughts on sustainability are presented in Table 3.2

Table 3.2 Thoughts on the environment

1	Do you think it is important for your school to have a Green Flag? a. Yes b. No
2	Do you think environmental problems are: *a. an urgent problem* *b. a problem for the future*

	c. *not a problem* d. *I don't know*
3	What do you think of the following statements? a. "There is NOTHING I can do about the state of the environment" b. "There is NOTHING my family can do about the state of the environment" c. "Green Schools HELPS the state of the environment" d. "Caring about the environment is IMPORTANT to me"

Questions which addressed where schoolchildren learned about the environment and whether they discuss the environment is presented in Table 3.3

Table 3.3 Learning and Discussing Environmental Issues

1	How did you hear/learn about the environment? (a) newspapers/books (b) TV/radio (c) internet (d) teachers (e) family/friends (f) other
2	Have you discussed environmental issues in the last month? (a) at home (b) with friends (c) in the classroom (d) not at all (e) other

Questions which addressed the everyday behaviours of the schoolchildren in their home is presented in Table 3.4

Table 3.4 Everyday Sustainable Activities in the Home

1	How do you travel to school on most days? a. walk b. cycle c. car d. school bus e. other
2	Do you do any of the following while you are at home: a. Put dry litter (eg. paper, clean plastic bottles) in a recycling bin? b. Turn the tap off while you are brushing your teeth? c. Turn off lights when you are leaving a room for a short time? d. Unplug your Play Station/ Xbox/ Nintendo/ Mobile Phone Charger/ Computer etc. when you are not using them?

Questions relating to whether schoolchildren actively promote pro-environmental behaviours are presented in Table 3.5

Table 3.5 Promoting Sustainable Behaviours

1	Does <u>anyone</u> in your household ask you to do any of the activities listed in Question 13? (Recycle; turn off water tap; turn off lights; unplug electronics) a. Yes b. No
2	Do <u>you</u> ask anyone in your household to do any of the activities listed in Question 13? (Recycle; turn off water tap; turn off lights; unplug electronics) a. Yes

	b. No
3	Do you encourage others (e.g. family, friends, and classmates) to be more environmentally friendly? a. Always b. Sometimes c. Never

The final question is the survey asked: *If there are any environmental issues or topics that you feel strongly about please mention them below*. The aim of this question was to allow the participants to give a qualitative account of their concerns regarding sustainability which may help to comprehend how schoolchildren conceptualise environmental issues.

3.6 Interviews

It was considered important for the researcher to carry out initial pilot interviews to practice good interview technique and to develop a greater understanding of what environmental behaviours were relevant to participants' daily lives. In total, 10 pilot interviews took place between June and August 2011. These pilot interviews were with a selection of family and friends varying in range from 18 to 54 years old. These interviews proved successful in narrowing the focus of the research and allowed the researcher to develop a research strategy and design that would answer the research question. Phenomenological interviews were used for this study:

> *'the goal of the interviews, most often conducted as a conversation, is to draw out rich descriptions of lived experience […] to explore commonalities and divergences in the experience of the same phenomenon*'.
>
> (O'Leary, 2010, p.121)

In-depth, semi-structured interviews were conducted with the 25 volunteer parents from the recruitment stage of the research design. Family interviews were not conducted as the focus of the interviews in this study was on '*practices*' in the home

and therefore, one respondent from the home was deemed satisfactory for the purposes of answering the research questions. Family interviews were also not conducted due to time constraints on the data collection phase but it is acknowledged that future research should include additional members of the household. Phenomenological interviews aim to gain an '*in-depth understanding of another person's experiences*' (Thompson *et al*., 1989, p.138). It is crucial for phenomenological research that understanding of the participants experiences is captured and represented in the research findings. For this study it was paramount to capture participants' consciousness and action in relation to sustainability as they experience it in their everyday lives. The construction and execution of interviews must accommodate the openness that is required for such detail to be gathered (Thompson *et al*., 1989). A process of interviewing is outlined below by O'Leary (2010, p.198):

1. Planning (Sample, access, your role, your biases, ethics, data)
2. Developing an interview schedule/recording system
3. Piloting
4. Modifying
5. Implementing
6. Managing and analysing

These steps guided the interviewing process for this study. Following the guidelines of Thompson *et al*., (1989) the interviews from this study were akin to a conversation rather than a question and answer dialogue. It was deemed important to position the interviews as a conversation rather than a structured interview as the participants were unfamiliar with the researcher and to a degree, unfamiliar with the topic of discussion. All participants were recruited through purposive sampling however, the level of environmental knowledge or commitment each participant had in relation to pro-environmental behaviours was not initially established. A semi-structured, conversation style of interview was employed which allowed for interviewees to relax and speak of their everyday activities with ease and without prejudice.

Equally important to this interview style is acknowledging the role of the interviewer in the interview process. The role of the interviewer '*is to provide a context in which respondents freely describe their experiences in detail*' (Thompson *et al*., 1989, p.138). The focus of the interview was on the experiences of the respondent whom were seen as the experts on their own experiences, behaviours and everyday practices. The researcher is not an expert and cannot come across in this way therefore, biases and views were bracketed in the form of *epoché* (Husserl, 1998) prior to commencing interviews. Through epoché '*one suspends judgements regarding whether objects of consciousness exist*' (Howell, 2013, p.61). This will be discussed further in section 3.11 of this chapter. Each expression made by the respondents was taken as a true and honest account of their particular experience of the phenomenon and not judged by the researcher's attitudes about the world.

In order to guide the interview the key environmental topics that form the basis of the Green-Schools programme were utilised. All participants' children attended a Green-School and thus, were assumed to have some awareness of these topics. The major themes that were discussed in the interviews, among others which were brought up by the respondents themselves, included:

- Waste management
- Energy efficiency
- Water conservation
- Transport reduction

These topics helped guide the interview but did not seek to prescribe the flow of the interview. They were instead used as conversation starters for the participants to recall and discuss their own particular experiences of each and perhaps spur thought to relating topics that were relevant to individual participants. A profile of the respondents is documented in Table 3.6. Participants were coded according to the school which their child attended (these codes can be viewed in Table 3.1. in Section 3.4 of this chapter). Each interview participant was thus assigned a code relating to

the school (e.g. C, CB, S, BL, etc.) and a number (1, 2, 3, 4, etc.) for identification and anonymity purposes.

Table 3.6 Participant Categorization

Participant	Gender	Age Bracket (Years)	Residence	Occupation
C1	Female	35-44	Countryside	Nurse
C2	Female	45-54	Town	Self-employed
B1	Male	55-64	City	Business Director
B2	Female	45-54	City	Accountant
B3	Male	45-54	Countryside	Lecturer
S1	Female	35-44	Countryside	Secondary Teacher
CB1	Female	45-54	Town	Home-maker
CB2	Female	35-44	Village	Home-maker
CB3	Female	45-54	Town	NURSE
CB4	Female	35-44	Village	Home-maker
CB5	Female	45-54	Village	Home-maker / Nurse
CB6	Male	45-54	Village	Public Servant

CTB1	Female	35-44	Town	Home-maker
CTB2	Female	45-54	Town	Home-maker
CTB3	Female	35-44	Countryside	Special Needs Assistant & Chiropodist
CTB4	Female	45-54	Village	Secondary Teacher
CTB5	Male	45-54	Town	Sales Agent
CTB6	Female	26-34	Countryside	Preschool Assistant
G1	Female	35-44	City	Civil Servant
G2	Female	45-54	City	Part-time cashier
G3	Female	45-54	City	Secondary Teacher
BL1	Male	45-54	City	Quantity Surveyor
BL2	Female	45-54	Town	Part-time sales advisor
BL3	Female	35-44	Village	Administration
BL4	Female	45-54	City	Administration

3.7 Data Saturation

Data saturation refers to when data collection ceases '*only when additional data no longer adds richness to understanding or aids in building theories*' (O'Leary, 2010, p.114). Due to the method of participant recruitment employed in this research study it was not possible to determine the number of interviews that would be conducted. Prior to the commencement of the study it was anticipated a certain number of parents would volunteer for interview but because of the design of participant recruitment it was impossible to determine how many parents would be willing to participate. As mentioned, an initial recruitment phase only yielded six parents/guardians. Thematic analysis of these six interviews did not produce clear indicators and thus, additional interviews were required. The second phase of interviews proved substantial as 19 additional parents/guardians volunteered for interview. During the course of these interviews several themes emerged. As the final few parents were being interviewed it was clear that no new themes were being raised by participants. Groenewald (2004, p.11) contends that data saturation occurs when '*interviewees (subjects or informants) introduced no new perspectives on the topic*'. As common in qualitative research, the final number of participants was determined by considering the depth and quality of how much each new participant would add to the findings (Bryman and Bell, 2011). No additional recruitment was deemed necessary following the second phase of interviewing given the reoccurrence of common themes throughout the interviews. The number of parents interviewed for this study totalled 25. The length of the interviews ranged from 25 minutes to 90 minutes, with the average interview 40-45 minutes in length. Each interview was deemed acceptable for inclusion in the study findings.

3.8 Transcription

Interviews were recorded on a digital recorder and I transcribed all the interviews to a computer for ease of analysis and interpretation. The number of pages of transcribed text totalled 96 for the pilot interviews and 226 for the parent interviews. A sample of transcript is included in Appendix 9. All interviews were transcribed verbatim and there were no issues with audibility. However, it is important to remember:

> '*visual cues that we rely on to interpret another's meaning are lost when we listen to a tape: the transcriber no longer has access to those important paralinguistic clues about meaning*'.
>
> (Marshall and Rossman, 2011, p.164)

It was important that I transcribed the interviews in close succession to when the interviews took place so as to maintain the highest level of understanding and translation of meaning into text. An example of a visual cue that was used by one participant is illustrated here:

> "*Ah it's a little bug bearer with me…if I go to the chemist…I have to go to the chemist and I will buy that much tablets (small amount gesture) and they give me that much packaging (large amount gesture). And it's slightly rude but I stand there and I take everything apart, take out what I want and say to them…throw the rest in the bin*".
>
> (Participant B2)

Here, non-verbal cues form an important part of the conversation and are key to understanding the meaning of the experience in question. All incidences of such visual cues and other occurrences such as laughter were recorded. It is openly recognised in this study that the information given by participants, and in turn transcribed into the form of raw data, is the only source for which analysis is conducted. Thus, rigour in transcribing interviews is vital to ensure the accurate interpretation of participants' experiences of the discussed phenomena (Spiggle, 1994).

3.9 Data Analysis and Interpretation

Once transcribed the raw data is subject to analysis, coding, and interpretation. Spiggle (1994, p.492) refers to the '*inferential processes that connect the end product of research to its data*'. Data analysis and interpretation processes are used by researchers to make sense of the data collected:

> '*Inferences result from the processes of analysis and interpretation that investigators use to generate conclusions, insights, meanings, patterns, themes, connections, conceptual frameworks, and theories – their representations of the reality described by the data*'.
>
> (Spiggle, 1994, p.492)

Thus, the data analysis and interpretation in this study represents the reality of the experiences of the participants, as described in the data. Acknowledging this, it highlights the importance of effective data analysis and interpretation. Data analysis involves the division of a '*complex whole into its constituent parts*' whereas in interpretation '*one makes a construal – asks what something means, or grasps the sense of it*' (Spiggle, 1994, p.492). Accurate representations of the data require some form of data analysis and interpretation. The steps taken in this study were guided by O'Leary (2010, p.262):

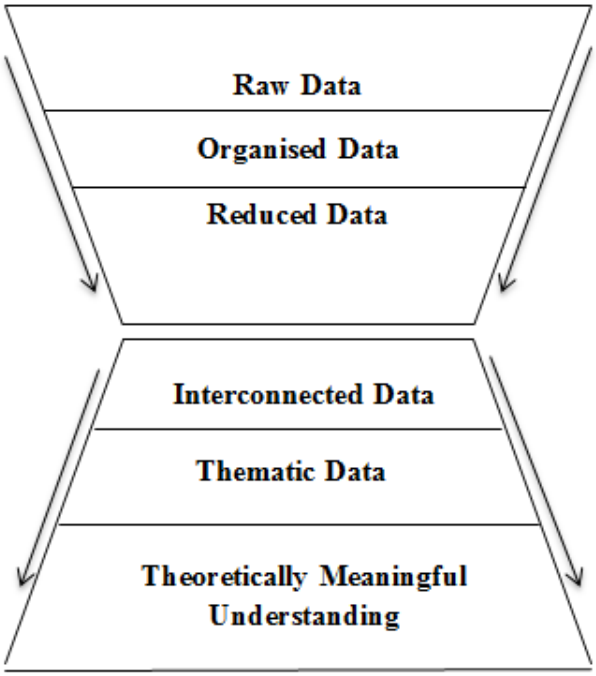
1. Identifying biases and noting overall impressions
2. Reducing, organising and coding data
3. Searching for patterns and interconnections
4. Mapping and building themes
5. Building and verifying theories
6. Drawing conclusions

Using the above guide by O'Leary (2010) and underpinning this with Thompson (1989) and Spiggle (1994) guidelines on data analysis I firstly viewed each transcript as a whole, and related separate passages of the transcript to its overall content. After each script had been interpreted at the individual level, I began relating separate interviews to each other, and common patterns were identified. These common patterns became my main themes. I then referred back to the individual scripts to ensure my interpretations were valid. A sample of transcripts can be viewed in Appendix 9.

This process of data analysis is similar to one suggested by Spiggle (1994) which outlines 7 steps of data analysis: categorization; abstraction; comparison; dimensionalization; integration; iteration; and refutation. Categorization refers to the process of classifying or labelling units of data. Abstraction refers to refining the categories identified into higher-order conceptual constructs. Comparison refers to the exploration of differences and similarities across incidents. Dimensionalization involves identifying properties of categories and constructs. Integration refers to integrating the categories and constructs that have been identified. The final two steps of iteration and refutation engage with the process of induction, deduction, and verification. Iteration involves '*moving through data collection and analysis in such a way that the preceding operations shape subsequent ones*' (Spiggle, 1994, p.495). This suggests that researchers do not perform specific research stages in a sequential manner but move between stages. Although the steps presented by O'Leary (2010) are sequential and the process of analysis is to move from raw data to greater theoretical understanding, this process is not necessarily linear in nature. This study adopted the iteration process of moving back and forth between the stages of data analysis (Spiggle, 1994). Rereading, rewriting and re-engaging with the data occurred several times before final outcomes were drawn from the text. The final stage of data analysis suggested by Spiggle (1994) is refutation which involves '*deliberately subjecting one's emerging inferences - categories, constructs, propositions, or conceptual framework – to empirical scrutiny*' (Spiggle, 1994, p.496). An outline of the data analysis process used for this study, of moving from raw data to theoretical meaningful understanding, is illustrated in Figure 3.2.

The reduction of the data allowed for more meaningful interpretation of participants experiences and allowed the researcher to recognise interconnections and extract themes from the text. This ultimately allowed for the extraction of data '*back outwards so that it tells a full and powerful story that is in rich dialogue with theory*' (O'Leary, 2010, p.263). The following section outlines the process that formed the analysis of this research.

Figure 3.2 Working with Qualitative Data: Drilling in and Abstracting Out



Source: (O'Leary, 2010)

1. *Identifying biases and noting overall impressions*

Firstly, I read each transcript diligently while noting initial thoughts alongside the text. This allowed for overall impressions of the content of the interviews to emerge. Although I had individually transcribed the interviews prior to this and would have been familiar with the content, it was deemed necessary to note overall first impressions again by rereading the texts. Goulding (2005, p.303) also notes the importance of reading texts in full in order to gain '*a sense of the whole picture*'. This overall read allowed for a more holistic understanding of the data and enabled interpretation of the data with greater confidence. Initial patterns emerged at this stage.

2. *Reducing, organising and coding data*

The second step involves the data becoming more organised. Data was examined line-by-line which '*involves systematic drilling of the raw data in order to build up categories of understanding*' (O'Leary, 2010, p.264). Although this ultimately reduced the quantity of data that was available for use, it did not reduce the meaning or experience of the participant. I noted important statements by participants and began to colour code emerging themes. This step allowed for emerging themes to be marked in individual transcripts. The next stage of understanding the data allowed for the emergence similar themes and statements across participant texts.

3. *Searching for patterns and interconnections*

Searching for patterns and interconnections enabled the clustering of themes across the data set and between themes themselves. Interconnections may ultimately relate to the '*the relationship between conditions and consequences, or how the experiences of the individual relate to more global themes*' (O'Leary, 2010, p.265). Rigour is important at every stage to ensure that the texts are not interpreted out of context and the themes suggested match the initial experience related by participants. These patterns were constantly verified by rereading the texts.

4. *Mapping and building themes*

At this stage the major themes emerged and took dominance from interconnected data and patterns. From here I was '*able to integrate the resulting themes into a rich description of the phenomenon under study*' (Goulding, 2005, p.303). A picture of the phenomenon as related by participants transpired. This '*picture*' of the phenomenon did not emerge straight away but only after series of complex mapping and remapping. The participants' particular experiences with regards to waste management, energy efficiency, water conservation and transport reduction were now comprehensively accounted for.

5. *Building and verifying theories*

At this stage the advanced mapping and theme building that consumed the previous stages crystallised into a broader sense of what was '*going on*' (O'Leary, 2010, p.267) with the data and the phenomenon in more detail. At this stage I was ready to contribute to the literature that was drawn upon to research such a phenomenon. Here, the data becomes useful to academic and possibly commercial sectors. It has now formed a broader and more theoretical contribution to the subject area.

6. *Drawing conclusions*

This phase allowed for a recap on the most important findings of the study and consider their relevance to existing literature. It enabled me to reconnect the data with the initial research question(s), aims, objectives and existing literature. Fundamentally, it initiated the construction of a framework representing the contribution of the research study. This adds clarity to the findings and represents accurately the originality of the research (O'Leary, 2010).

While these analytical procedures manipulated the data, '*interpretation makes sense of data through more abstract conceptualizations*' (Spiggle, 1994, p.497). Interpretation, distinct from analysis, is not realised through a set of procedures or steps but rather:

> '*arriving at an interpretation results from an emergent, holistic, extralogical insight, or understanding. The interpreter translates some distant – less familiar, abstract, indirectly apprehended – object, experience, or domain into one that is near – more familiar, concrete, directly apprehended. Through this translation the interpreter grasps a meaning by seeing resemblances between a new sign system, a text, and a previously understood one*'.
>
> (Spiggle, 1994, pp.497-8)

This interpretation of the research findings from this study will be further discussed in Chapter 5.

3.10 Ethical Considerations

Ethical research practice is paramount when conducting social research that involves the participation of human subjects (Bryman and Bell, 2011). Privacy, anonymity, and right to participate must be acknowledged and respected (Marshall and Rossman, 2011). According to the Code of Good Conduct in Research at University College Cork (UCC) non-clinical research that involves human participants in experiments, interviews or surveys must be approved by the Social Research Ethics Committee (SREC). Ethical approval must be granted prior to the commencement of the stated research. Principals for Good Research Practice must be incorporated into the research design and process. Due to this research involving children under the age of 18 it was necessary to seek ethical approval. Ethical issues that involve the use of children in research studies comprise of:

> '*protecting them from harm as a result of participating in the study, protecting their identities and privacy, and being diligent to ensure that they are willingly participating in the study.*'
>
> (Marshall and Rossman, 2011, p.158)

There are issues concerning research with children such as level of skill at reading or writing and conducting research in an environment that is familiar to children (Peracchio, 1990; Elliott and Leonard, 2004; Nicholls and Lee, 2006). The surveying of the schoolchildren for this study took place in their school classroom with their teacher present in the room. This setting was chosen as most suitable for the completion of the survey as the schoolchildren would be comfortable in their own environment. The relative vulnerability of the children was protected by this environment (Marshall and Rossman, 2011). This site was also chosen for reasons of convenience. Children were asked not to write their name or any personal details on their surveys and each survey was collected anonymously.

In order to ensure ethical research, I exercised informed consent (Holloway, 1997; Groenewald, 2004). In line with Groenewald's (2004) recommendations for

receiving consent from participants I compiled an informed consent agreement (See Appendix 4). This detailed the following:

- The purpose of the research (without stating the central research question)
- The procedures of the research
- The risks and benefits of the research
- The voluntary nature of research participation
- The informant's right to stop the research at any time
- The procedures used to protect confidentiality

Each participating child required a signed consent form by their parents to participate in the survey. The principle of informed consent is about the right of individuals to determine if they want to be part of the study (Ruane, 2005). If a consent form was absent the child did not participate in the survey. If for any reason any child did not want to participate in the survey at the time of participation, this was also respected.

The SREC require submission of a detailed description of the research project before ethical approval is granted. The information that was submitted to the SREC for review can be seen in more detail in Appendix 5. A basic outline of the submission included: a brief description of the project and its research aims; the purpose of seeking ethical approval; potential ethical considerations; justification of methods; participant profile; informed consent; and project start and completion dates. Further details were requested by the SREC following initial submission. Responses to the additional questions can be found Appendix 6. One query involved:

> *Question: Interviewing parents or guardians is a next phase of the research? Is the researcher applying separately for ethical approval for this?*
> Answer: Yes, this is the next stage of this research.
> No, the researcher will not be applying for ethical approval for this phase of the research because the subject matter of the interviews will be based on perceptions and behaviours around sustainability and, as such, is non-controversial and participation is voluntary.

Following a resubmission to the SREC ethical approval was granted for this research (See Appendix 7). With regards to the justification of methods it is important to note the explanation:

> A survey is deemed the most useful instrument in researching schoolchildren as it has been previously used by An Taisce to great success. The questionnaire used in this research is adapted from one that was used by An Taisce in 2001 to research opinions and behaviours of 5th and 6th class pupils in Green-Schools and Non Green-Schools. Wording is used appropriately so as pupils aptly understand what each question is based on. Surveys are deemed appropriate when quantitative results are required. For the purposes of this research, the quantitative data produced will be used to frame the questions asked in the following step (interviewing parents/guardians) of the overall research.

Voluntary participation is an important feature of all research. Participating children were only those whom returned a signed consent form from their parents. If a signed consent form was absent or a child did not want to participate in the survey they were omitted. Equally, parents were given an opportunity to voluntarily participate in the research by returning their contact details (See Appendix 1). Further verification of their willingness to participate in the interview was established through an initial phone call. Respect for all participants' wishes was upheld at all times. Participants were assured that all data gathered from the surveys and interviews would remain entirely anonymous and all data presented in the study would be anonymised. Participants were also informed that all data gathered for the purpose of this study would be kept completely confidential.

Prior to the commencement of the survey a brief explanation of the purpose of the study was outlined to participants. Schoolchildren were encouraged to give honest answers to the survey questions and reassured that it was not an examination and thus, their answers may differ to those sitting beside them. The researcher also allowed the children to ask questions about the survey if they did not understand a question. At the beginning of each interview a brief explanation of the purpose of the study was related to the parents/guardians. Consent for audio-taping the interviews was sought during the initial phone conversation and again prior to the face-to-face interview. Each participant was informed on the approximate time the interview

would take and encouraged to give honest accounts of their experiences and behaviours throughout the interview. Good rapport was established between the researcher and the respondents. It was imperative that the interviewee was made feel comfortable and at ease with the researcher as they would be discussing their day-to-day activities in detail.

3.11 Researcher Identity, Voice and Bias

> '*In social research the researcher […] is the key instrument*'.
>
> (Wellington and Szczerbinski, 2007, p.51)

Acknowledging the researcher and their explicit role in the research process is essential for studies of a social nature (Huges and Sharrock, 2007; Wellington and Szczerbinski, 2007). The interpretive paradigm accepts that the researcher cannot simply be independent of the social world as the researcher '*being a human being who had to operate within society*' cannot be an objective observer (Huges and Sharrock, 2007, p.258). A pivotal aspect of phenomenological interviewing is that it '*permits an explicit focus on the researcher's personal experience combined with those of the interview partners*' (Marshall and Rossman, 2011, p.148). For this reason it was considered appropriate to state assumptions and thoughts in a reflective manner throughout the research (Ortlipp, 2008). One such reflective account is provided in Appendix 8. An excerpt of this reflective passage is presented in Table 3.7.

Table 3.7 An Excerpt from Authors Reflective Journal

Reflective Journal Entry – June 2011
My past studies and personal interest in food and health led me to looking at this area to see if there was anything that I could study however nothing really struck a chord. I was working at the time [beginning of PhD], and had been for the previous few years, in a health food shop. This was a very big part of my life and I absolutely loved working there. One thing that always fascinated me was, living in a small town, a lot of 'locals' would never have stepped foot inside the shop. People that knew I worked there used to ask me what we sold, who shopped there, how the business was doing, who owned it etc., but still, would never step foot inside the door. Their curiosity was not enough to affect the physical act of walking in the door of the shop. This interested me. I was completely aware that not everybody had the interest or desire to visit a health shop but for some, I believed, they were in some way held back by something that didn't allow them to steer their body in the door.

The reflective passage (Appendix 8) is deemed important for this study as it frames the thought processes of the researcher and identifies their position on ethical consumption prior to conducting primary research. This extract represents the *epoché* discussed in section 3.6 of this chapter:

> '*Epoché is a process that the researcher engages in to remove, or at least become aware of, prejudices, viewpoints or assumptions regarding the phenomenon under investigation. [It] helps enable the researcher to investigate the phenomenon from a fresh and open viewpoint without prejudgement or imposing meaning too soon*'.
>
> (Patton, 2002, p.485)

My views at the beginning of the research process is important in relation to the findings of this study. Despite the views stated in Appendix 8, I remained, although directly involved in the research process, non-judgemental throughout the

interviews. I believe my situation and thoughts prior to conducting this research, combined with the responses of the participants under research, contributes positively to the discussion chapter and the overall understanding and contributions of this study to the sustainable consumption debate.

3.12 Chapter Conclusion

This chapter has presented a detailed description of the ontological, epistemological and methodological perspectives that underpin this study. This is a phenomenological study that is situated in the interpretive research paradigm. A mixed method approach using survey and interviews was used to answer the research question and primary research aims. Although using a survey method, this is an overall qualitative study which aimed to garner an in-depth understanding of how sustainable behaviours are developed in the household. It has discussed the importance of ethical conduct when designing and carrying out a research study that involves the participation of children under the age of 18 and the ethical approval procedures that were deemed necessary prior to the research commencing. It further detailed approaches to data saturation and data analysis and coding. One of the most important features of this chapter is the identification of personal biases. These are essential to note prior to discussing the findings of this study.

Chapter 4

Research Findings

4.1 Introduction

This chapter will begin with a discussion of the survey which was administered to 116 Green-School children. The aim of this survey was to garner a greater understanding of how schoolchildren conceptualise and practice green behaviours both within their school and in the home. As discussed in the previous chapter, the schoolchildren were asked a total of 18 questions which centred primarily on their actual behaviour and everyday practices rather than their attitudes towards particular practices. In addition to '*tick the box*' exercises, the participants were given the opportunity to detail their opinions more broadly with two qualitative questions in the survey. This qualitative aspect was used to explore sustainable behaviour practices from the children's point of view. This chapter will explore the results of this survey and discuss how these schoolchildren conceptualise sustainability.

The second discussion in this chapter centres on the thematic analysis of 25 semi-structured interviews that were conducted with the parents of Green-School children. Conversation was loosely-centred on the four main themes of the Green-Schools programme (waste management, energy efficiency, water conservation and transport reduction). The reason for grounding the interviews with these particular topics was to explore parents' views in relation to the Green-Schools programme and discover if any of these sustainable behaviours were practiced in the home. The structure of the interview was not made known to participants but rather focused on their (and family members') behaviours in relation to the particular themes. As the interviews were semi-structured these topics acted only as a guide. Respondents were assumed to be '*conscious*' of environmental concerns due to the enrolment of their child in a Green-School however, whether participants were in fact aware of environmental issues was confirmed during the interviews. The Green-Schools programme was discussed in the interview as a means to gauge their knowledge on it, its aims for sustainability, and whether sustainable behaviours were occurring across contexts: from school to home. This chapter will discuss the findings from these interviews and discuss the influence these findings may have on sustainability. The degree to which these findings confirm/extend the previous theorising in this area will be discussed in Chapter 5.

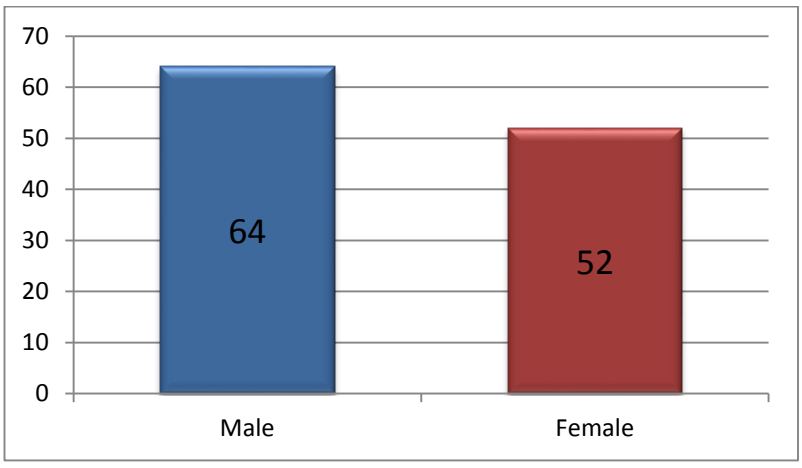
4.2 Survey Findings

This section presents and discusses the findings of the surveys that were administered to Green-School pupils. Statistical analysis was not used in this research as the main aim of the survey was to explore how schoolchildren conceptualise sustainability and to gain access and context to interview the parents of Green-School children. The survey used in this research was adapted from the An Taisce survey (2001), which compared Green-Schools with non-green-schools (Green-Schools Research Report, 2001) and comparisons with this study will be noted in discussing the findings of my research[5]. The following section will present the answers to some of the most important questions that were asked of the survey participants. It will begin with demographic analysis; outlining the gender and age profile of participants. It will then present and discuss how the participants learned about the environment and sustainability and the importance they place on taking care of the environment. Discussion will then focus on their behavioural practices at home and whether they take ownership of their environmental responsibilities. The final discussion on the findings from schoolchildren focuses on their qualitative answers in relation to the two qualitative questions in the survey.

4.2.1 Demographic Results

The gender profile of participants is outlined in Figure 4.1.

Figure 4.1 Gender Profile

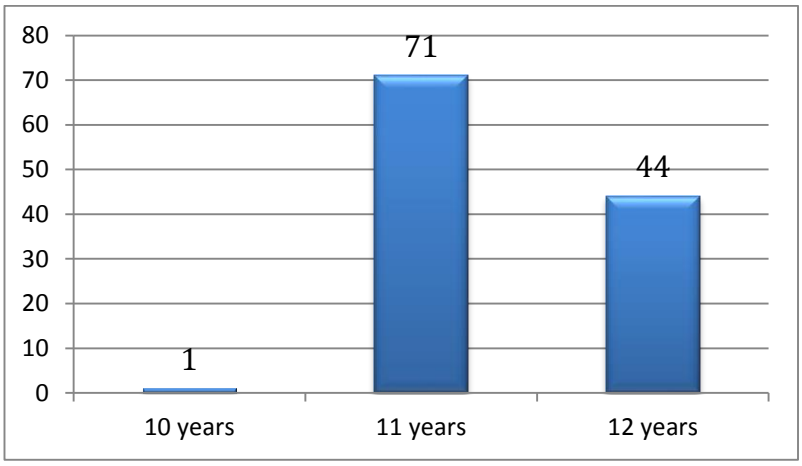


[5] The comparisons I draw between my findings and the 2001 survey findings are for discussion purposes only as An Taisce used statistical analysis in their study.

There were 64 male participants (56% of sample) and 52 female participants (44% of sample). The particular selection of Green-Schools allowed for a relative balance in gender numbers.

The age profile of participants is presented in Figure 4.2. The classes selected for this research were 5th and 6th class. These were chosen as they are the senior classes in primary education and generally take on the responsibility of coordinating the Green-Schools programme within their schools. The An Taisce survey also selected 5th and 6th class pupils for their research in 2001.

Figure 4.2 Age Profile



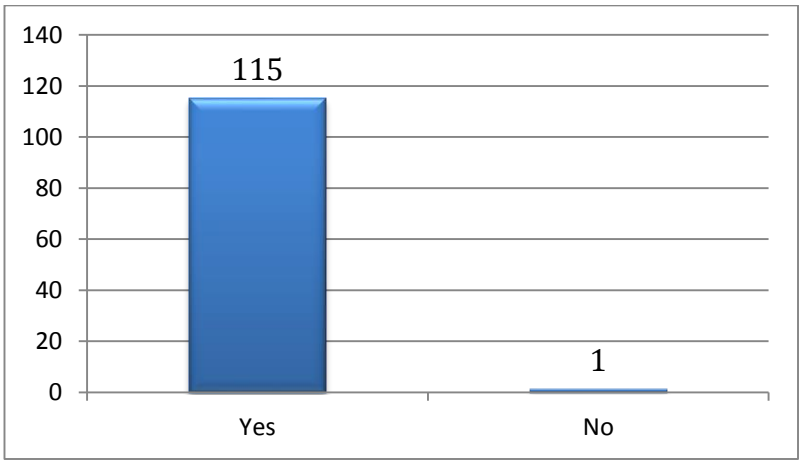
The age profile of participants was as follows: one participant was 10 years old (1% of sample); 71 participants were 11 years old (61% of sample); while 44 participants were 12 years old (38% of sample).

4.2.2 The Environment and Sustainability

4.2.2.1 Thoughts on Sustainability

A greater understanding of the thoughts of participants regarding the environment and sustainability was required to contextualise the behaviours of participants within their wider views and understandings. A total of six questions in the survey addressed the specific thoughts of the participants regarding the environment. The following questions try to understand the importance the participants place on taking care of the environment and the belief that their behaviour can play a part in sustainability. Figure 4.3 illustrates the answer to the question: *Do you think it is important for your school to have a Green Flag?*

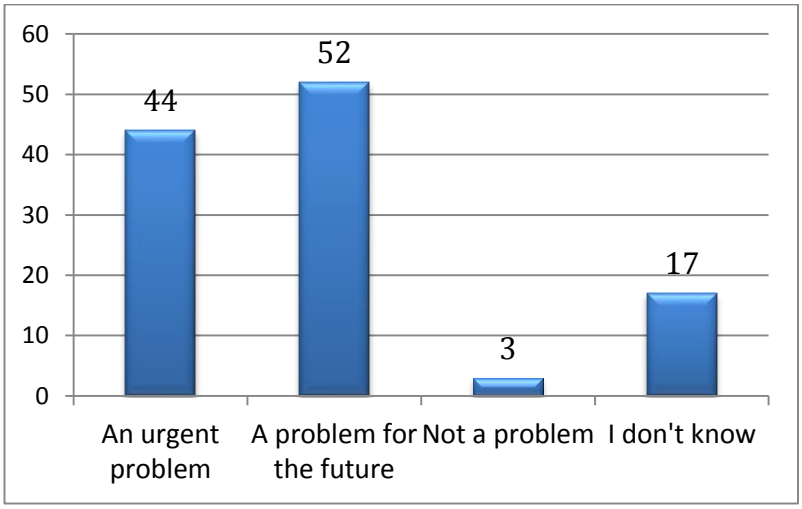
Figure 4.3 Do you think it is important for your school to have a Green Flag?



All but one of the 116 participants believed that it was important for their school to have a green flag. This highlights the weight these participants place on the Green-Schools programme in their school. These participants have a positive attitude towards the presence of the programme in their school. There was a second part to this question: '*if answered yes, please state why you think so'* which will be discussed further in section 4.2.5 of this chapter.

The urgency of environmental issues in the eyes of the participants is shown in Figure 4.4. The participants were asked if they felt *environmental problems were (a) an urgent problem; (b) a problem for the future; (c) not a problem; or (d) I don't know.*

Figure 4.4 Do you think environmental problems are:



The number who believed that environmental issues were an urgent problem was 44 participants (38% of sample); a problem for the future was 52 participants (45% of sample); not a problem was 3 participants (2% of sample); and the number that don't know was 17 participants (15% of sample). Interestingly, the majority of participants, 45%, believe that environmental issues are a problem for the future and not an urgent problem. This may have an impact on their sense of responsibility for their current behaviours regarding the environment, if they believe that sustainability is a '*future*' issue.

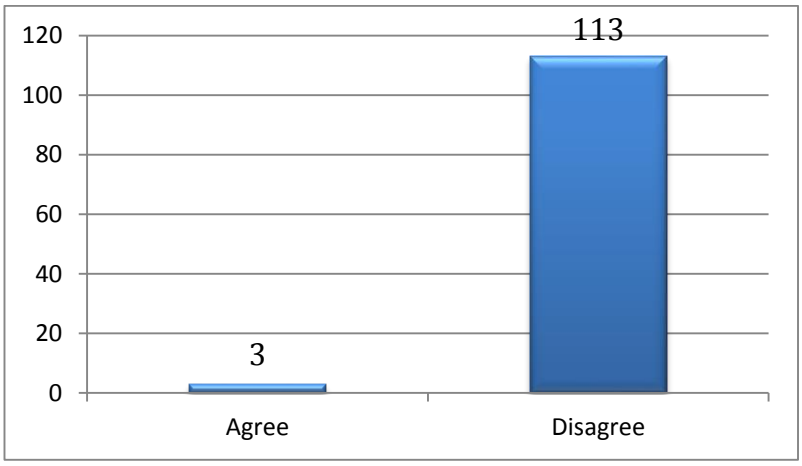
In comparison with the An Taisce survey, which asked this question of both Green-School children and non-green-school children, the answers in this research are more akin to the answers of non-green-school children in the 2001 survey. This is somewhat alarming as the majority of An Taisce's non-green school children (51%) also believed that environmental problems were a problem for the future (Green-

Schools Research Report, 2001). Although not statistically relevant, this study suggests that Green-School children may believe that environmental problems are problems of the future and thus, the urgency of their behaviour change may be jeopardized.

To further understand the participants' thoughts about the environment, they were presented with a number of statements and asked if they either agreed or disagreed with each statement. Figure 4.5 presents responses to what participants thought of the following statement: *'There is nothing I can do about the state of the environment'*.

Figure 4.5 What do you think of the following statement?

"There is NOTHING I can do about the state of the environment"

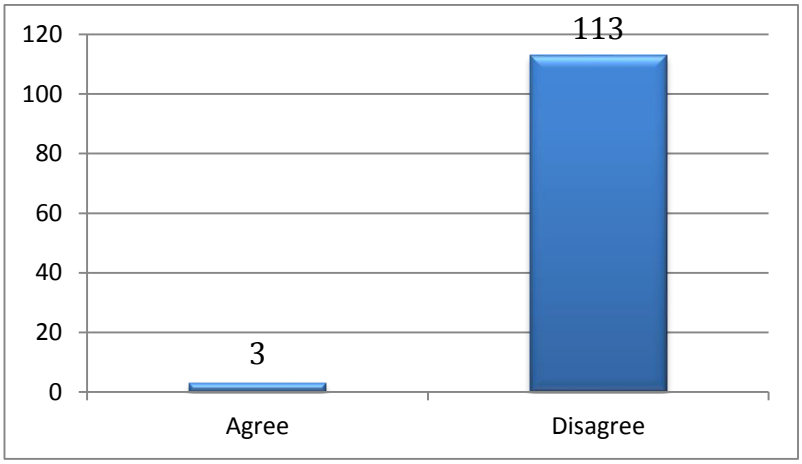


In response to this statement 113 participants (97% of sample) disagreed while 3 participants (3% of sample) agreed. This answer is very similar to the An Taisce survey where 95% of Green-School children disagreed with the statement (Green-Schools Research Report, 2001).

Figure 4.6 looks at whether participants agree or disagree with the following statement: *There is nothing my family can do about the state of the environment*.

Figure 4.6 What do you think of the following statement?

"There is NOTHING my family can do about the state of the environment"

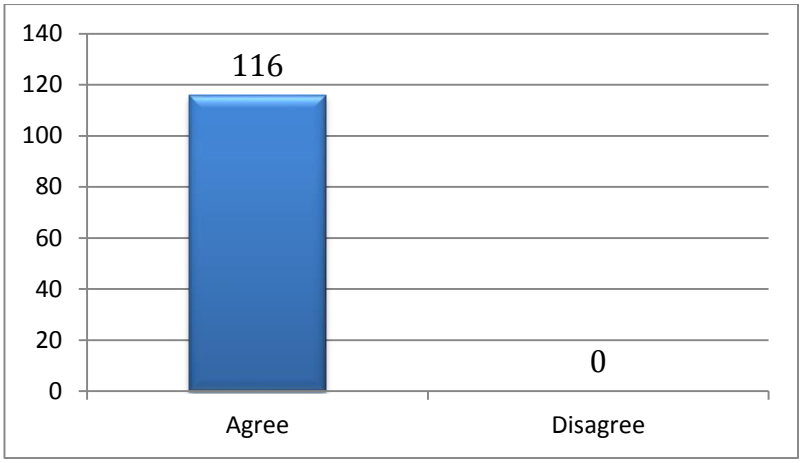


Again 97% of participants disagreed with this statement and 3% agreed. Both these statements show that participants believe that they are not completely powerless in achieving a better environment. This suggests there is empowerment among participants and perhaps a sense of ownership and responsibility towards their behaviours.

Figure 4.7 illustrates participants' response to the statement: *Green-Schools helps the state of the environment*.

Figure 4.7 What do you think of the following statement?

"Green Schools HELPS the state of the environment"

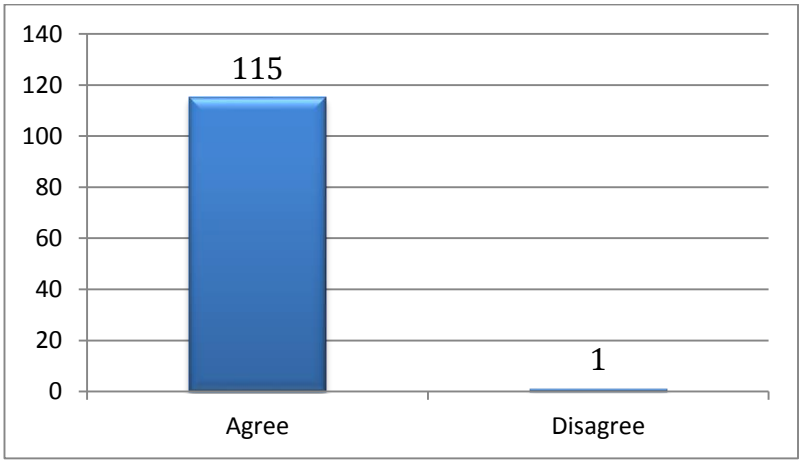


All 116 respondents agreed that the Green-Schools programme is beneficial to the state of the environment. This full agreement suggests that schoolchildren acknowledge and understand the aims of the Green-Schools programme in helping the environment.

The final question that was asked in relation to participants thoughts on the environment and sustainability was whether they agree or disagree with the statement: *Caring about the environment is important to me*.

Figure 4.8 What do you think of the following statement?

"Caring about the environment is IMPORTANT to me"

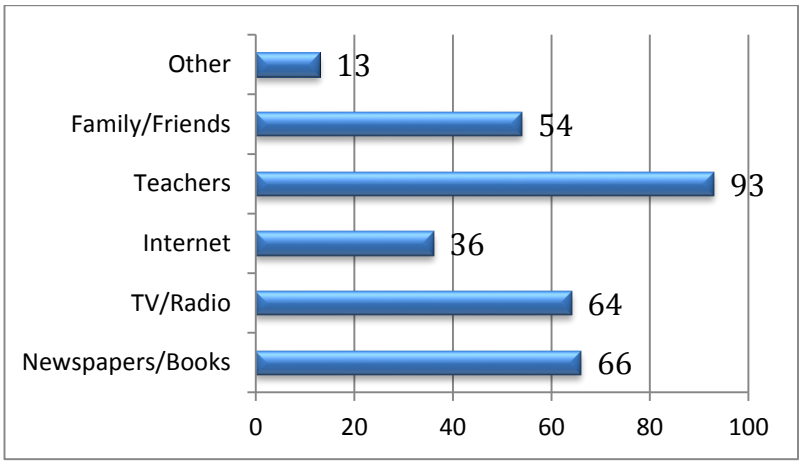


As illustrated in Figure 4.8 all but one (99% of sample) agreed with this statement. This clarifies the positive sentiment participants relate to the care of the environment. The environment is a topic that these schoolchildren are aware of and attach care and responsibility to.

4.2.2.2 Learning and Discussing Environmental Issues

After considering the thoughts of participants in relation to sustainability and the environment, how participants learned about the environment and whether they discuss the environment in their daily lives was addressed with the use of two key questions. Figure 4.9 illustrates how participants learned about the environment. Participants were allowed to give multiple answers for this question.

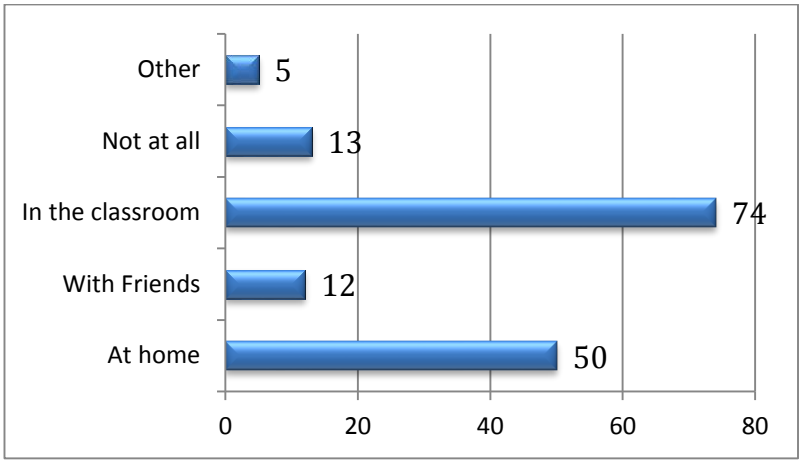
Figure 4.9 How did you hear/learn about the environment?



The majority of participants learned about the environment from their teachers (80% of sample). This result is similar to the An Taisce survey were 83% of Green-School children cited teachers as their primary source of information (Green-Schools Research Report, 2001). The following three sources were also cited as important: newspapers/books (57% of sample); TV/radio (55% of sample); and family and friends (46% of sample). The internet was the least cited source of information on the environment (31% of sample).

Considering how participants learned about the environment, whether they discuss the environment in their daily lives was addressed with the question*: Have you discussed environmental issues in the last month (a) at home; (b) with friends; (c) in the classroom; (d) Not at all; (e) other*.

Figure 4.10 Have you discussed environmental issues in the last month?



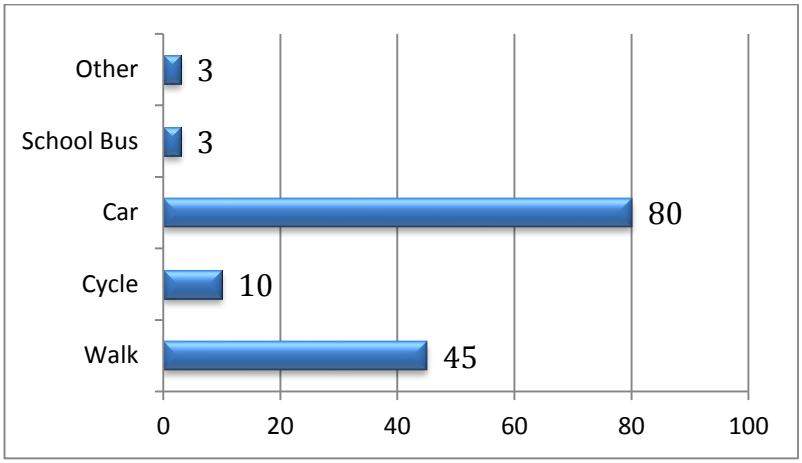
Again, participants were allowed to give multiple answers for this question. Figure 4.10 illustrates that the majority of participants (64% of sample) discussed environmental issues in the classroom; 50 participants discussed in the home (43% of sample); 12 participants discussed with friends (10% of sample); and 13 participants did not discuss environmental issues at all in the last month (11% of sample). This suggests that the contexts where discussion of the environment are most likely are the school and home contexts.

4.2.3 Everyday Practices

Given that this research focuses on everyday behaviours and practices it was fundamental that the everyday behaviours of schoolchildren in relation to the environment were explored. The following survey questions aimed to understand the everyday behaviours of schoolchildren and their families.

Figure 4.11 looks at how participants travel to school on most days. Participants were allowed to give more than one answer for this question. Transport reduction is one of the themes of the Green-Schools programme and is presented as one of the more challenging obstacles in achieving sustainability.

Figure 4.11 How do you travel to school on most days?

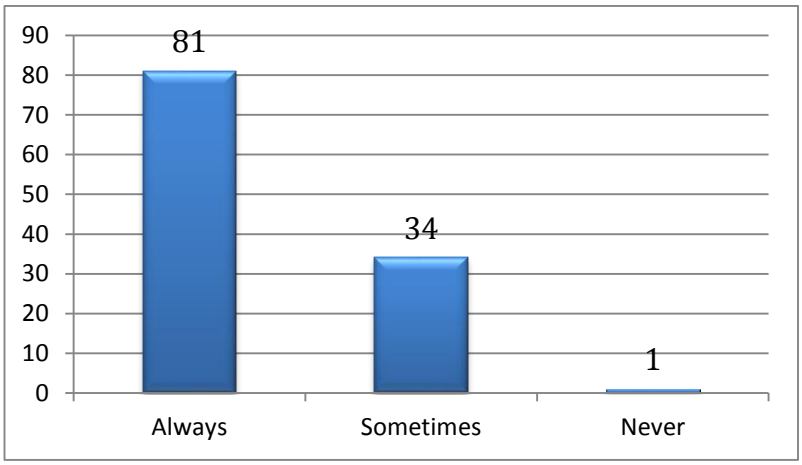


The main modes of transport to school were: 80 participants travel to school by car (69% of sample); 45 participants walk to school (39% of sample); 10 participants cycle to school (9%); 3 participants travel by school bus (3% of sample); and a further 3 participants cited other (3% of sample). Travel by car is by far the most cited mode of transport to school.

Figure 4.12 looks at the participants' behaviour in relation to waste management. Waste management in the form of recycling plays a big role in teaching the schoolchildren about the environment and sustainability within the school. Under the '*waste*' theme participants would have learned about the need to reduce and recycle the waste they create and use in their daily lives. Learning and practicing waste management in the school is maintained under the Green-Schools programme. This question illustrated in Figure 4.12 asks if participants participate in a waste management practice in the home.

Figure 4.12 Do you do any of the following while you are <u>at home</u>:

Put dry litter (eg. paper, clean plastic bottles) in a recycling bin?

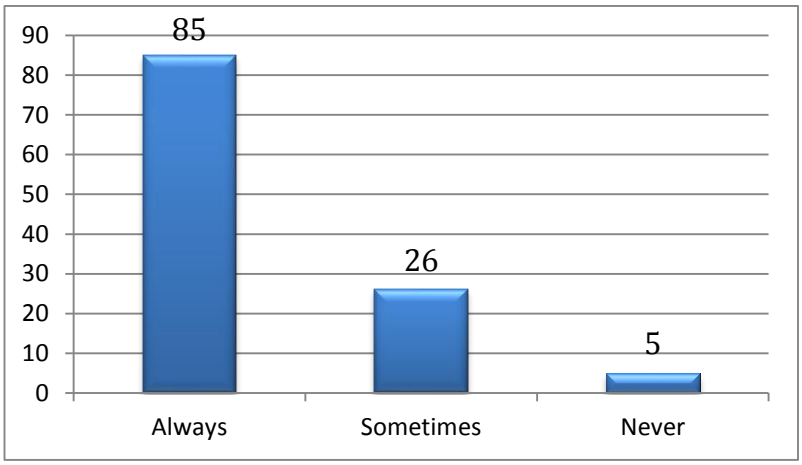


The participants responded as follows: 81 participants (70% of sample) always recycle at home; 34 participants (29% of sample) sometimes recycle; and 1 participant (1% of sample) never recycles. This suggests a fairly robust practice of recycling by schoolchildren in the home.

Figure 4.13 looks at participants' behaviour in relation to water conservation. Again, integral to the Green-Schools programme, schoolchildren are taught and encouraged to practice effective water conservation practices in the school. This question illustrated in Figure 4.13 asks if participants practice water conservation at home in the form of turning tap water off while they are brushing their teeth.

Figure 4.13 Do you do any of the following while you are <u>at home</u>:

Turn the tap off while you are brushing your teeth?

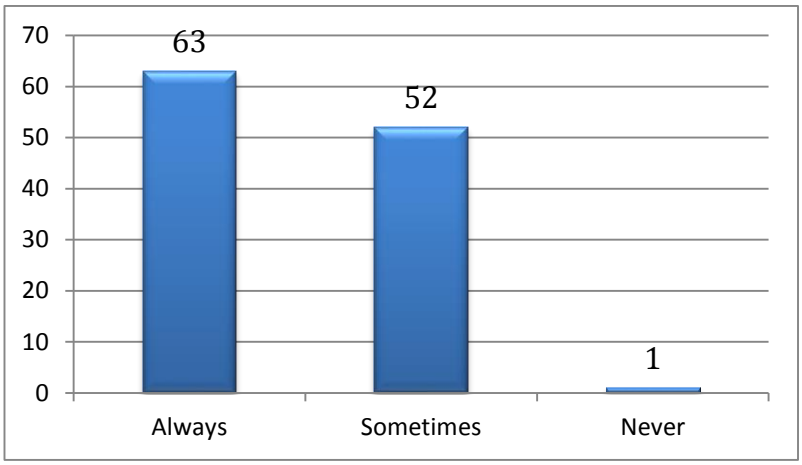


The participants responded as follows: 85 participants (73% of sample) always conserve water; 26 participants (22% of sample) sometimes conserve water; while 5 participants (5%) claim they never conserve water in the form of turning off the tap water while they are brushing their teeth. In a similar way to recycling this illustrates that water conservation is an activity that schoolchildren are adept at performing. These results indicate an improvement on the results of the An Taisce survey which reported 30% of Green-School children *always* conserve water, 42% *sometimes* conserve water and 29% *never* conserve water (Green-Schools Research Report, 2001). This suggests an improvement in reported behaviours of water conservation.

Figure 4.14 looks at participants' behaviour in relation to energy conservation. In exploring participants' propensity to conserve energy in the home they are asked if they turn off lights when they leave a room. Energy conservation is one of the main themes of the Green-Schools programme and is practiced within the school context. The question presented in Figure 4.14 aims to explore whether this behaviour by schoolchildren also occurs in the home context.

Figure 4.14 Do you do any of the following while you are <u>at home</u>:

Turn off lights when you are leaving a room for a short time?

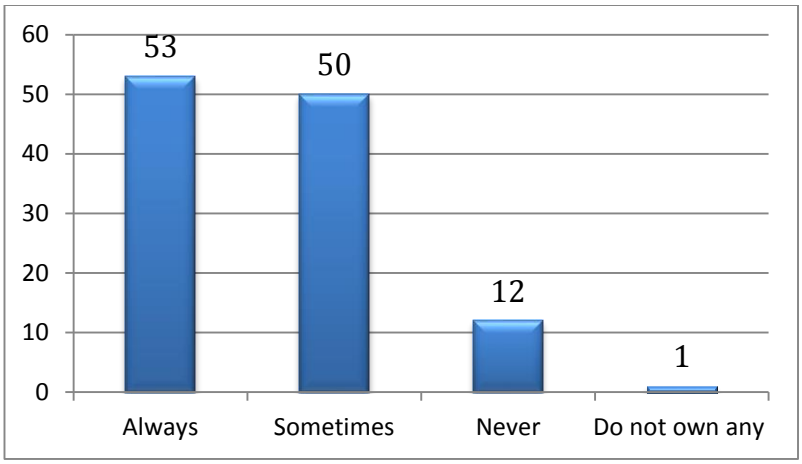


The participants responded as follows: 63 participants (54% of sample) always turn off lights; 52 participants (45% of sample) sometimes turn off lights; and 1 participant never turns off lights when they leave a room. Although a well-practiced behaviour, turning off lights does not occur as regularly as waste management or water conservation among the sample of respondents. This finding is similar to An Taisce's study where 47% of Green-School respondents *always* conserve electricity, 40% *sometimes* conserve energy and 13% *never* conserve energy (Green-Schools Research Report, 2001). The increase in *always* conserve is not as great as the water conservation example but nonetheless it's worthwhile to note the percentage difference for those who *never* conserve energy. There appears to be a change in this particular behaviour over time.

Figure 4.15 also explores energy conservation. This question asks participants if they unplug their personal electrical equipment when finished using them. For example: Play Station; Xbox; Nintendo; Mobile Phone; Computer etc.

Figure 4.15 Do you do any of the following while you are at home:

Unplug your Play Station/Xbox/Nintendo/Mobile Phone Charger/Computer etc. when you are not using them?



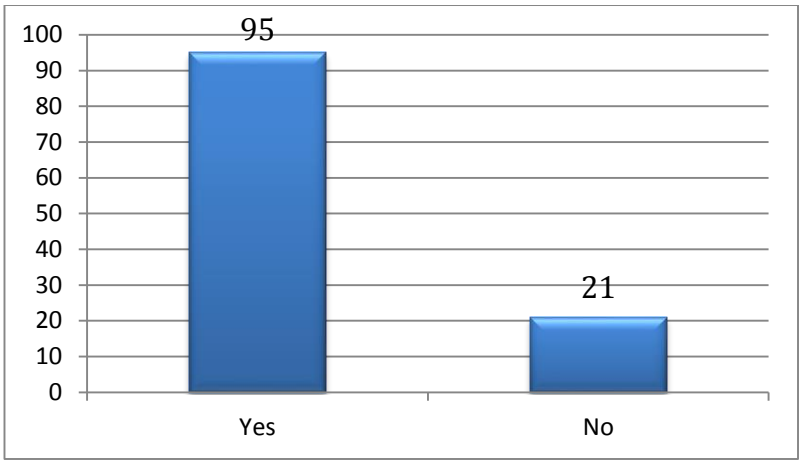
The aim of this question in relation to the previous question is to explore if energy conservation extends to unplugging electronic devices when not in use. The participants responded as follows: 53 participants (46% of sample) always unplug equipment; 50 participants (43% of sample) sometimes unplug equipment; 12 participants (10% of sample) never unplug equipment; while 1 participant did not own any personal electrical equipment. These results also suggest that energy conservation does not occur as consistently as both waste management and water conservation. Both questions that dealt with energy conservation have a much higher rate of *sometimes* activity than the *sometimes* responses for waste and water behaviours. The reasons for these behaviour patterns were not explored further in this particular study.

4.2.4 Promoting Sustainable Behaviours

In light of the sustainable behaviours practiced within the household by schoolchildren, whether these behaviours are promoted or encouraged either by others or the children is explored. A series of questions in the survey aimed to uncover if the participants actively engage and encourage others to be more sustainable in their everyday activities. Figure 4.16 looks at whether anyone in their

household asks them to do any of the activities previously discussed: recycle; turn off tap water; switch off lights; unplug electrical equipment.

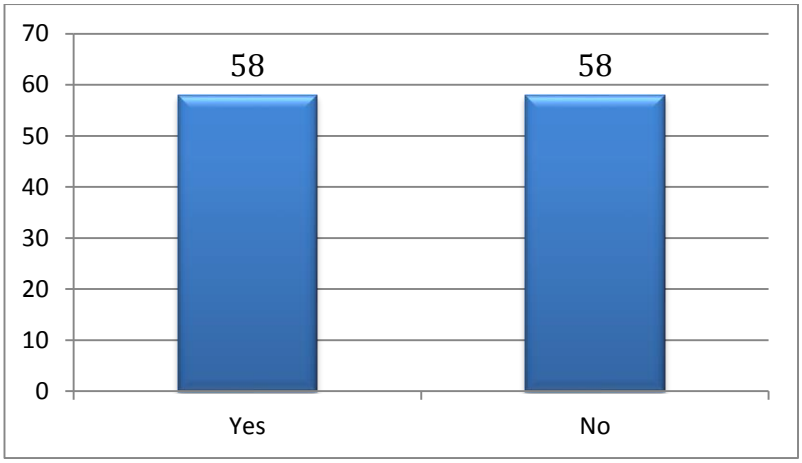
Figure 4.16 Does <u>anyone</u> in your household ask you to do any of the activities listed in Question 13?



The participants responded as follows: 95 participants (82% of sample) claim that others ask them to perform the behaviours listed previously while 21 participants (18% of sample) claim that others do not ask them to participate in sustainable practices. This perhaps indicates that ownership of sustainable duties in the home context lies with someone other than the schoolchildren.

Figure 4.17 in reverse, looks at whether the participants ask anyone in their household to perform any of the sustainable behaviours discussed previously. The aim of this question was to explore if any of the participants were promoting sustainable behaviours in light of the specific aim of the Green-Schools programme to extend sustainable behaviours beyond the school gate and into homes and the wider community – possible occurrence of '*positive pester power*'.

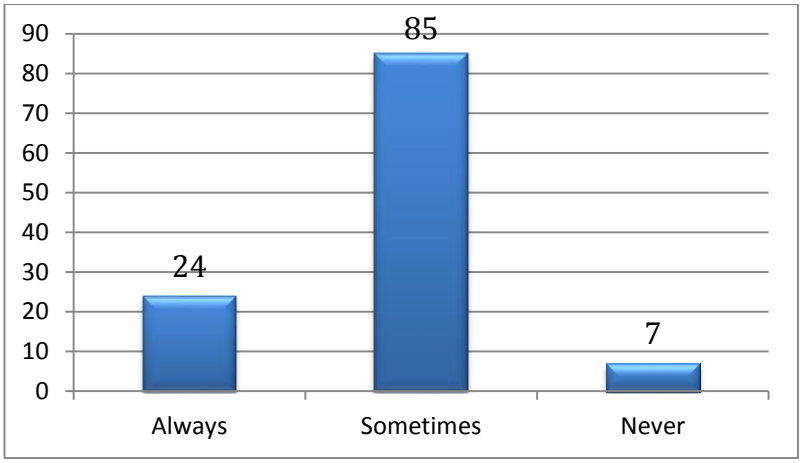
Figure 4.17 Do <u>you</u> ask anyone in your household to do any of the activities listed in Question 13?



The participants responded as follows: 58 participants (50% of sample) said they do ask others to partake in the sustainable behaviours listed while the other 58 participants (50% of sample) claim they do not ask or encourage others to behave sustainably. This is result suggests that while half of the schoolchildren are promoting sustainability, in equal measure, the other half of this sample are not promoting sustainable behaviour in the home context. This has important implications for both the achievement of the Green-Schools Programme objectives and the development of sustainable behaviours in society.

The final question relating to the promotion of sustainable practices by schoolchildren is illustrated in Figure 4.18. This question asks how often schoolchildren encourage others to be more environmentally friendly.

Figure 4.18 Do you encourage others (eg. family, friends, classmates) to be more environmentally friendly?



The participants responded as follows: 24 participants (21% of sample) always encourage others; 85 participants (73% of sample) sometimes encourage others; while 7 participants (6% of sample) never encourage others to be more environmentally friendly.

Regarding the Green-School children in the An Taisce survey, 11% *always* encourage others to be environmentally friendly, 72% *sometimes* encourage others, while 16% *never* encourage others (Green-Schools Research Report, 2001). Again here, we see the greatest change in the reduction of *never* answers which suggests that schoolchildren are perhaps becoming more proficient in communicating and encouraging others to be more sustainable. Perhaps this suggests that there is presence of '*positive pester power*' in Irish households/society?

4.2.5 Qualitative Survey Findings

Participants were given two opportunities within the survey to elaborate on their feelings, opinions or beliefs. The survey was structured in this way so as to garner a greater understanding on how schoolchildren conceptualise sustainability and its importance in their lives. The first question that attempts to explore the opinions of participants asks – '*Do you think it is important for your school to have a Green*

Flag? If yes, please state why you think so'. Figure 4.3 from the previous section illustrates that 115 of 116 schoolchildren surveyed agreed that a Green Flag is important for their school. Some of the reasons the participants believed the Green-Schools Programme was beneficial for their school are listed below. The quotes are listed under thematic headings of:

- Social appearance
- Practical application
- Consideration for the future

The second question in the survey that attempted to explore the opinions of participants asks – '*If there are any environmental issues or topics that you feel strongly about please mention them below*'. This question allowed participants to freely account any concerns or issues regarding the environment and sustainability. I encouraged participants to answer this question under free expression; they could account anything they felt needed to be recorded in relation to Green-Schools, the environment, their own behaviours, behaviours of their home or community, etc. These accounts are listed under the thematic headings of:

- Increased awareness
- Practical solutions

Firstly, the question of why participants believe the Green Flag is important for their school will be discussed followed by a discussion of the open-ended question regarding their general environmental concerns.

4.2.5.1 Importance of Green Flag Achievement

4.2.5.1.1 Social Appearance

The following quotes are in response to the question why it is important for the participants' schools to be a part of the Green-Schools programme. The first theme that was present in their responses was social appearance. Participants claim that the Green Flag is pivotal in '*showing others*' that they are responsible and the school is working towards sustainability. The following quotes illustrate this point:

> *"It is important because it shows that we support the environment and protect it"* (Participant QC4)

> "*It is important because we would know we were the most environmental school*" (Participant QBL8)

> "*Yes because it is good for the schools appearance and encourages children to help the environment*" (Participant QBL18)

> "*Yes because it would be a great promotion strategy for our school*" (Participant QG5)

4.2.5.1.2 Practical Application

A second theme in response to the question of why it is important their school has a Green Flag was the practical application of what they learn about the environment. Here participants displayed a sense of application to their learning and suggests ways in which their green behaviour may benefit society. The following quotes illustrate the practical application participants gave to what they learned from their Green Flag achievement:

> "*I answered yes because it makes the school more green and you learn how to save electricity and water*" (Participant QB1)

"*It is important because it shows how we conserve energy, save water and recycle*" (Participant QG8)

"*I think it is because we have to learn about where rubbish goes and how to protect the environment*" (Participant QS6)

"*I think it is important because we are saving money and polar bears*" (Participant QCTB3)

4.2.5.1.3 Consideration of the Future

The final theme that emerged from the question of why Green-Schools is important refers to the schoolchildren recognising the need to protect the environment for future generations. This theme differs to the other two as it highlights the participants' awareness of the '*bigger picture*' and how their school is contributing to a better future. The following quotes illustrate how the schoolchildren identify the future as an important recipient of their sustainable behaviour practices in the school:

"*Because it means that we're helping the environment which could help us in the future*" (Participant QBL11)

"*Because it shows that we as a community can make a difference for the future*" (Participant QB7)

"*I think a green flag is very important because it shows that we believe in a better future*" (Participant QCTB1)

4.2.5.2 Environmental Concerns/Interpretations

4.2.5.2.1 Increased Awareness

The final question in the survey was an open-ended question where participants were encouraged to account for any concerns or issues they felt needed to be highlighted.

This qualitative question allowed for greater depth in interpreting how schoolchildren understand and conceptualise sustainability issues. Many of the participants took this opportunity to showcase their environmental awareness and the need for others to become environmentally aware. The following quotes illustrate their awareness of sustainability and in some cases participants identify the need for others to also increase their awareness:

> "*I feel that most people don't clean their wrapper and used bottles up in public areas. More people should plug out their electronics when not using them. People should carpool, walk or take the bus for less pollution. Owners of pets should clean up their droppings and not to leave them for others. People shouldn't use nuclear power plants anymore because of pollution and use renewables more*" (Participant QC5)

> "*I think it would be nice to plant more trees. It was nice when we got a windmill and when we did the fundraiser for the green flag. I think we should encourage recycling even more and encourage walking or cycling to school. I think it would be really nice to use less electricity in school to help save lots of things such as polar icecaps*" (Participant QCTB1)

> "*Lake and river pollution especially after floods then all the pollution gets carried through the streets etc. and if it starts diseases for people and animals. I hate seeing people that don't care about other people and animals and still dump, when good people come to help. Their goodwill is wasted when people keep dumping waste*" (Participant QCTB6)

These quotes illustrate the acute awareness these schoolchildren have of the need to protect and conserve the environment. Many of the responses have a normative tone suggesting the need for behaviours to change.

4.2.5.2.2 Practical Solutions

In addition to showcasing their environmental awareness the schoolchildren were keen to suggest practical solutions to some basic environmental problems. The following quotes illustrate the participants' practical application of their pro-environmental education to everyday activities both within and outside of the school

context. These quotes further illustrate how schoolchildren conceptualise sustainability and may suggest that viewing sustainability in the everyday, ordinary practices of individuals, households and communities is a practical and real approach to understanding behaviour change:

> "*I think people should think about using so much electricity and recycling their rubbish. That when it is a sunny day, try to hang your clothes on a line in your back garden instead of wasting electricity with your dryer*" (Participant QC9)

> "*Since our school became part of the Green-Schools Programme I have learnt lots of ways to save the environment. How to reuse things like keys or scraps of paper and save water and electricity and how to travel eco-friendly and I hope that one day everyone will be doing this*" (Participant QB5)

> "*I learned always to turn the lights off when you are out of the room because this helps to save a lot of energy. It is also good to have short baths and showers because it wastes a lot of water to have long hot showers and baths*" (Participant QS5)

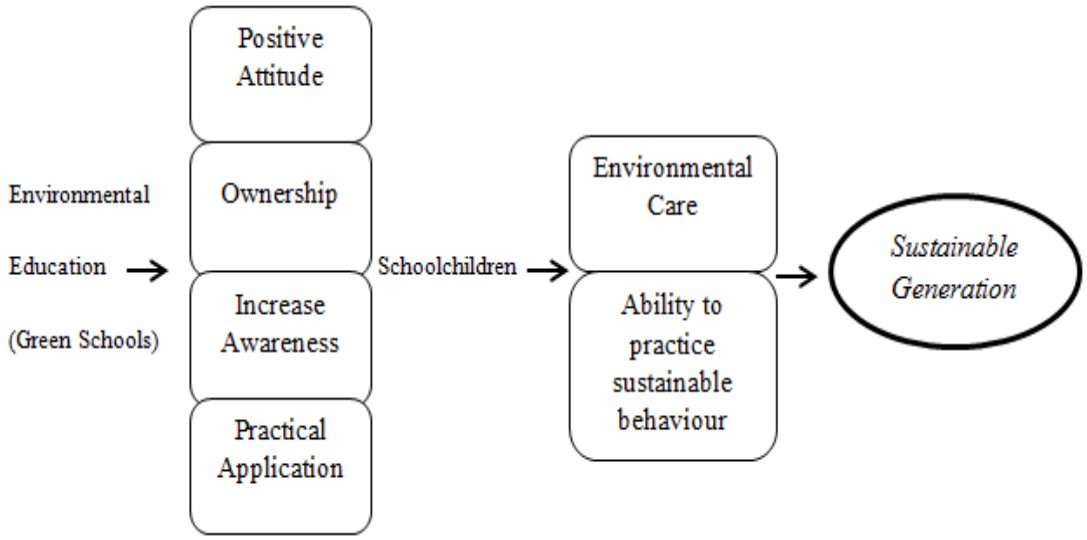
> "*To help the environment at home by closing doors, plugging out electrical objects, recycling, and composting. To help the environment outside my home by not dropping rubbish on the ground or in rivers, by not leaving a car running if not in use and by picking up rubbish that is thrown on the ground and then putting it in the bin*" (Participant QS12)

These quotes from participants demonstrate their knowledge and application of sustainable behaviours in everyday activities such as drying laundry, taking showers and efficient use of cars. These schoolchildren express the capability of practically applying their environmental awareness in everyday, ordinary practices. Whether they actually practice these activities in the home or community will be addressed in section 4.3 of this chapter which discusses behaviours in the home with the parents of some of these schoolchildren.

4.2.6 Synopsis of Survey Findings

The purpose of this survey was to explore how schoolchildren conceptualise sustainability and was also used as an access point to the parents of Green-School-going children. The results of the survey reveal that schoolchildren have an acute awareness of the need to protect the environment and display a promising account of how this awareness should be applied in everyday activities both within the school and around the home. Figure 4.19 illustrates the overarching findings from these surveys.

Figure 4.19 Survey Findings



Source: Author

The results of this survey highlight the importance of the Green-Schools programme in developing and nurturing green behaviours among schoolchildren. The findings have shown that environmental education has imparted a positive attitude; sense of ownership; increased awareness of the environment; and developed a practical application of learning among the schoolchildren that were surveyed as part of this

research. In a similar way, An Taisce's research in 2001 highlights that in contrast to students who are not exposed to environmental education, Green-School-going children are less likely to drop litter, more likely to participate in local environmental projects, and more likely to conserve water and energy (Green-Schools Research Report, 2001). The derivatives of the Green-Schools programme found in this study have resulted in environmental care and ability to behave sustainably among pupils of these schools. Interestingly, An Taisce maintains from their study that environmental awareness does not directly translate into sustainable behaviour practice (Green-Schools Research Report, 2001). The characteristics of Green-School-going children in this study indicate that there is potential for this educated generation to become the sustainable generation of the future. Whether these positive behaviours are practiced outside of the realm of this programme will be discussed in the following section.

4.3 Parent Interviews

This section will discuss the findings of 25 semi-structured, in-depth interviews with parents of Green-School children. These interviews were conducted with the main aim of understanding if, and how sustainable behaviour practices occur within the household. As all respondents were parents of Green-School children it was assumed that there was some awareness of the programme either from official reports from the school or verbal reports from their children. Indeed, all respondents were either previously aware of the credentials of the programme or were informed in part by their children of the pro-environmental activities that were taking place in the school. The structure of the interviews centred on the four main themes of the Green-Schools programme: waste management; energy efficiency; water conservation; and transport reduction. All respondents made comments that confirm their consciousness or awareness of the environmental debate and can thus be regarded as '*conscious consumers*' (Szmigin *et al*., 2009) for the purpose of this research. As conversation progressed, respondents also narrated ways in which they were environmentally conscious, irrespective of their children's activities in the school.

There were very few accounts of voluntary behaviour change due to overriding environmental concern. Only one respondent seemed truly driven by environmentally centred motivations. This respondent appeared for interview wearing a Fairtrade t-shirt, which was an initial indication of their strong beliefs. However, even this respondent quoted barriers to adopting a completely environmental-conscious lifestyle although some sustainable transport activity was occurring by her children:

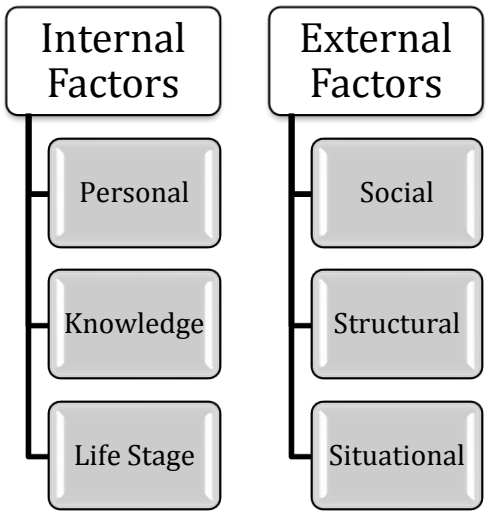
> **Participant S1:** "*I suppose we are one and a half miles from town and the children are stuck in everything so it's in-out, in-out, in-out…it could be ten times a day. And it kills me because number one it is money but number two its…ugh every time….and we have a seven-seater which is worse because that is so heavy on petrol as well. So that is the only bad thing we do in our house I think*"
>
> **Interviewer: Do any of your children have bikes?**
>
> **Participant S1:** "*Yes, they do. One came [to school] today on her bike*"

This respondent was the only one who appeared to be mostly ethical in her thoughts and behaviours yet still identified barriers to complete adoption. In a positive light regarding transport options, it appears that the next generation in this family does not solely rely on cars to travel to school. However, it appears, even though all respondents reported behaviours that can be deemed as environmentally conscious, the majority of respondents in this research attribute their sustainable behaviours to other factors, rather than voluntary change due to ethical attitudes or concern. Previous studies have shown that ethical intentions do not necessarily translate to ethical behaviours (Chatzidakis *et al*., 2006; Carrington *et al*., 2010; Eckhardt *et al*., 2010). This has contributed to the debate that the ethical consumer is a myth (Devinney *et al*., 2010; Eckhardt *et al*., 2010). Self-reported attitudes and intentions that have ethically-concerned undertones have displaced the anticipation of ethical consumer behaviour in the past (Young *et al*., 2010; Moraes *et al*., 2012). This study however, due in part to the fact that it looks at self-reported *behaviours* rather than *attitudes or intentions* regarding ones behaviour, indicates that in fact consumers participate in ethically perceived behaviours but when asked about these behaviours they quote various facilitating factors other than ethical concern. This suggests that perhaps these consumers are positively participating in sustainable behaviours but

their participation is *passive* rather than *active*. This contributes to the debate on how to encourage sustained behaviour change. Perhaps relying on ethical concern for the environment and willing consumers to act on this concern is distorted. Perhaps consumers are *passively* being sustainable but are not motivated by ethical concern for the environment. This passive behaviour will be discussed further in Chapter 5.

The following section will discuss these factors (See Figure 4.20) which I have categorised as internal (personal; knowledge; and life-stage) and external (social; structural; situational) factors. These factors contribute to the development of sustainable behaviour practices in the home.

Figure 4.20 Facilitating Factors of Sustainable Behaviour



4.3.1 Internal Factors

The 25 semi-structured interviews with parents/guardians of Green-School-going children revealed that internal factors have an influence on the behaviours of individuals. Following thematic analysis, three main internal factors materialised.

These factors are (1) personal (2) knowledge and (3) life stage (See Figure 4.21). Personal factors include: attitude; personal preferences/beliefs; and ownership. Knowledge refers to: ethical awareness; and media influence. Life stage refers to: generational differences; and childhood influence. Previous studies have explored the influence of both attitude (Ajzen and Fishbein, 1980; Freestone and McGoldrick, 2008) and awareness (Carrigan and Attalla, 2001; Oates *et al*., 2008) in the quest of understanding consumer behaviour in a pro-environmental context. The following section will discuss in further detail how each of these internal factors facilitates the sustainable behaviour of households in this study.

Figure 4.21 Internal Factors shaping sustainable behaviour

4.3.1.1 Personal

Personal refers to the attitudes, personal preferences and sense of ownership of respondents in relation to pro-environmental behaviours. The influence of attitudes on behaviour has resulted in a lengthy debate on whether attitudes can be a marker for intentions or behaviours (Carrigan and Attalla, 2001; Chatzidakis *et al*., 2006; Carrington *et al*., 2010; Bray *et al*., 2011). While attitudes were identified in this study, they are not attributed the same weight that has been previously credited in the literature. Attitudes of respondents were quite strong in explaining their rationale for non-participation, rather than participation, of certain sustainable behaviours such as

composting. Some subthemes of personal preferences/beliefs include: waste aversion; self-deprecation; and fears. Ownership was quite apparent among respondents in relation to their role or duty in '*doing their part*'. These three subsections of '*Personal*' will be discussed separately to allow for greater depth of understanding.

4.3.1.1.1 Attitude

Attitudes have formed a large part of the literature on sustainable consumption (Auger and Devinney, 2007; Moraes *et al*., 2012). Perceptions on the concept of sustainability were discussed by some participants as a duty rather than a decision to behave ethically:

> "*I see it [recycling] as a civic duty rather than an optional extra*" (Participant B2)

There were some negative responses to government strategies that deal with sustainability. Resistance to legislation and charges form part of the attitudes of participants but several participants discuss this resistance in a similar fashion; ultimately attitudes seem to be passive in nature:

> "*I don't think that legislation and charges are always the way to go. Sometimes it is just too much for people and people don't like to think that they are forced into things either, that is just human nature…but sometimes I guess we just have to be*" (Participant CB1)

Respondents had some negative views on the imminent water charges but overall attitudes towards the charge were passive. Respondents felt that this charge was primarily a revenue generating tax but also felt that there was widespread abuse of water in many households and this may be a way to force consciousness on consumers with the result being more sustainable water use. Attitudes to water conservation seemed to change over time with respondents claiming that they have become more conscious of their water use. One participant recalled a situation

during winter months where their water levels were low due to snow and freezing weather conditions. Their water use changed over this period as they became more aware of the scarcity of water:

> **Participant G3**: "*Somebody at work told me put a 7up bottle into the cistern that that would reduce the water use a bit so we did that as well but, I took it out the minute the water came back…straight away, the minute the water came back I took it out.*
>
> **Interviewer**: **Can you tell me the reasons you did that?**
>
> **Participant G3**: "*Because I felt that you weren't getting enough water to flush. Whereas I feel that if I had the loos with the two buttons, because my mum and my sister has those, and we do obey it and I feel that there is enough water to clean but with the 7up bottle I just felt that there wasn't. I am desperate. You learn a lot about yourself in times of crisis*"

Although consciousness of water use was raised in this instance, it was only temporary and occurred under extreme conditions. This sustainable use of water was not sustained. Therefore, although attitudes to water conservation may be positive and active, this view may not be sustained over time and may require structural change ("*loos with two buttons*"). Another respondent recalls how one environmental concern may conflict with another, thus altering attitudes and possibly behaviours in the future:

> "*You know what I think about as well, I see my teenagers trying to wash out the shampoo bottles the odd time and they give up because it is so hard to get rid of all the suds and then when they bring in the water charges is that going to stop us from washing things out…I don't know. If I am going to waste water washing out all the cans and plastics then am I really going to bother…is it going to incur a bigger cost to me at the end of the day…and I can see that people will say 'ah to hell with this, I am not wasting this water' and just throw it into the refuse. That's how I would think…*" (Participant CB5)

With further probing this participant revealed additional reflective thoughts on the conflicting nature of two sustainable behaviours of waste management and water conservation. I asked the respondent to tell me how she feels about these two behaviours of recycling and saving water:

> *"Its counterproductive really…turn on the tap to wash out an empty milk carton…how many litres of water am I using to wash out that carton of milk…I have no idea. That is a question I would ask."* (Participant CB5)

Firstly acknowledging that this is a perceived behaviour response in the future and not a report of current behaviours, this response has potential implications for the continuity of one sustainable practice (recycling) given the uptake of another sustainable practice (water conservation). There is a contradiction of behaviours in this situation where being '*good*' at recycling (washing out all plastics) results in being '*bad*' or unsustainable with regards to water use (using lots of water to wash plastics). This respondent seems to struggle to make sense of practicing both these behaviours concurrently. Potential frustration emerges in this situation; being a dutiful recycler will result in a monetary cost for the household once water charges are introduced. If one competently recycles their waste, ensuring that all plastics are clean prior to disposal, there will be monetary implications. It seems, from this respondents perspective, that one sustainable behaviour (recycling) will perhaps be sacrificed in light of a strong desire (albeit motivated by monetary implications) to practice another sustainable behaviour (water conservation). This has important implications for understanding behaviour practices in the household, and in particular, how one practice may have implications for another.

It is important to note here that at the time of interview there was uncertainty whether there would be a standard rate charge for water or whether water would be metered. At present, water charges are being rolled out across Ireland as a standard rate up until all water meters are installed. At this point, water use will implicate a direct usage-cost to the household. The views presented in the above quotes raises a very important question – do/will sustainable practices in the home come into conflict with each other? And if so, what implications does this have for safeguarding several sustainable behaviours being practiced by the household? It is suggested here that this household will practice water conservation at the expense of recycling practices. Going forward, this is an area of real concern.

This also contributes to Peattie's (1999) earlier contention that each transaction should be treated differently as consumers are not consistent in their behaviours. McDonald *et al*. (2009) contend that even if a consumer is green in one aspect of their consumption, it does not necessarily indicate that they are consistently green in all other consumption contexts and this study supports this contention. However, acknowledging that it is beneficial to look at each behaviour practice individually, the discussion presented above on the interconnectedness of recycling and water conservation practices suggests that we need to consider behaviour practices alongside each other, as one behaviour may have implications for another behaviour. Therefore, studying behaviours from a practice approach needs to acknowledge that an actor may forego one behaviour in light of another.

Attitudes found in this research predominantly relate to environmentally-led legislation and governance rather than personally driven attitudes towards the sustainability discourse. The attitudes of respondents seem to be passive in nature due to their reliance on legislation rather than informed ideals of sustainability. These attitudes differ greatly to ones presented in the literature on ethical consumers (Leonard-Barton, 1981; Roberts, 1995; Straughan and Roberts, 1999; Harrison *et al*., 2005; McDonald *et al*., 2006) and despite the criticism of the use on attitudes as a guide to behaviour (Devinney *et al.*, 2010) it is important to note here the significance of these passive attitudes and the possible link to legislation as a way of increasing sustainable behaviours of the general population.

4.3.1.1.2 Personal Preference/Beliefs

Personal preferences/beliefs refer to the responses that generally started with "*well, personally, I…*" These include rationales for action or inaction and portray personal preferences regardless of environmental concern. Some of these statements include:

> "*I am just that way. I am a scientist*" (Participant S1)

And:

> "*I always prefer it out of a mug as against those paper cups. Now whether or not that stands up environmentally as I know it has to go into a dishwasher and so on but it is purely a personal preference*" (Participant B3)

These are statements that reflect their own personal reasons or beliefs about why they act in a particular way. Some subthemes that emerge within these statements include waste aversion:

> "*I really don't like waste and I don't think its meanness – it's not that. I just hate waste*" (Participant C2)

Several participants refer to their competent recycling activities or composting of food reflecting their need to reduce their creation of waste. Several of these respondents quoted that perhaps this '*need*' to avoid waste creation stems from their childhood:

> "*Maybe because I grew up in an era where there wasn't a lot of everything in the house*" (Participant C2)

Respondents therefore, seem to battle their need to reduce their waste due to inherent patterns of behaviour that lend themselves to the reduction of waste.

Others deny the opportunity of establishing a greater sense of responsibility of their actions due to self-doubt. This self-deprecating tone was evident from one male respondent:

> "*My wife is much better at it [recycling] than I am*" (Participant B1)

And one female:

> "*My husband is a big fan of recycling, a big fan – it is probably him you should have spoken to really*" (Participant BL4)

Another respondent claims that although she believes she is behaving in an environmentally-friendly manner she compares her effort negatively in comparison to others:

> "*I do really try so I think I am pretty good but I know I am not brilliant because I hear all these women with their compost heaps*" (Participant CTB2)

An overriding rationale for non-participation in compost heaps is a fear of rodents. Although intentions may be positive the likelihood of action is weak for many, including this particular respondent and persists even in the event of an alternative system:

> **Participant G1**: "*I suppose that is because of my whole fear of my furry friends. I don't think I would, with all the best intentions in the world, ever see myself doing it* [composting]"
>
> **Interviewer**: **If there was a service whereby the compost might be collected with the regular waste disposal, would you be more inclined to compost then?**
>
> **Participant G1**: "*No, I would probably still have the same fear that it would attract unwanted friends*"

Personal beliefs therefore seem to have an effect on reported behaviours. Personal preference, self-doubt, self-image, and fear are among the subthemes that arose from this segment of internal factors that contribute to the behaviour practices of participants.

4.3.1.1.3 Ownership

Respondents were very conscious of the concept of ownership or sense of responsibility in relation to their own personal behaviours. Some respondents recalled their own sense of responsibility and how they satisfy their need to be

responsible while others recognised the need for corporations or governments to have a greater sense of responsibility. Personal responsibility or ownership arose from stimuli such as: love for children; dominant figure in the household; amenities; and excess packaging. One respondent portrays his sense of frustration with excess packaging:

> "*Increasingly…and it's the source of a very tiny annoyance, because it is waste. You know…you are getting this package for this product and then you have the responsibility of disposing of the package, which is all wrong. The only purpose for packaging…the only valid purpose is to protect what's inside but for most things you don't need what they are giving you*" (Participant B1)

The presence of recycling amenities has had an impact on the sense of responsibility among respondents. The physical presence of recycling collection may have spurred some consumers to reconsider their waste disposal:

> "*I think I have changed…I have changed definitely. I guess we are just a lot more aware now and since the wheelie bins I think that has really gotten people tuned in. Before I would say I don't care what happens to the environment or the ozone layer or anything like that but that was just kind of ignorance really but when you sit down then and you think about it…*" (Participant C2)

Ownership of their behaviour or duties driven by concern for their children was a common theme for many interviewed. For one respondent, although she is not sure exactly what impact her behaviour is having on the environment, believes that she has a responsibility to the next generation and that determines her behaviour:

> "*I am handing my little space over to the next generation so why should I be the one to increase the ozone layer or putting a hole in the ozone layer or whatever I am doing…so that is why I do it*" (Participant CB1)

Participants, being parents/guardians, also described their role as one of the dominant figure in the household. Their role as a parent implies responsibility in its

very nature. Parents, as dominant figures in the household, tend to take sole responsibility for domestic activities such as recycling and saving energy. In this research, parents admit to taking complete ownership of many household activities:

> "*I never really get them to wash out the plastics…I do that myself…because I just find it easier that way*" (Participant CTB3)
>
> "*It is every mother…I mean I empty the lunch boxes because they would be in the school bag for a week otherwise*" (Participant CB3)

Interestingly, the children of these respondents attend a Green-School and are thus aware of how their own behaviours can be environmentally-friendly and actively practice pro-environmental behaviour in school. However, in this case, the parents taking complete ownership ('*I do that myself…because I just find it easier that way*') may in fact be denying these children from showcasing or practicing their ability to be environmentally-friendly in the home context. The ownership of household activities that these parents claim, may prevent those children from expanding ownership and ability to behave sustainably beyond the school context.

4.3.1.2 Knowledge

The use of information in encouraging ethical behaviour has been widely discussed (McDonald *et al*., 2006; Oates *et al*., 2008; Bray *et al*., 2011; McDonald *et al*., 2012). The '*conscious consumers*' in this study do not principally search for information but rather gain information from family, friends or mainstream media. In addition, respondents reported becoming more aware and recognising information about the environment due to legislation or waste collection standards imposed on them. Examples here include respondents' knowledge and awareness of the use of plastic following the introduction of the plastic bag levy which was introduced in Ireland in 2002. Interestingly, although respondents were aware and had knowledge on the impact humans were having on the environment and were aware of the sustainable activities that may help reduce the impact on the environment, they struggled to conform entirely to these behaviours in their everyday lives. Awareness or knowledge does not necessarily encourage sustainable behaviour practices among

participants of this study. Individuals were unwilling, or otherwise, to voluntarily change all their everyday behaviours to behaviour that is pro-environmental.

Participants in this study claim to have mainly changed their behaviour only where information gained was due to forced, legislative or policy change. Individuals or households changed their behaviours when their waste disposal companies required them to separate their rubbish or a behaviour changed when a cost was implemented on a certain unsustainable item or behaviour (e.g. plastic bag levy). Knowledge, when combined with certain external factors, which will be discussed in section 4.3.2 of this chapter, may have the potential to increase sustainable behaviours. The following section will discuss the second dimension of the three internal factors that shape sustainable behaviours among participants in this study. Knowledge refers to ethical awareness and media influence.

4.3.1.2.1 Ethical Awareness

The respondents in this study report that even though they are aware that certain activities impact negatively on the environment they are not willing to change their ways. This may suggest that consumers are trying to balance their environmental awareness with the fact that they live in a '*consumer society*' (Peattie, 2009). Some consumers are unwilling to negotiate their behaviours:

> "*I know for a fact that if I had another baby in the morning I wouldn't be washing the nappies, I would still buy them…even though I know how bad it is for the environment*" (Participant C1)

> "*I think now that everything now is disposable and nothing is repaired – that bugs me a bit. Even though I would be that way inclined myself…if the hoover packed up tomorrow I don't think I would be going to the hoover shop to get it fixed [laughs] I would just buy another one*" (Participant C2)

> "*I am no saint. Sometimes I would say 'oh god, I am not washing that' and I would just tip it into the bin but I mean everything used to go into the waste but now my recycling bin is always full, always*" (Participant CTB1)

The intentions discussed here by respondents potentially have a negative impact on the environment and the respondents are aware of these consequences. Nonetheless, they seem to be unwilling to change their behaviours. It appears that the use of knowledge in these circumstances does not impact positively on behaviour. Thus, information or awareness does not independently result in improved sustainability among consumers in this study. As one participant aptly stated:

> "*Disastrous…absolutely disastrous…we know what to do but we are not doing it. It is like Weight Watchers. We know what to do*" (Participant G3)

Although knowledge has increased awareness it hasn't necessarily increased sustainable behaviours for this participant. The acknowledgment that their behaviour is '*disastrous*' illustrates their awareness of the need to protect the environment and the impact their behaviours may be having but they freely admit that transfer from knowledge into actual behaviour is easier said than done.

Legislation and government initiatives seem to have a positive effect on both consciousness and behaviours of the participants in this study. Respondents quoted becoming more aware of the unnecessary use of plastic following the plastic bag levy introduction in Ireland, especially when they go abroad to countries that do not have a plastic bag levy. There is also an overwhelmingly positive response to the levy in Ireland describing it as a necessity in raising awareness and changing behaviours of the population:

> "*They are doing it because they have to do it. But because it was forced on them, it is now after educating them and making them more aware and to think okay – why do I have to separate all my rubbish…so then maybe they think about it more*" (Participant C2)

> "*There is a lot of waste, I know, even just in my house and if you add up all the houses it must just be scandalous because there are people in this world that don't have clean water and we are just letting it run down the sink. And really the only way to change that, and I don't really agree with the charges, but that will enforce changes. It is like the recycling, once you start taking out the bin for recycling it is just…the bin is there so you just may as well use it. So you just adapt and I think they are brilliant now I think it is fantastic that amount of stuff that is reused now that used to go to landfill*" (Participant CTB1)

Overall, it appears that regulatory change both through legislation and private company procedures to some extent regulates participants' behaviour and has an overall positive effect on their awareness. Forced awareness in one aspect of behaviour may raise consciousness in other behaviours. Although there is a negative attitude to the imminent water charge this participant suggests that overall, if it results in behaviour change then it is imperative that it is implemented. This may suggest a major role that legislators may have over not only the actual behaviours of households but the progression of sustainability through the steady change of mind-sets that recognise the importance of behaviour change of everyday practices in and around the home.

4.3.1.2.2 Media Influence

For marketing purposes, it is central to note the media references mentioned which had particular impacts on behaviours. Interestingly, media was not mentioned regularly throughout the interviews but rather referred to by some participants as an information source easily available to them such as the radio. Media served to inform participants on topical discussions on environmental issues but does not seem to have a direct influence on actual behaviours:

> "*Yes, like Barney's song 'never leave the water flush when you are brushing your teeth…' yes we sing the song but we still leave the water run when we are brushing our teeth!*" (Participant G3)

A children's programme instils a memorable tune in the minds of those in the household but it has not had any impact on their actual behaviour. Therefore,

awareness has increased but has not had a positive impact on behaviour. The only other media source that respondents cited was radio:

> "*It was even on the radio again this morning because there is a water tax looming and a property tax looming and there are second house charges and the household charges*" (Participant BL1)

> "*I would never take any notice until recently when I heard them talking about it on the radio and they were speaking in relation to quantities in a particular type of container and it might be for example only two thirds full and then they also talked about the possibility that we don't need that type of packaging at all*" (Participant BL2)

Again, this media influence has assisted in raising awareness of environmental issues but it is not clear if this information will impact actual behaviours. However, information is an important tool in progressing awareness of sustainability. It appears in this study that media is not the greatest source of information for consumers and neither does it act as a catalyst for behaviour change. It has however, helped to increase the awareness of environmental issues to some extent. Respondents in this study report that knowledge of sustainability increases their consciousness but does not seem to necessarily influence their everyday behaviours.

4.3.1.3 Life Stage

Generational differences were widely discussed by participants both in terms of how they perceive their children's attitudes and behaviours towards sustainability and how they view their own attitudes and behaviours. Participants perceived their children's knowledge and behaviours regarding sustainability as being somewhat of a '*second nature*' response whereas they perceive their own upbringing and the lives of their parents in contrast to that of their children. It was implied that older generations find it more difficult to understand the concept of recycling and other sustainable activities. However, interestingly, participants acknowledge that past generations had less external forces to contend with, less packaging and less consumables. Therefore, behaviours were perceived in that era as being far more

sustainable than today. There were several reminiscing statements about the past both in terms of how there weren't as many materialistic items to contend with and how they managed their waste in ways that may now be perceived as unsuitable. One participant recalled how when she was a child they used to burn all their rubbish and that was perceived at the time as a productive way of disposing of waste. Participants acknowledge that all these activities in the past were constructed within the boundaries of the social norms of the time.

There are two subsections within this theme: generational differences; and childhood influence. Firstly, children are positioned as adapters of sustainable behaviours, such as recycling, when discussed in comparison to older generations. Secondly, recollections of past lifestyles are perceived by participants as being naturally sustainable and governed by social norms.

4.3.1.3.1 Generational Differences

Participants perceived their children as possessing a greater understanding of green initiatives as it forms part of their education system and social norm:

> "*I think that my kids will grow up being more aware of the environment than I was certainly because I think that they are getting little bits of it from everywhere*" (Participant CB2)

There is a perception that younger children in families have a greater awareness in comparison to teenagers or young adults. Several participants claimed that their teenagers or young adults would not be as conscious of the need to recycle in the home but the younger, school-going children display a greater awareness of sustainable behaviours:

> "*My eldest is 22 and my youngest is 12 and you are looking at two totally different people in those 10 years and I am not saying that she [22 year old] won't recycle or anything like that – she would, but there is no way she would have been as educated as he [12 year old] would be on it*" (Participant G2)

And another respondent quotes:

> "*teenage hormones are the biggest barrier*" (Participant G3)

From these claims it seems that a particular generation is perceived to be more environmentally aware due to their education system – attending a Green-School – and their social environment which, due to several factors, enables sustainable behaviours. Whether or not this is true in the eyes of the children, or can be sustained as they move through life-stages is not established. There is some evidence from parents that teenagers in the home, regardless of whether they attend a Green-School at second level, do not comply well with environmentally-friendly efforts such as energy efficiency, recycling or water conservation. However, this was not developed further in this study.

4.3.1.3.2 Childhood Influence

Several participants recalled their childhood behaviours and the lack of materialism which enabled them to naturally be more sustainable. This was extended to consider their parents era also. Materialistic items were simply not available and thus waste was not the environmental issue that it is today:

> "*I mean years ago, when you think of it – they did it years ago. Like I think it's very fashionable now to be environmentally-friendly but years ago all our mothers and grandmothers did it*" (Participant C1)

As discussed in Chapter 2, focus within the sustainability literature has been to raise awareness of dwindling natural resources and progress sustainable consumption (Lenard-Barton, 1981; Straughan and Roberts, 1999; McDonald *et al*., 2006; Peattie, 2009; Szmigin *et al*., 2009; Prothero *et al*., 2010). Education systems are designed to educate young children on the impact their consumption and activities have on the planet (Uzzell, 1999; Boeve-de Pauw and Van Petegem, 2011; Walshe, 2013). Participants in this study perceive their children as having more information on sustainability and being more likely to act in a sustainable manner. Interestingly,

when asked further about their behavioural practices, respondents claim that even in their lifetime they themselves have been far more sustainable than current day generations. Although they perceive their children as having more information on how to be sustainable, they have experienced actual sustainability in their own childhood. Some of the factors that are perceived to have influenced this sustainability in the past include: social norms; availability; cost; and lack of services:

> "*There was no proliferation of plastic in my day […] most of that generation, the one before mine, were all self-sufficient. They grew their own potatoes and carrots. My mother had her own carrots, celery, vegetable marrow, and cabbage…everything…so everything that we would have to go out to buy in the local supermarket they had it themselves*" (Participant CTB5)

> "*Even now with furniture, if we don't like the colour of the couch now we will change it but I suppose they didn't have the money either back then and things weren't as cheap either, in relative terms. And my mother wouldn't have a credit card. She still wouldn't have a credit card. She just wouldn't understand the workings of it really. Before you either paid for it and could afford it or else you did without it. So that might have made it easier waste wise as well*" (Participant G3)

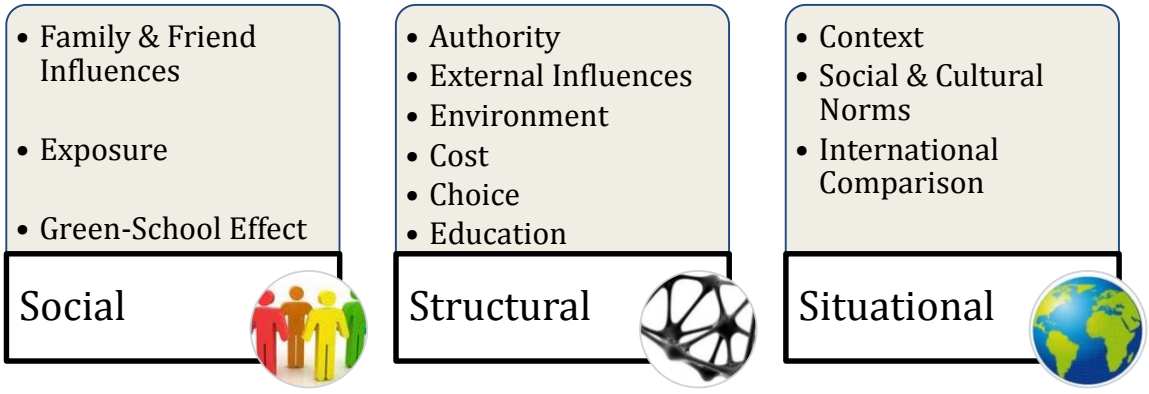
Participants recall how their parents would have dealt with waste management and accumulation of materialistic items and the factors that bound those behaviours. The introduction of a consumerist society would have coincided with adulthood for the majority of participants perhaps influencing their behaviours with regards consumption. It would seem from this research that perceived generational differences may influence participants understanding and likelihood of adopting sustainable lifestyles.

4.3.2 External Factors

In addition to internal factors contributing to sustainable behaviours among the respondents, external factors were also identified. Participants of this study told of various scenarios where external factors have influenced their actions and behaviours. Following thematic analysis three main external factors were identified. These factors are (1) social (2) structural and (3) situational. As illustrated in Figure 4.22 social factors refers to the social influence of family and friends in participants'

immediate environment and their exposure to environmentally-friendly options through references and other sources. Structural factors refer to authority; external influences; education; environment; choice and cost. Situational refers to the situational factors that influence behaviour namely; context; social and cultural norms; and international comparison. This section will discuss in more detail each of these external factors that have developed the behaviour practices of households in this study.

Figure 4.22 External factors shaping sustainable behaviours



4.3.2.1 Social

Social factors are those factors concerned with social influence from family and friends within participants close environment. They also include exposure to the concept of sustainable behaviours from various reference sources including verbal discussion of sustainable behaviours from Green-School-going children in the home. Behaviours may be altered due to advice or actions of others that have a positive environmental impact. The proliferation of sustainable behaviours though social interactions have been discussed in previous studies (Duvall and Zint, 2007; Watne and Brennan, 2011). Respondents reported how the action of others with regards to the environment has had an effect on their awareness of sustainability.

4.3.2.1.1 Family and Friend Influences

Participants discussed their social environment regularly throughout the interviews and in particular the role that others have had on their level of awareness. One participant discusses a chain reaction in relation to their practice of sustainable activities:

> "*I've been doing it for years…always would have done it because of what my friend had told me. Her partner at the time would have been very environmentally friendly and I would have just gotten into it because I was living with her*" (Participant C1)

Here it is quite evident how this participant believes she developed awareness and practice of sustainable behaviours. Other social scenarios unfold as to how behaviour patterns have been adopted:

> "*My husband's mother is very keen on all that so she would be saying to me 'don't do that – wash it out, flatten it, etc*.'" (Participant CB4)

This participant improved her recycling habits through the informed influence of her mother-in-law. Others learned from their children:

> "*You get a much better feeling when you let your kids see that you are buying into it and see them buy into it and to see them as agents of change in a household because nine times out of ten we are telling them what to do, this is a situation where it gave them an opportunity to say 'listen this is what we are doing…what are you doing?*'" (Participant B3)

This particular participant perceived children in the household as potential agents of change. This social influence is important and will be discussed in more detail later in relation to the Green-Schools effect (Section 4.3.2.1.3). Although some of these activities are situated within the home environment there are also accounts of learning from family outside of the home context:

> "*The kids would be very aware because when we go up home we stay with my sister and her husband is all into that – growing his own veg and potatoes – so they would be out helping to water them and harvest the green beans and they have hens, so they love helping him*" (Participant CTB1)

Participants also recollect occasions where they tried to influence their family and friends behaviour:

> "*I live near the recycling centre and when it first opened there was this horrible cat that came up to my house so I used to give-out to people for not washing out their recycling*" (Participant CTB6)

This social influence is important to note and links also in part to structural factors such as authority which will be discussed in section 4.3.2.2. Here, this participant is verbally interacting with family and friends by way of trying to change their behaviour, due primarily to an external factor ("*horrible cat*") that was directly impacting her home environment. If successful, the net result of this type of social interaction with family and friends is cleaner recyclables being delivered to the recycling centre.

4.3.2.1.2 Exposure

Exposure is similar to social interactions with family and friends but is more reflective in nature and considers how respondents were introduced to sustainable concepts such as through a book club or work situations. Participants recall certain situations that have had an impact of their perceptions:

> "*I was thinking I was doing great as I was filing my recycling bin, overflowing…that I was doing great things for the environment, or so I thought until I read that book [No Impact Man]*" (Participant C1)

This particular respondent recalls a learning curve experienced by being exposed to a book from her local book club. Exposure to environmental campaigns in a work environment were also evident:

> **Participant G2:** "*Their [large supermarket chain] waste control is very good. And in relation to the environment the lights go on and off when you go into a room, the lights go on and off automatically – they are fierce into their carbon footprint*"
>
> **Interviewer: Okay, can you tell me about your energy use at home?**
>
> **Participant G2:** "*I would be desperate…I would be very inclined to plug things out or turn the switch off at least*"

This participant referred to her energy saving as being very much in existence in the home. Recalling exposure to environmental awareness outside of the home context (at work) may aid in increasing consciousness of the practical behaviours that can make a difference and that may lead to a lower carbon footprint. Another participant became more involved in an environmental incentive at work when she was asked to join an environmental committee and participate in environmental awareness raising activities:

> "*We are organising something in work – it is Environmental Week, every year we do one. And last year I organised to have electric cars from Kearys and it was a great success*" (Participant BL3)

One participant had developed a heightened awareness about how other countries feel about sustainability due to family connections:

> "*China is coming at it from a different perspective. I don't know if you know but my daughter is Chinese…she is adopted from China so we have been to China several times so we have seen some of it. But China is at the other end of the scale from the US, where they have a huge population, they have growing living standards, they are growing their economic activity and their attitude largely is…well if you burn oil and all this sort of thing don't tell us to stop doing it…we need, deserve and are entitled to the same standard of living than anybody else on the planet…* (Participant B1)

This participant reported how he has travelled several times to China and has been exposed to their mentality and how they feel about sustainability. This respondent perceives the achievement of global sustainable consumption as something that will be difficult to attain, due in part to the mind-set of countries that have not yet

enjoyed the level of materialism that Western countries have, such as the U.S.A. This in turn has broadened his awareness of issues facing the mobility of the sustainability movement on a global scale.

This reflective recount of how participants were first introduced to sustainability concepts or how certain situations enabled them to become more aware of their own behaviours is important. The exposure to sustainable consumption practices at work such as automatic lights and environmental week heightened the knowledge of these respondents of how individuals can become more sustainable. It was not established in the course of the interview if these practices were adopted by these individuals in their own home but this exposure increased their awareness of sustainable behaviours and issues.

4.3.2.1.3 Green-Schools Effect

One way in which the Western world has begun to combat over consumption is by introducing environmental education to encourage and promote sustainability (Duvall and Zint, 2007; Dunlap, 2008; Satchwell, 2013; Walshe, 2013; Lee, 2014). Green/Eco-Schools strive to educate and influence the behaviours of schoolchildren, parents and the wider community (Green-Schools Ireland, 2015). As all participants in this study were parents of Green-School children, their exposure to this programme has identified some interesting results. Respondents had very limited knowledge on the specifics of the Green-Schools Programme with awareness coming mainly from their child verbally discussing their school activities, while others claimed their only knowledge of the programme was a result of the letter I had sent to parents as recruitment for this research:

> "*To be honest I know very, very little about it in a since that I wouldn't have read any documentation about it. All I do know is that it is there. What I would know would have come directly from my kids and we would also see the green flag as we pass the school every day. So in terms of criteria or what it actually means, how it is maintained, the underlying criteria judging whether or not it is retained – I have absolutely no idea*" (Participant B3)

"*The kids are obviously involved but the parents don't seem to be involved. So I know very little about it really*" (Participant CTB1)

However, although some respondents claim they have very little awareness or knowledge about the specifics of the programme there seems to be some transfer of knowledge and actual behaviours by the children from the school to the home context. Respondents emitted an overall positive attitude regarding the Green-Schools programme as an idea, and acknowledged that their children have a greater awareness of environmental concerns:

"*The kids really loved it. It got into them and they enjoyed it and it was a topic of conversation when they came home so in that regard what it had done was it positioned green initiatives very positively in their minds and when you see your kids enthusiasm for something it really does put it up to you. Because if a child comes home enthusiastic you can't dismiss it…that's horrible and would be an awful thing to do. So you find yourself buying into it*" (Participant B3)

"*I would certainly say that if we didn't have the children in the house we would be far less aware of it ourselves and yet it has become the habit for us now as well. It certainly has…pushed upwards as it were from the children*" (Participant B2)

"*I think it is a fantastic idea. I think that it gives them a sense of responsibility and it gives them a sense of 'this is my rubbish, I caused it, I created it, it doesn't end there, I am responsible for it'. I think it is wonderful*" (Participant G3)

There were some mixed reports on the transference of sustainable behaviours across contexts (from school to home). There were some reports of children taking the role of informant and opinion leader. There were also reports of children acting in an authoritative manner in the household regarding recycling and the use of energy and water. This can be perceived as a form of '*positive pester power*'. It is unclear as to whether this influence had a sustained effect on the household and behaviours involved. However, again these involvements from children in the household were met with positive regard from parents:

"*My son would turn the tap off when he is brushing his teeth and I wouldn't necessarily always do that now. I would have to think about it because I would have run the tap, rinsed my brush under it and then walk off to brush my teeth and I would leave the tap running while I was doing that. And my son would have made me more aware by saying 'Mum, did you just leave that tap running?!*'" (Participant BL2)

"*She would be bringing home messages about recycling stuff and we would get a little lecture now and again…you are supposed to this and you are supposed to do that*" (Participant B1)

"*They would often put signs up underneath them [light switch] saying 'please switch this off' so they would certainly have an awareness of the use of energy, which comes from school I'd say. It is certainly not from me anyway, so it must be school*" (Participant CTB4)

However, there were other accounts that children did not discuss any environmental concern at home and neither do they actively display behaviour that conforms to environmental consciousness. This leads to the discussion of whether or not the Green-Schools is successful in its target of sustained behaviour change in the mind of the child and affecting the behaviours of parents and the wider community. Recalling a question in the survey that was administered to the schoolchildren asked if they ever encouraged others at home to perform sustainable behaviours (Figure 4.17). Results illustrate that only half of the schoolchildren claim they try to encourage others which may explain the lack of consistency or regularity of the behaviours of children in the home, as reported by some parents. There are signals here that the environmentally conscious behaviour is not always sustained across contexts. Respondents were aware of the ethical behaviours that their children could partake in but refuse to, or otherwise, in the household context:

"*The kids don't tend to say that much about it*" (Participant G1)

"*Two of mine have at some stage been on the Green-Schools committee and when they are on that there is even a greater awareness. What I don't understand then is*

that it doesn't relate at home because none of them can turn off a light" (Participant CB4)

"*You can't get them into the shower and then when you get them in, you can't get them out. So they are not conscious at all about the amount of water they are using. The taps when they are brushing their teeth are left running…*" (Participant CTB1)

Overall, the aim of the Green-Schools programme, of educating children on the required knowledge and practical behaviour change necessary to live a sustainable lifestyle, has been met with positive attitudes from the interviewed parents. Whether these positive attitudes have an effect on the overall sustainable behaviours of the household is unclear. There seems to be greater awareness and consciousness of the practical steps that can be taken in leading a more sustainably conscious lifestyle due, in part, to the verbal and physical actions of the children in the home. However, there is a perception by some parents that their children are aware of what they may do to conserve water or save energy but simply do not apply those concepts at home.

This research suggests the Green-Schools Programme is successful in educating a new generation on the practical and achievable steps to a more environmentally conscious future. These practical steps are successfully carried out in the schools that achieve their Green Flag awards. Whether this practical application of what has been learned in school about the environment transfers consistently across contexts to pro-environmental behaviours in the home has been given a mixed response by parents of Green-School-going children in this study. The task going forward may be in extending the successful influence this programme has had in schools to the household level. Given that children may act as agents of change in a household, by practicing '*positive pester power*', they play an important role in building a holistic picture of how sustainable behaviours occur and are sustained in households in Ireland. A challenge may be to increase the likelihood these schoolchildren can be active agents of change in greater numbers than what seems to be currently present.

4.3.2.2 Structural

Structural factors that were discussed by participants include: authority; external influences; education; environment; choice; and cost. Each represents a given structure with a system that regulates and/or encourages sustainable behaviours. These structural factors pay a part in the adoption of sustainable consumption. Authority refers to legislation with regards sustainability, waste management standards and authoritative '*rules*' in the home and school. External influences refer to the use of eco-appliances and excessive packaging. Environment refers to the immediate environment in which consumers are bound to. Cost refers to the economic costs and benefits that impact sustainability. Choice refers to the perceived options of participants. And education refers to the structured education systems that encourage environmental awareness. Each of these factors will be discussed in further detail, relating their impact on the sustainable behaviours of participants.

4.3.2.2.1 Authority

Authority is one of the main themes emerging from participants responses. Authority generally refers to environmental legislation. Participants expressed their views on current legislation such as the plastic bag levy and discussed imminent legislation such as the water charge. Participants also had views on the future of sustainability and the potential role of authority in altering the behaviours of consumers:

> "*I think its legislation. I don't think somebody is going to go out there and appeal to somebody's better nature […] so I think its legislation so people will have no choice. And at the end of the day I think people will probably accept it – the plastic bags were a classic one. There was so much talk about that and then it was like a whimper…we all just adapted and now we are a leading light in plastic bags or non-plastic bags*" (Participant B1)

There was an overriding perception that authority, although not necessarily liked, is a necessary evil. Authority for some is perceived as an impetus for change:

> "*it has to be done because there is a lot of wastage of water and we wouldn't be the sort of people that wash down their cars or anything but we wouldn't be, I'd say, quite as conscious of it as we could be*" (Participant CB1)

The water charge evidently, comes at a cost to households and thus can be linked to the '*cost*' factor which is also a subtheme of structural factors. However, participants view authoritative regulations, although cost incurring, necessary to halt the wastage of natural resources:

> "*I think it is suitable to be honest because there is such wastage and apparently we are the only country in Europe that hasn't got it [water charge] so I feel that if we are a part of the European Union then we should pay it…there is wholesale abuse if you don't charge for something in Ireland, in my mind*" (Participant BL1)

Although participants do not report a reduction in their water consumption currently, they believe that wastage of water is widespread. Participants do not hesitate to suggest that regulation is necessary to alter the behaviours of individuals and households. Therefore, respondents are aware and recognise the need to conserve water but are relying on structural agents to determine when and to what extent their behaviour will change.

Similarly, waste management companies have reportedly altered the behaviours of some respondents:

> "*To be honest with you, when the bin man wanted it done that way…we didn't give it a lot of thought prior to that*" (Participant B1)

> "*We have recycling, we do recycling so I'd wash the tins out and the bottles and all the rest and they go into the one bin…because that is what the company wants*" (Participant C1)

Waste management and recycling awareness seems to have heightened when waste management companies dictated how their waste is to be sorted and collected. Behaviour change did not occur because of an overriding responsibility to care for the environment.

Authority also refers to dominant forces in a household or school that do not simply encourage sustainable behaviours but rather set rules that must be obeyed. This authoritative tone is present throughout responses from parents:

> "*The nagging has to come from at home as well; they have to keep it up. They will all do it in school because they have to do it in school and they will get in trouble if they don't do it in school, which is the right way to do it*" (Participant CTB3)

Governance seems inevitable from this parent's point of view as she argues that behaviours are not sustained across contexts. Others also reiterate the need for instruction and governance in the home:

> "*If they throw something wrong into the recycling bin it annoys me […] I would get cross at them so they know…*" (Participant CTB6)

And likewise in school it is perceived that behaviours are governed by authority:

> "*They would be very aware of the healthy lunch policy but whether they do the healthy lunch policy because it is healthy or if it is because it's what they have to do – it is because it is what they have to do. But that is kids that is the way they operate. If you tell them and even at that they will try to slip something in the back door if they thought it wasn't being monitored*" (Participant CB4)

Discussions here suggest that if behaviours are to be changed and sustained, authority plays a crucial role. Interestingly, respondents seem to have a passive attitude to their behaviour change. It seems as if there is very little resistance to

changing their behaviours once it has been enforced on them through authoritative figures or forces. Despite respondents not portraying much active behaviour in light of pressing environmental concerns, their behaviours, albeit passive, are having a positive net result for the environment. This '*passive positive behaviour*' may play a crucial role in addressing sustainability issues.

4.3.2.2.2 External Influences

External influences refer to the presence of eco-appliances and their bearing on the adoption of sustainable behaviour. It also refers to the impact of packaging on participants' control of their waste. External influences refer to the physical factors that play a role in determining respondents' sustainable behaviours. Participants situate certain appliances or facilities in their home that make it easy for them to commit to more sustainable living:

> "*I put in a new kitchen about seven years ago and I put in the two bins, one for recycling and one for waste so that made it very handy…the fact that the two bins were together when I opened the drawer as opposed to chucking it all in one bin…so it makes it more simple*" (Participant C2)

Convenience in this case of having two bins side-by-side has encouraged compliance with sustainable waste management. Bin provision is important to another respondent but in this case he refers to the ethics of what one should do with their waste rather than simple convenience:

> "*We should have two bins. That has to be the first place to start. If I looked down and saw two bins in my office I would throw my waste fruit into one and my paper into the other and it is not that it would be a reminder – it tells me that there is a right and a wrong way of doing this*" (Participant B3)

This particular scenario is in relation to a work environment and suggests that unless external factors are in place, consumers may not act ethically. As another participant claims:

"*I recycle because the bin is there so I might as well be using it*" (Participant CTB1)

An external influence, such as the presence of bins, may tweak consumers' behaviour, with positive results. Many participants also invested more substantially in upgrading their homes to make them more energy efficient:

> "*We insulated the house about two years ago into the cavity walls and we also put in solar panels at that time. And that has made a big difference especially from the beginning of May to the end of September so we would have buckets of hot water. I also put in a stove fire recently instead of an open fire and that has definitely cut down on the amount of timber and coal that I would use because it seems to retain the heat so after about 2 hours you can stop putting stuff into it because it has enough heat*" (Participant CB3)

Several participants discussed upgrading their home with solar panels and insulation which has allowed for greater sustainable consumption but at no great effort once the initial investment is made. Changing habits of water use is offset against a greater saving of energy due to solar panels on the roof. It is not established if these home improvements were completed due to environmental concerns but many participants referred to a monetary grant that was available to upgrade homes. Interestingly, these respondents are practicing positive sustainable behaviours but are not necessarily doing so out of any particular care or concern for the environment. This can also be viewed as '*passive positive behaviour*' on the part of respondents. They can be seen to be passively behaving in a sustainable manner. They are not acting on awareness of the environment or on positive attitudes or intentions towards pro-environmental behaviour but nonetheless are behaving in a pro-environmental manner. This has interesting implications for progressing sustainability which will be discussed further in Chapter 5.

There was an overwhelming negative discourse among respondents regarding packaging. Participants felt that excessive packaging was making it very difficult for them to be more sustainable and was increasingly difficult to escape:

> "*Ah it's a little bug bearer with me…if I go to the chemist…I have to go to the chemist, I will buy that much tablets (small gesture) and they give me that much*

> *packaging (large gesture). And it's slightly rude but I stand there and I take everything apart, take out what I want and say to them…throw the rest in the bin. It's the same thing with receipts at tills. The only reason people give you a receipt is because they want you to supervise whoever is behind the till to make sure they are being honest*" (Participant B1)

This respondent despairs at how the responsibility of disposal is given to consumers even when the need for such quantities of packaging is unnecessary. This particular respondent refers in particular to his monthly prescriptions where there is, in his eyes, far too much packaging for what he is receiving. Grocery shopping poses another issue for participants as they feel there are little options but to purchase packaged produce:

> "*Often it is quite difficult to get away from the packaging. Even things like a few chillies…you go to Supervalu to get a few chillies and they are in a plastic bag. So it can be difficult*" (Participant CB1)

And similarly:

> "*There is more waste now…definitely. Even when you buy yoghurts even the way the carton is in a paper sleeve or in a box, it actually drives me nuts*" (Participant CB4)

There is a general consensus that over-packaging is unnecessary and is a source of frustration for consumers; it is perceived as very difficult to avoid. Respondents claimed that they are presented with an overload of packaging and have no choice but to do their best to recycle it. This impedes the development of sustainable consumption for these consumers. Consumers in this study recognise the waste that packaging is creating unnecessarily but they are at a loss as to what they can do:

> "*It drives me mad actually…wrapping up cucumbers and things like that. I have noticed recently that for blueberries and strawberries they used to come in a plastic container and now they put an extra plastic wrap around it…maybe it is because it opened up or something. So now there is the plastic container and then a roll of*

plastic cellophane around it. So it is double packaging but I can't do anything about that. There isn't a choice" (Participant BL3)

These external, structural issues are important to note as they may be utilised to increase and further progress sustainable consumption. While on the one hand external influences may have a positive effect on behaviour in the case of solar panels but in a contrasting way the external influence of packaging is impeding sustainable consumption. The role corporations play in sustainable development is brought to the forefront here. Do corporations have a strategic role to play in the practical achievement of sustainability? Excessive packaging is frustrating respondents but many feel that there is very little they can do about it. With whom does the responsibility for sustainability lie is an important question to consider, in light of these particular findings.

4.3.2.2.3 Environment

Environment in this context refers to the immediate physical environment that impact on participants' attitudes and behaviours. In particular it refers to infrastructural and spatial issues that are perceived to inhibit sustainable behaviours. The most frequently mentioned behaviours in relation to these issues include the reasons for not composting food waste and reasons why the car is the predominant mode of transport. Participants repeatedly cite spatial issues when discussing composting:

"*I mean we have such a small area that it is very visible…it would be very visible from all the windows of all the houses. It is not like a lot of older houses where they would have hedged off areas or places beside sheds but there is absolutely no spare square foot in our garden so it is not an option*" (Participant B2)

This respondent completely rules out the possibility of owning a compost bin primarily due to lack of space. Again, another cites proximity to her house:

> "*I don't [compost] and to be quite honest with you I am living in an estate with a small garden and I did consider a compost bin but it would be too near the house because of flies and everything else it just wouldn't work*" (Participant CB3)

Participants are open in their opinions that the possibility of them owning a compost bin is highly unlikely. This poses as a threat to the advancement of sustainability as their perceptions are well formed and are rather tenacious:

> "*I don't think composting works in small gardens…it is just not hygienic, it is not hygienic around small kids – I don't care what you do there is just too much work involved to getting out of it what you should so my peels do go into the bin I'm afraid…call me a bad carbon footprint or whatever but you know it is just not something that would work for us. It is just too close to the back door, it stinks too much, and it draws rats…*" (Participant CB4)

Overall, only two participants of 25 owned a compost bin. The remainder of participants cited spatial issues and fear of rodents as a barrier to owning and using a compost bin. This may prove a difficult barrier to overcome and is an important factor to consider in relation to waste management systems.

Infrastructural issues also posed as an issue for respondents. This issue was most frequently raised as respondents discussed their transport use. The main mode of transport used by all participants was car. Interestingly, participants related the desire to cycle or walk as an alternative to motor transport on certain occasions but cited infrastructure as the main impediment:

> "*He tries to cycle as much as he can but that back road…I am the one that is putting a stop to that because I say 'I don't care about the ozone layer I don't want you squashed flat by a truck going down that back road' so that is the down side*" (Participant CB1)

Safety is a top priority for participants and the infrastructure does not provide a safe environment:

> "*I think if the road wasn't so bad I think I would let them cycle. It has to do with where we live, it is not the distance, it is the road*" (Participant CTB1)

Parents are forbidding their children, who are seemingly keen to cycle to school, due to infrastructural issues that they have no control over. Parents discussed how their children were learning about the environment and transport at school and were enthusiastic about cycling to school. These infrastructural issues are having an impact on the progression of one of the aims of the Green-Schools programme. On a personal level, respondents also recall how they are bound to using motor transport for what should be a carbon-neutral activity:

> "*Even when I go for a walk I would drive to go for a walk. But that is really because where I am located because there isn't a footpath on the road*" (Participant CB2)

Even as respondents incorporate leisurely activities into their day they are using motor transport to do so, driven mainly by the lack of appropriate infrastructure. Cumulatively, this is having a negative effect on sustainability. Infrastructural and spatial issues are perceived by respondents to inhibit sustainable behaviours even in the presence of positive attitudes towards the desirable behaviour. Spatial issues in relation to organic waste composting and infrastructural issues relating to overreliance on car as the predominant mode of transport are creating an environment where respondents are behaving in a manner in which they perhaps would like to change, but feel trapped into their current behaviours due to external factors that are out of their immediate control.

4.3.2.2.4 Cost

Cost refers to charges that are imposed on individuals and households, but have positive environmental implications. Water charges were one of the main topics discussed by participants. The cost implication seems to have a positive impact on both behaviour and consciousness:

"*No, never…only since I was being charged. I never would have thought about it*" (Participant C1)

Another respondent also openly admits that her behaviours are not driven by the environment but by cost:

"*I wouldn't use the dryer a whole lot now really I would put the clothes on the clothes-horse…but then again that's not for the environment it's for my bills*" (Participant C1)

This participant recognises that the economic decisions she makes also have environmental impacts but nonetheless openly confirms that her behaviour is driven by cost and not care for the environment. However, it is important to note here that the outcome is a positive one for the environment, perhaps another indication of '*passive positive behaviour*' on the part of the respondent. When discussing governmental charges there were some mixed responses from participants. One respondent's considered response:

"*Part of me is saying oh god no… not another tax. Not more money and I do feel that there is so much water and we are entitled to water but then when I think about it from a logical point of view we are using water from the tap to clean cars…we are using pure water for rubbishy kind of things so I think that is going to make us more aware so ultimately, once I get over the money it is going to be very positive*" (Participant G3)

While another respondent is vehemently opposed:

"*Well I don't know because between the water charges, house charge, the sewage tank charge…I don't know…if it was just one rather than them trying to get everything. People can't pay their mortgages and they are having their houses taken of them and they decide to bring in all these charges now? I just think it's stupid…*" (Participant CTB6)

Ultimately, charges help to raise awareness and perhaps alter behaviours for some but for others these water charges are seen as a tax and the connection between economic cost and environmental gain is lost. However, environmental behaviours are reported in relation to cost factors where consumers become more frugal. This frugality has positive implications for sustainability:

> "*I really believe…and I know I sound like an ole fart when I say this but when I was at home I didn't give a damn about the TV being on or the lights being on or anything like that and I was thinking what are the parents talking about…but now that I am paying the bills…and I honestly think that is what it comes down to. Now I did start fining them [children] 20cent if they left the lights on [laughs] and that fairly focused their minds*" (Participant CB4)

Economic decisions therefore, may have a positive impact on the environment with a reduction in the amount of energy a household consumes:

> "*We cook with gas as well but I am more aware of it now…because it is becoming more expensive. I might not be as aware if it weren't costing me so much money. So I can't say that I am doing that for any particular reason other than cost*" (Participant BL2)

Again, participants openly admit that their actions are not driven by environmental concern but their reported behaviours are representative of a '*conscious consumer*'. This highlights respondents' propensity to behave responsibly or sustainably but these behaviours are not driven by positive attitudes. Their behaviour is driven by factors far removed from environmental concerns but *passively*, they are contributing to a more sustainable society.

4.3.2.2.5 Choice

Several accounts reveal that consumers may be conscious of their impact on the environment but their behaviours do not reflect that consciousness due to their lack of choice. Participants claim that they simply do not have alternatives when faced with transport dilemmas, use of water, and excessive packaging. These perceived

limitations have important repercussions for sustainability as structural issues continue to bound consumers' behaviour:

> "*There really isn't any alternatives here…there is no train so everyone is in cars. There is no other option really unless you get up on your bike and I mean you can't bring three kids on your back*" (Participant CB4)

Lack of suitable transport options dictates the mode of transport chosen which is bound by family structure. This participant does not perceive any suitable alternative for the transportation of her children to school. Similarly, this participant claims she has no other options and if she had she would take them:

> "*I don't agree with jeeps and there was surveys done on that…we have a people-carrier and that uses up a lot of energy and it isn't great for the environment but the only reason we have it is because we have to have one. If we didn't have to have one, we would have a car*" (Participant CTB3)

Environmental awareness is high but environmental action does not reflect this primarily due to a perceived lack of alternatives. This participant reasons that her people-carrier has less of an environmental impact than a jeep and therefore, she has made the most environmentally-conscious choice given her circumstances.

Discussions on the water charge prompted one participant to ascertain:

> "*I mean nobody just turns on their tap for fun…you don't just turn it on and say 'ah what the hell I'll just leave that run for an hour' I mean you use what you have to use and you are still going to have to put on your dishwasher, washing machine, you are still going to have to shower. You can't cut down the time of the dishwasher and you can't cut down the amount of time for the washing machine but perhaps you could be more efficient in showers but other than that I don't see how you can use less water. You still have to wash your car even if it is only once every six months*" (Participant BL4)

This particular respondent argues that regardless of a water charge households have little choice on how much water they use. Modern-day living predetermines the use of dishwashers and washing machines and therefore, suggesting that people are irresponsible with their water use is absurd. This participant sees little choices when faced with the challenge of reducing water use.

As discussed previously, consumers struggle to make ethical decisions with regards to excessive packaging:

> "*My friend was saying – you go to New Zealand and you have all your fruit stacked up and it's all separated…whereas here…everything is in a bag. Your apples are in a bag; your oranges are in a net. I try to avoid the trays…you know you'd find four apples in a tray. But everything is packaged here*" (Participant C1)

This consumer struggles to find fruit and vegetables that are not packaged in the supermarket with an international comparison made with New Zealand. This participant continues to argue:

> "*I've noticed that…we are very limited really here in Ireland […] the choice isn't there as much*" (Participant C1)

International comparison will be discussed in greater detail within the category of situational factors (Section 4.3.2.3). Perceived lack of choice has an important role to play in deconstructing consumer behaviour. Ethical alternatives are not chosen primarily due to perceived limitations on choice but this does not accurately reflect the awareness of consumers. The structural boundaries within which behaviours occur must be recognised in order to gain a more holistic view of sustainable behaviour in the everyday.

4.3.2.2.6 Education

Discussions developed with respondents on ways in which sustainability has somehow progressed and how consumer behaviour may continue to change for the

foreseeable future. Education was a strong theme discussed in this regard as respondents perceived it to be one of the most effective ways in changing behaviours:

> "*You educate people and you get the ball rolling that way. It has got to make a difference*" (Participant CB1)

Responses have a positive tone, if not slightly hopeful, suggesting that there is a level of uncertainty but nonetheless, something must be done:

> "*I think we are learning about it and I'm all for it but I'm only a half…a quarter…of the way there I would imagine. I think that the more we are educated about it, the more we are charged for things…that's when you will see a difference. I really think that is what it comes down to*" (Participant C1)

Generational differences also emerge in this context as one respondents argues:

> "*It has to start really at the education level with the kids and I think small kids nowadays are a lot more enlightened in that respect than we would have been…but then again the proliferation of plastic wasn't as prominent in my time that it is today so all the more reason that young kids nowadays needs to be wise to all of this and needs to be aware that you don't throw stuff into the water*" (Participant CTB5)

This respondent argues for the continuation of education at school level as they propose that the external factors that will affect his children are different to those that would have impacted on his behaviour growing up. There is a sense of necessity in respondents' arguments, assuming that education will change consumers' behaviours for the better.

Overall, respondents admit they are not fully committed to the sustainability movement and predict greater adoption of sustainable behaviours following education and cost implications. This perhaps suggests that consumers are waiting to be educated and waiting to be forced to change their behaviours? Respondents

display a high level of acceptance of the sustainability agenda but admit their lack of widespread commitment easily. This may suggest that there is an implied acceptance of forced responsibility regarding individual and collective behaviours. Where behaviour has been enforced or enabled there appears to be '*passive positive behaviour*' occurring. Is it possible that trying to increase environmental concern in a view to encourage voluntary change by some consumers is a futile exercise? Perhaps a more sustainable and practical approach to achieving sustainable consumption by many in society is to *force* responsible behaviours on consumers through governance, legislation, structural mechanisms or other influential means?

4.3.2.3 Situational

Situational factors that emerged from the thematic analysis include: context; social and cultural norms; and international comparison. Context refers to how different settings alter behaviours of participants or their family. Social and cultural norms refer to the norms of society at a given time. International comparison refers to sustainability comparisons participants discuss between Ireland and other countries. Each of these subthemes will be discussed in detail.

4.3.2.3.1 Context

Context refers to how different settings vary behaviours. Parents believe their children act in an environmental manner at school but for some their behaviour is reported to be different in the home setting regarding the same behaviours:

> "*I guess they are listening to it in school but I think it is different when they come home…they think I should be running around after them all the time*" (Participant CTB 2)

And similarly another parent considers how behaviour transfer does not occur:

> "*Two of mine have at some stage been on the Green-Schools committee and when they are on that there is even a greater awareness. What I don't understand then is*

> *that it doesn't relate at home because none of them can turn off a light*" (Participant CB4)

While this parent recalls a greater awareness of sustainability from her children while they were on the Green-Schools committee this awareness did not transfer in behavioural form from school to home. She subsequently offers an explanation:

> "*I think that it is learned patterns within an environment with children, definitely. The thing is, they do know it but if nobody is going to get on their case then they won't be bothered. And you know what I think it is the same for adults. I genuinely think that none of us would have started recycling only we had to. None of us will start conserving water until we have to. It is human nature and it is not just kids or not just adults and I think that some people are definitely more aware and better at it than others and more responsible than others but that is just the way of the world*" (Participant CB4)

This perception of sustainable behaviours is interesting in many ways. It encompasses several of the themes found throughout the interviews. In reference to context, this parent has had experience where her children behave differently in different contexts. She also suggests that authority has a substantial role to play in initiating and maintaining sustainable behaviours.

Context dependent behaviours are not exclusive to children either. Respondents recall situations where their own behaviour is context dependent:

> "*It is actually bizarre because we have a little mobile home down in Fountainstown and when we are down there, there is nothing at all wrong with the water coming from the tap, but I won't drink it. I will always have bottled water… At home I have no problem drinking the water...whether I am crazy or not I don't know…that is just me [laughs]*" (Participant G2)

This participant perceives her behaviour as somewhat irrational but admits that is how she behaves regardless. Similarly, another participant recounts how her behaviour regarding energy efficiency differs when she is on holiday:

> "*We have a mobile home in Banna and we are very good there for the energy because we are afraid if we leave anything on that it is going to cause a fire so we are really excellent for there so there would be a big difference between my winter and summer electricity alright… I am afraid that the mobile is so flimsy that that is my biggest fear...the safety…whereas here at home I wouldn't have that fear at all*" (Participant G3)

This energy efficiency is determined by the setting in which she finds herself – due to the fear of fire in the mobile home she is subsequently more conscious of electrics with the result being greater energy efficiency. However, at home, where the fear of fire is absent, energy efficiency behaviours do not materialize. Context is thus important to understand the overall picture of the practice of sustainability. Consumers' environmental behaviours may be determined by a particular setting.

4.3.2.3.2 Social and Cultural Norms

Social and cultural norms relate to socially accepted behaviours at a given point in time. Social norms were discussed by respondents both in terms of the norms of the past and the norms of today's society and what effect these norms have on behaviour. Respondents recall how previous generations were naturally environmentally friendly:

> "*It's very fashionable now to be environmentally friendly but years ago all our mothers and grandmothers did it*" (Participant C1)

Environmental impacts were not a concern for past generations due in part to the fact that there were less materialistic items available, as discussed previously. However, as a '*consumer society*' (Peattie, 2009) took hold and consumables increased there was widespread over use of natural resources (Stern, 2007; Moloney *et al*., 2010; Wells *et al*., 2011). However, one respondent perceives this phase of over consumption as changing:

> "*Before you would just go out and buy another one whereas now, you notice dressmakers are really busy, cobblers…my uncle works repairing things and before he said people would just throw it out and buy another one whereas now they are repairing their washing machines and their dishwashers. And now if you were to change your couch you would sell it on now rather than just dump it*" (Participant C1)

This respondent furthers to say that the recession has had an important impact on the behaviours stated above. Consumers cannot afford the same standard of living as they once could. This reiterates the notion that motivations may not necessarily be ethical but the resulting behaviours have sustainability gains (another example of '*passive positive behaviour*').

Participants discussed their behaviour change in relation to the plastic bag levy. Bringing bags with you to the supermarket has now become habitual and perceived as the norm:

> "*You don't even have to think about it*" (Participant CB3)

One participant reiterates how this ethical practice of bringing a reusable bag to the supermarket for your groceries has become the norm:

> "*I work in Tesco in the cash office, part-time, but nowadays very, very little people come into the shop without a bag. Everyone brings a bag […] you would even see men coming in with bags and once men are doing it now I think it has definitely caught on!*" (Participant G2)

These social rules have a remarkable impact on consumer behaviour. Certain consumers may be more comfortable partaking in an activity if it is socially accepted:

> "*It [recycling] is just the thing to do isn't it…everyone is doing it*" (Participant CB6)

Normalising behaviour (Rettie *et al*., 2012) has been suggested as having a substantial impact on the acceptance and practice of pro-environmental behaviours. This normalising, which seems to have occurred in relation to recycling behaviour may have a profound positive effect on the progress of sustainability. The challenge going forward may be perhaps to normalise other sustainable behaviours which have not enjoyed the same transformation waste management has.

There were some references by respondents on how they perceive culture in playing a role in shaping consumer behaviour. There was a perception that other countries culture may not be a healthy backdrop to sustainability. One respondent refers directly to the U.S.A. suggesting that their culture has shaped unsustainable behaviours:

> "*The US has just grown up with a culture of waste…they take it for granted and they take it as a right. But the rest of the world is…almost outside looking in. Ultimately you will see in the future that that will be a huge area for contention…the obvious one is in terms of energy resources*" (Participant B1)

While another respondent refers to Irish culture:

> "*Every household in Ireland…have you ever heard Des Bishops skit about leaving the immersion on? It is engraved in our culture – you do not leave the immersion on! [laughs]. Anything else but not the immersion…that just seems to be a cultural thing for some strange reason*" (Participant B3)

Here, behaviour is perceived to be governed by a cultural aspect rather than any particular environmental incentive. These social and cultural norms indicate that situational factors may have influential effects on the behaviour practices of a nation. Can normalising sustainable consumption be the answer to sustainability? And if it is, how do we normalise behaviour?

4.3.2.3.3 International Comparison

A common theme running throughout interviews was international comparison. Participants regularly referenced other countries in relation to Ireland's behaviours, systems and rules. There was extensive awareness on how other countries operate in relation to sustainability and these examples were used to benchmark the efforts being made in Ireland to deal with environmental concerns:

> "*I am from France and we are definitely more careful about water than I have been used to here. It has always been metered there from as long as I can remember and when I tell people over there that we don't pay for water here they are shocked…they can't believe it. Water over there is considered the same as electricity or gas…exactly the same. There would be restrictions during the summer; depending on what area you live there are different prices. Each region is independent that way and they have their own resource so in some areas the water could be more expensive than other areas. So people are very aware of it. In summer you are not allowed to wash your car or you are not allowed to water the garden so people are very aware of it but it is not only the price but they are constantly reminded of the availability of it*" (Participant BL3)

Due to her familiarity with other countries regulations this participant was quite willing to accept the imminent water charges in Ireland. Others question the potential impact they are making as they consider behaviours in other parts of the world:

> "*On a good day at least I think I am making a difference so at least that matters and personally I feel a bit better about it and then you read something about America with their big guzzler cars or China or Japan and how much they use and you think my God are we even making a dent…?*" (Participant G3)

There is a degree of despair evident here. This particular respondent is pitching the changes she has made in her life and her family's life for the sake of the environment and an international comparison with other countries may have a damaging effect on her perception of sustainability if she continues to perceive her impact in this way. Thus, international comparison can be seen as both positive and negative in relation to advancing sustainable consumption. What is imperative to note is that consumers are aware of international behaviours and they can benchmark their behaviours against those of more sustainable or less sustainable countries.

4.3.3 Synopsis of Interviews

Undoubtedly, consumers are aware of the environmental debate and the efforts that may be made to improve our overall impact on the environment. Parents in this research were regarded as '*conscious consumers*' due to the attendance of their child at a Green-School. It was established through thematic analysis of the interviews that all the parents' interviewed had some level of awareness about the need to protect the environment. This affirms the assumption that parents of Green-School children are conscious of the environmental debate and behaviour change initiatives. This research explored the self-reported behaviours of these parents and their households and conclude that behaviour practices in the household context are influenced by both internal and external factors. These factors are presented again in Figure 4.23 and Figure 4.24.

Figure 4.23 Internal Factors

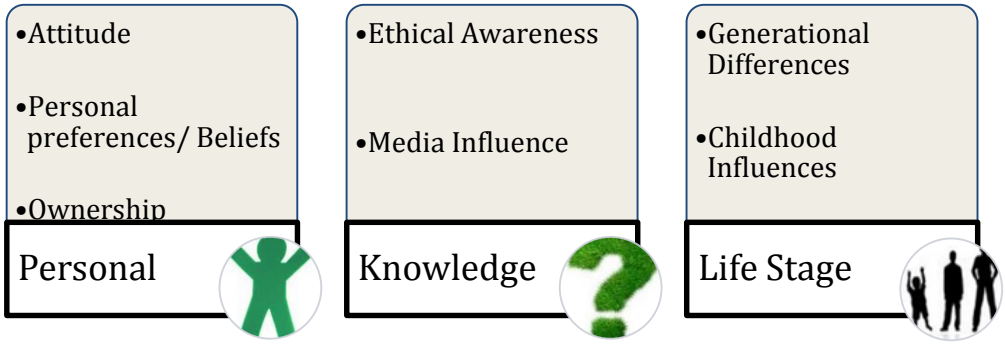
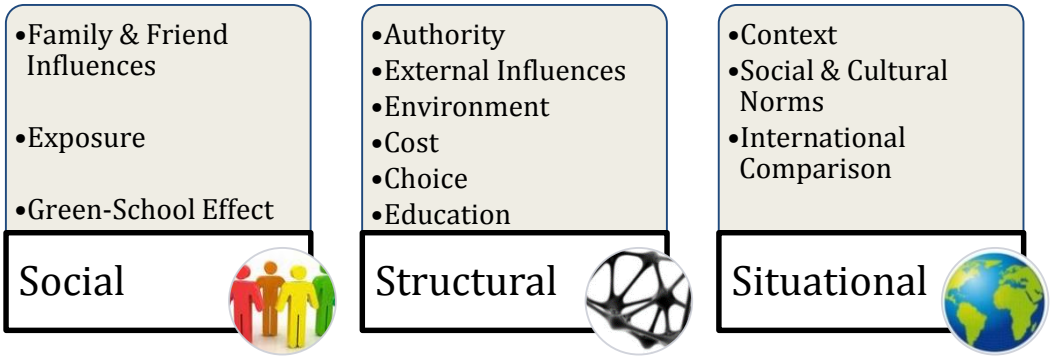


Figure 4.24 External Factors



Internal factors included personal beliefs and attitudes, knowledge accumulation and generational differences. External factors include social interactions, structural constraints and situational guidance. One of the most important findings of this research is the various factors that impact on the everyday behaviours of consumers' and the indication that the majority of behaviours that have changed in a positive way for the environment has not been voluntary in nature or guided by ethical concern. This is an important addition to the current discourse on sustainable consumption and may assist in progressing the sustainability agenda. These findings are discussed in greater detail in Chapter 5.

4.4 Chapter Conclusion

This chapter presented results of a survey with 116 schoolchildren from a total of 7 Green-School and discussed the findings of 25 semi-structured interviews with parents of Green-School-going children. The aim of the survey was to explore how schoolchildren conceptualise and practice green behaviours both within their school and in the home. The results of the survey reveal that schoolchildren have an acute awareness of the need to protect the environment and display a promising account of how this awareness should be, and at times is, applied in everyday activities both within the school and around the home. The results highlight the importance of the Green-Schools programme in developing and nurturing green behaviours among schoolchildren. The findings have shown that environmental education has imparted a positive attitude; sense of ownership; increased awareness of the environment; and developed a practical application of learning among the schoolchildren that were surveyed. These derivatives of the Green-Schools programme have resulted in environmental care and ability to behave sustainably among pupils of these schools. These characteristics of Green-School-going children indicate the potential for this educated generation to become the sustainable generation of the future. The role schoolchildren play in imparting positive behaviour change in the home is reflected in their practice of '*positive pester power*'. This concept and its potential for advancing sustainable development will be discussed in Chapter 5.

The second discussion in this chapter centred on the thematic analysis of the interviews that were conducted with the parents of Green-School children. Conversation was loosely-centred on the four main themes of the Green-Schools programme. The Green-Schools programme was discussed in the interview as a means to gauge their knowledge on it, its aims for sustainability, and whether sustainable behaviours were occurring across contexts – from school to home. It was established through thematic analysis of the interviews that all the parents had varying levels of awareness of pro-environmental issues. This affirms the assumption that parents of Green-School children are conscious or aware of the environmental debate and behaviour change initiatives. The interviews with parents found that everyday behaviours in the household are influenced by both internal and external factors. Internal factors included personal beliefs and attitudes, knowledge accumulation, and perceived generational differences. External factors included social interactions, structural constraints and situational guidance. There seems to be an overwhelming *passive* attitude towards behaviour change in the household. It seems as if there is very little resistance to changing behaviours once it has been enforced through authoritative organisations/institutions. Despite respondents not portraying much active, voluntary behaviour change in light of pressing environmental issues, their behaviours, albeit passive, are having a positive net result for the environment. This '*passive positive behaviour*' may be vital in addressing sustainability issues and will be discussed in greater detail in Chapter 5.

Chapter 5

Discussion

5.1 Introduction

The aim of this chapter is to infer meaning from and extend the discussion of the findings presented in the previous chapter. These findings are considered in light of the broad literature review discussed in Chapter 2. This chapter will address the main research question: In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home? And the sub-questions: How do pupils of Green-Schools conceptualise sustainability? Does a transfer of behaviours across social contexts occur – from school to home? How do households (of Green-School children) identify and practice sustainable behaviours? Providing clear answers to these questions allows for clarification of my research findings. This chapter comprehensively documents the overall findings of this research study and will form the basis for the discussion on the key contributions and implications of my research on theory, practice and policy that will be discussed in Chapter 6.

5.2 Addressing the Research Questions

Based on the findings of this study, the following section addresses the main research question and corresponding sub-questions. It is imperative for clarity of this study's contributions and implications to clearly outline the answers to these questions. My main research question was:

> *In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home?*

The premise of this question deals with the *practice* of sustainability. Much of the sustainable consumption literature deals with consumers *concern* or *awareness* of sustainability, or of their *motives* or *intentions* to behave ethically. This study of self-reported *behaviour practices* in the home context offers a valuable contribution to the current thought on sustainable consumption. To adequately answer the main research question, three operational questions/objectives were explored:

i. How do pupils of Green-Schools conceptualise sustainability?
ii. Does a transfer of behaviours across social contexts occur – from school to home

iii. How do households (of Green-School children) identify and practice sustainable behaviours?

As discussed in Chapter 3, a mixed method approach was used to answer these questions, which have resulted in valuable insights into sustainable behaviour practices in the home. The following section will firstly discuss the operational sub-questions which underwrite the answer to the main research question.

5.2.1 Sub-question 1

How do pupils of Green-Schools conceptualise sustainability?

To answer this question I surveyed schoolchildren who attend a Green-School. The survey was focused on how schoolchildren learned about the environment, how they felt about it, where and how they practiced sustainable behaviour and whether they influenced others behaviour in a pro-environmental manner. The findings illustrate that children who attend a Green-School believe that environmental issues are important and believe that both themselves and their family have an important role to play in the future sustainability of the planet. The children primarily learned about the environment from their teachers and the school environment fosters discussion and practice of sustainable behaviours. It is important to note here that the award of a Green Flag requires the children to take an active role and responsibility for sustainable practices such as segregating waste, turning off lights, conserving water etc. The schoolchildren surveyed confirm their role in maintaining their school environment and acknowledge actively discussing environmental issues in the classroom. This confirms the success of the Green-Schools programme in increasing awareness and participation of sustainable practices in the school.

The qualitative questions used in the survey and discussed in Chapter 4 illustrate the genuine care and concern these schoolchildren have for the environment and their practical competency in practicing sustainable behaviours. Students gave individual examples of how we can become more environmentally responsible which demonstrates their ability to apply what they have learned about being pro-environmental to everyday situations, often situations which would naturally occur

outside of the school context (e.g. sustainable means of drying laundry). They strongly identify the need for society to increase their *action* in relation to the environment and this is reflected in their answers. To recall one child's assertion:

> "*I have learnt lots of ways to save the environment, how to reuse things like keys or scraps of paper and save water and electricity and how to travel eco-friendly and I hope that one day everyone will be doing this*" (Participant QB5).

These findings suggest that schoolchildren conceptualise sustainability as an action-oriented solution to environmental damage caused by human consumption and they recognise that improvement in our everyday behaviours is required. This builds on the study conducted by An Taisce in 2001 that compared Green-Schools with non-Green-Schools. An Taisce found that the Green-Schools Programme was having a very slight effect on environmental awareness levels but was having a very significant effect on environmental behaviours (Green-Schools Research Report, 2001). When compared with the current study there are interesting progressions. The qualitative questions in the survey used for this research revealed that Green-School children have a heightened sense of awareness and concern for the environment, and report significant competency in practicing sustainable consumption, relative to those surveyed in 2001. This progression of both awareness and pro-environmental behaviour practice suggests that the Green-Schools programme is successfully shaping the pro-environmental behaviours of this young generation.

5.2.2 Sub-question 2

Does a transfer of behaviours across social contexts occur – from school to home?

This sub-question was answered by both schoolchildren and parents. The survey asked schoolchildren about their everyday behaviour practices in the home while parents/guardians were asked whether their child displays any sustainable behaviour practices in the home. The findings here add an interesting element to the sustainable consumption debate. The Green-Schools programme ensures that the schoolchildren uphold good sustainable behaviours in school. The facilities within the school and assumed responsibility of the schoolchildren to care for the sustainable use and

disposal of waste, energy and water ensure their practice of sustainable behaviours in this context. This study explored whether these children, without the structure and peer support experienced in school, continue these sustainable behaviours in the home. To fully understand the effect the Green-Schools programme has on the wider community, it was necessary to explore if there was a transfer of knowledge and/or behaviour from the school to the home context. The findings discussed in Chapter 4 suggest that this transference is occurring in the form of '*positive pester power*'. This intriguing concept arose from the analysis of both surveys and interviews. The schoolchildren were asked about how they perform sustainable behaviours in the home (e.g. recycling, energy conservation) to gauge if their ability to practice sustainable consumption upholds across contexts. The findings suggest that the majority *always* put dry recyclables in a recycling bin and turn the tap water off when they are brushing their teeth. This illustrates their commitment to sustainable practices involving waste and water as they transfer across contexts. Energy conservation did not seem to transfer as easily across contexts. The majority of schoolchildren admitted to either *always* or *sometimes* conserving energy. This is positive behaviour in terms of sustainability but the lack of commitment to energy conservation in the home differs to their reported strong '*always*' commitment to sustainable practices involving waste and water. What is more interesting in this context is that the ownership of these sustainable behaviours does not lie necessarily with the children. This greatly differs from the school context where the children take responsibility for the successful implementation of the Green-Schools programme (Green-Schools Ireland, 2015). The majority of children admit that someone in their household asks them to perform the sustainable consumption tasks. The findings here suggest that the *context* and forces within that context have an important role to play in determining behaviours of children in the home. This differs from the traditional view of focusing solely on the knowledge or competency of the actor to determine behaviour.

Positive Pester Power

Although children admit that someone in their household takes ownership of such sustainable practices or at least in part ensures that the children practice these

behaviours, there is also evidence of the schoolchildren taking on this role. Half of the 116 schoolchildren surveyed said that they ask people in their home to practice these sustainable behaviours while the majority said they encourage others to be environmentally-friendly. This suggests that at least some of these schoolchildren are practicing '*positive pester power'* which is a concept that has not been uncovered in this area in the past. This '*positive pester power*' finding contributes to literature on reverse socialisation. Reverse socialisation refers to '*the process by which parents acquire consumer skills and knowledge from their children*' (Ekström *et al*., 1987, p.283). Much of the literature on reverse socialisation discusses the ways in which parents learn from their children through the transference of information (Ekström *et al*., 1987; Easterling *et al*., 1995; Ballantyne *et al*., 1998; Gentina and Muratore, 2012). Environmental resocialisation is presented in the literature as occurring due to environmental concern among children and adolescents which acts as a motivator in educating and influencing their parents (Easterling *et al*., 1995). Essentially, children, being educated and informed, are teaching or transmitting information to their parents. This transfer of information is said to influence parents' attitudes and behaviours (Ekström *et al*., 1987; Easterling *et al*., 1995; Ballantyne *et al*., 1998).

In light of the earlier discussion on the gap between attitudes-intentions-behaviours (Belk *et al*., 2005; Carrington *et al*., 2010; Devinney *et al*., 2010; Carrington *et al*., 2014) and the nature of the influence on parents in this study (pestering), the transfer occurring between child and parent is conceptualised as combining both the reverse socialisation literature and pester power literature. The finding of '*positive pester power*' in this study suggests that, in the context of an action-oriented environmental education programme (Green-Schools), children are directly influencing *behaviours* through their '*pestering*' techniques (putting sticky notes under light switches/giving out, etc.). Positive pester power extends our understanding of reverse socialisation in this context as children are directly influencing the *skills* or *behaviours* of a household and extends the pester power literature in highlighting the positive impact of such behaviour.

'*Positive pester power*' can be defined as children pestering their parents (or members of their household) to behave in a positive way (i.e. practice sustainable consumption). The findings from the parents' interviews strongly corroborate the impact of positive pester power. This suggests that the Green-Schools programme is having a positive impact on the practice of sustainable behaviours in the home context; some parents claim that their child gives them a lecture on sustainability by telling them what they should or shouldn't do; another discusses how their child sticks paper notes under light switches to turn them off; another discusses how their child corrects members of the household when they leave tap water run; while another parent claims that their children have had a very positive influence on the uptake of behaviour in the home claiming that pro-environmental behaviours have pushed upwards from the children. These are all indications that Green-School children are *positively* pestering members of the household to practice sustainable consumption. This has very important implications for both the legitimization of the Green-Schools programme and the overall potential for it to positively impact on behaviours of society.

The presence of '*positive pester power*' in this study is not without some ambiguity and contradiction as some other parents admit that they take ownership for washing school lunchboxes and segregating rubbish as they believe that their children would not perform these behaviours voluntarily. Parents also recall having to constantly ask their child to turn off lights in the home. These mixed findings suggest that the transference of sustainable behaviours across social contexts is complex. It suggests that schoolchildren are in part acting as catalysts for behaviour change in the home context, through the use of '*positive pester power*', but equally other forces in the home context influence behaviour practices. Nonetheless, the idea that '*pester power*' (Horgan, 2005; Carey *et al*., 2008; Lawlor and Prothero, 2011) exists in this context opens up new avenues for positive behaviour change strategies and it supports the Green-Schools explicit aim of imparting behaviour change to the wider community.

This '*positive pester power*' finding also builds on An Taisce's (2001) study. While An Taisce did not directly investigate the effect of the Green-Schools programme on the wider community, it did ask if schoolchildren practiced recycling in the home. They found that recycling levels were higher in the homes of Green-School children than in the homes of non-Green School children. Although they acknowledge that this recycling could be a home-based phenomenon, the potential influence of schoolchildren in the home was implied and the Green-Schools programme was reported to have a positive impact on behaviours across contexts (Green-Schools Research Report, 2001). My study builds on this initial assumption to ascertain that the Green-Schools programme, through enthusiastic schoolchildren imparting '*positive pester power*' on members of the household, are having a positive impact on pro-environmental behaviours in the home context. Acknowledging the inconsistencies across households, this finding nonetheless broadens our understanding of the potential of Green-School children in not only raising awareness among members of their social circle but also having a substantial impact on behaviour practices. The Green-Schools programme has begun to empower these young children to change the way we behave both in the school and home environments. The practical implications of these findings will be discussed further in section 5.3 of this chapter.

5.2.3 Sub-question 3

How do households (of Green-School children) identify and practice sustainable behaviours?

The final question seeks to explore the sustainable behaviours that are practiced in households. The reason this question asks how households *identify* and *practice* sustainable behaviours is because the participants in this study were not self-confessed ethical or conscious consumers. This may have had implications for how these individuals perceived sustainability issues. However, the interviewees were assumed to be conscious of the sustainability debate due to the enrolment of their child in a Green-School. Thus, exploring how, and indeed whether these parents/guardians identify and practice sustainable behaviours in the home is an important aspect of this research. The main focus of the interview discussion was on

their everyday practices in relation to waste management, energy efficiency, water conservation and transport use. How participants conceptualised these sustainable practices in their home lives was inferred from discussions on how these behaviours were practiced in the home. For the purpose of this thesis the parents are labelled as '*conscious consumers*' as being somewhat aware of the environmental debate but not necessarily behaving consistently in line with this awareness (Szmigin *et al*., 2009).

The findings of this research suggest that sustainable behaviour practices such as waste management, energy efficiency and water conservation are practiced in the home to some extent but transport reduction does not occur as households rely heavily on their cars as the main mode of transport. Where sustainable behaviours are practiced in the home they seem to be passive in nature; an overwhelming majority discuss behaviour change occurring passively in response to external factors. How households identify and practice sustainable behaviours will be discussed under the four main themes that were discussed in interviews: waste; energy; water; and transport.

Waste

From the perspective of the participants in this study, waste management in the household is identified as being routinized and normal. The findings suggest that waste management is not seen as something that is necessarily '*good*' or '*ethical*' in their minds but identified as a practice that is '*the norm*' in the household. All households segregate their recyclables from landfill waste while only two households compost their food waste. The lack of composting by households was not because they were not aware of the benefits but because their infrastructure did not allow for a compost heap (e.g. small garden). The respondents attitudes to waste management is that is it not necessarily a choice but something you have to do or naturally do.

The impact of our '*consumer society*' influences some respondents as they admit that although they do not agree with overconsumption or the unnecessary use of landfill they are unwilling to compromise on some behaviours. For example, one respondent claims that although she is aware that disposable nappies are bad for the environment, she would never use the more environmentally friendly alternative of cloth nappies. This comment may be perception-based rather than reality-based and may not be an accurate representation of their behaviour, given that some past studies have found issues with self-reporting (Carrington *et al*., 2010; Devinney *et al*., 2010). Nonetheless, this statement illustrates their generally passive engagement with ethical issues.

The findings also reveal that households struggle with the abundance of packaging of products they purchase and they believe they do not have any control over this. There seems to be a lot of frustration with how the responsibility of disposing of this packaging is left to the consumer and they acknowledge that in times past there weren't any waste management issues because there was less production and supply of packaging. In their view, past generations were far more competent in managing their waste but this was due to the market environment and social norms of the time.

The findings also suggest that households have changed their waste management behaviours in the past few years not because of concern for the amount of waste that was being generated or its impact on the environment but because it was enforced by waste management companies. For the most part, households identify waste management as a positive and necessary behaviour but something that is practiced because it has been easily facilitated and has now become the norm in society. Their behaviour in relation to waste management seems to be *passive* in nature. Respondents do not seem to be actively engaging with pro-environmental behaviours relating to waste management, but rather responding to requirements from their waste management companies.

For some households, proficiency in their waste management systems has been fine-tuned by influences from their social circle (e.g. their children, mother-in-law, sister's husband etc.). Some report post-behaviour change concern, where once they were forced to change their behaviour because of the structure of their waste collection, they began to think about the impact waste has on the environment. This suggests that perhaps care and concern for the environment may be secondary to behaviour change. This concept is in contrast to popular thought in this context; that attitude precedes behaviour. Here, positive behaviour change (albeit enforced) precedes positive attitudes about the environment in some households. This development of pro-environmental behaviour first, and concerned thought after, adds significantly to the sustainable behaviour change literature. This will be discussed further in section 5.2.4.

Energy

Energy efficiency was not discussed as substantially as waste management by respondents. The findings indicate that if energy efficiency is practiced in the home it is usually out of concern for the cost rather than the environment. Some respondents report to not using the tumble dryer and instead opt for a more sustainable air drying of clothes but this is practiced for cost efficiency. Likewise another respondent admits to charging her children if they leave lights on in the house but again she mentions that it is because of the bill at the end of the month and not for the environmental reasons of being energy efficient.

There seems to be a greater awareness of energy use in contexts outside of the home (holiday homes or caravans) but this is mainly due to safety fears. Some energy efficient behaviour has been routinized due to a cultural norm (turning off the immersion). The findings also indicate that some respondents' workplaces were competent in saving electricity in the form of automatic lights and having electric cars available for their employees but neither of these scenarios resulted directly in energy efficiency in the home. In one household the children identified issues with energy use as they put signs under lights to turn them off. Overall, the findings

suggest that energy use is not identified as an environmental issue by households. However, energy efficiency *is* widely practiced in the household because of concerns for the monetary cost. This suggests that positive, pro-environmental behaviour in relation to energy efficiency is practiced in the home context, but this positive behaviour is not driven by environmental consciousness or concern.

Water

Water use was discussed extensively by participants due to the impending water charges in Ireland. Respondents had some negative views on the water charges but their overall attitudes to the charge were passive. They felt that the charge was primarily a revenue generating tax by the government but felt that there was widespread abuse of water in many households and the charges would ensure greater water conservation and increased consciousness of water use by society. Again, this is similar to the reported increased care for recycling practices in the home once a waste management system was required by waste collection companies. Here, with regards to water conservation, responses suggest that behaviour change must be facilitated first before consumers' consciousness of how much water they use becomes apparent. Respondents felt that once they were being charged for water it would change their behaviour and ultimately make them think about their water consumption. They suggest that despite the belief that households are wasteful when it comes to water, behaviours would not change until they have to.

There was some discussion of voluntary behaviour change regarding water use such as their child pestering them to turn tap water off when brushing their teeth or the scarcity of water during cold winter months altered their behaviour practices (putting a 7-up bottle in the toilet cistern). Current water use was discussed in relation to the behaviour of recycling by some respondents; the findings suggest that consumers' behaviour practices may alter in a positive way when water charges are implemented with regards to water use but this may have negative implications for waste management. Some households suggest that they will reduce their water use because of the cost by abandoning their current efficiency in washing recyclables and

segregating their waste. This finding suggests that environmental behaviour practices in the home may come into conflict with each other. Overall the findings suggest that households identify water conservation as an important environmental issue but openly admit to relying on legislation or external forces to determine their water use in the home. Similar to waste management, behaviour change in relation to water conservation also seems to be passive in nature.

Transport

The final sustainable consumption theme that was discussed with participants was the issue of transport use. It is important to note that typically the transport theme is the 4th theme of the Green-Schools programme and, as none of the surveyed schools had attained a 4th Green Flag, it is possible that the schoolchildren were not necessarily as aware of its environmental impact as the other themes discussed. This limits the extent to which children can affect the transport choices in the household. Nonetheless, the impact of transportation on the environment is well discussed in media and as parents/guardians typically have daily interaction with some form of transport it was important to determine how they perceived their use of different modes of transport.

The findings overwhelmingly suggest that infrastructural barriers inhibit any desired behaviour change by households. Several respondents claim that they have tried to reduce their reliance on the car as the main mode of transport but the danger of the roads completely obliterates the possibility of changing to a more sustainable transport method, such as cycling or walking. Some members of the household have expressed an interest in cycling to work or school but concern over road safety has inhibited its adoption. One respondent even claims that when she goes for her morning walk she must first drive to an area which has a footpath. Here, what should be a carbon neutral activity involves the use of a car because of infrastructural issues. This suggests that despite the desire to not rely on the car as the main mode of transport, households are left with little choice.

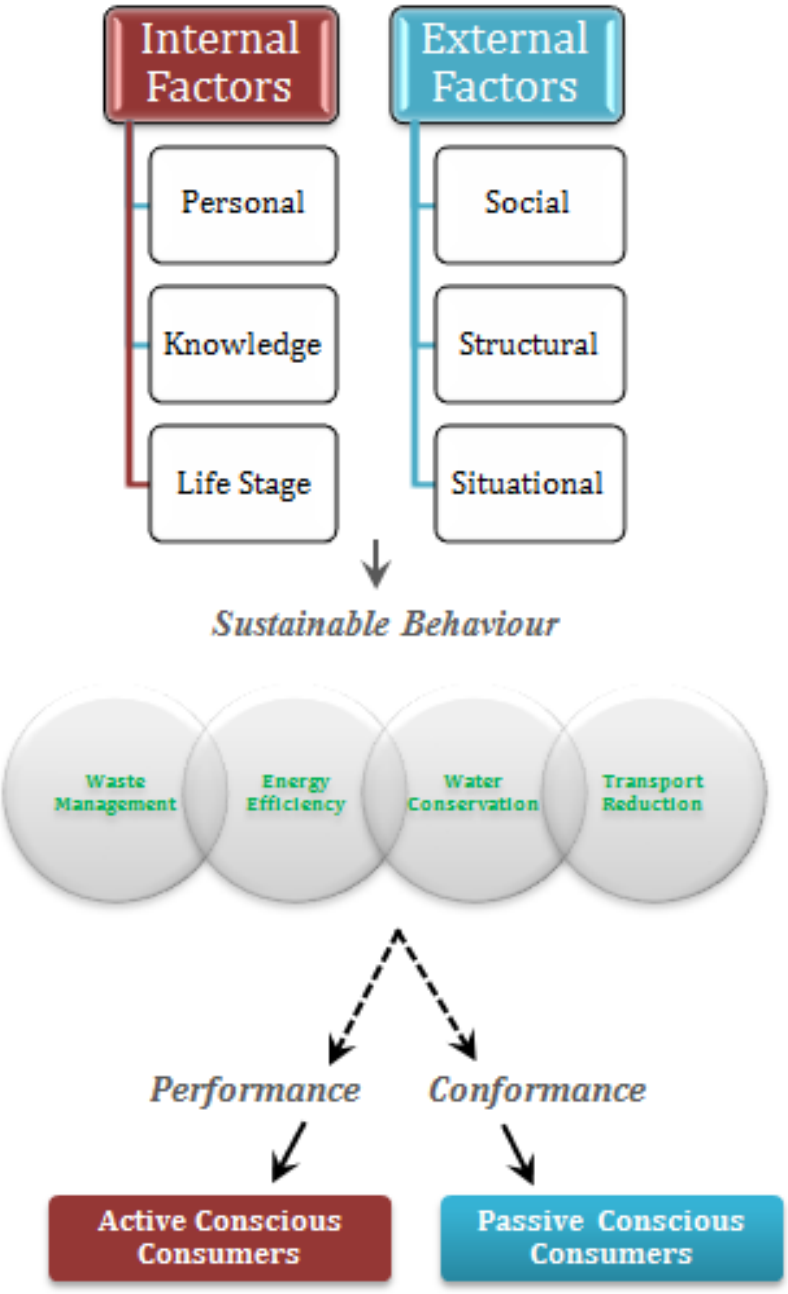
Even the most '*ethical*' respondent, who presented to interview wearing a Fairtrade t-shirt, admitted that car use was '*the only bad thing*' they did in their household. It is perceived that households cannot alter their mode of transport to one that is more sustainable. Another parent argues that although she recognises that she shouldn't use the car as often as she does because of environmental concerns she cannot cycle and '*carry three kids on my back*'. Households perceive there to be no alternatives and seem to be '*locked in*' (Jackson, 2005) to their use of cars. Respondents perceive their use of transport as unchangeable due to external factors and for the most part do not practice sustainable transport use.

5.2.4 Main Research Question

In the context of the Green-Schools programme, how are sustainable behaviour practices developed in the home?

The preceding sub-questions aimed to contextualise sustainable behaviour practices both within the school environment and the household. The answers to these questions inform the main research question of how sustainable behaviour practices are developed in the home, given that at least one member of the household attends a Green-School. The overall findings of this research indicate that households practice sustainable behaviours in varying degrees and these practices are developed by both internal and external factors. These findings contribute to the framework presented in Figure 5.1.

Figure 5.1 The development of sustainable behaviour practices in households



Source: Author

This framework illustrates the development of sustainable behaviour practices in the home. Internal and external factors (See Table 5.1 for a recap of these factors) directly influence the development of sustainable behaviours practices (waste management, energy efficiency, water conservation, and transport reduction). In turn, these behaviours occur in a *performance* or *conformance* manner in the home, leading to either '*active conscious consumers*' or '*passive conscious consumers*'.

Table 5.1 Internal and External Factors

Internal Factors	**External Factors**
Personal • Attitude • Personal Preferences • Ownership	*Social* • Family & Friend Influences • Exposure • Green-School Effect
Knowledge • Ethical Awareness • Media Influence	*Structural* • Authority • External Influences • Environment • Cost • Choice • Education
Life Stage • Generational differences • Childhood Influences	*Situational* • Context • Social & Cultural Norms • International Comparison

This research explored, in the context of the Green-Schools programme, how sustainable behaviour practices have developed in the home context. Figure 5.1 illustrates that both internal and external factors play a role in determining behaviour in this context. This development of behaviours will be discussed in relation to the two '*conscious consumer*' types subsequently identified in this research: *active* and *passive*.

Active Conscious Consumers

While all interview respondents appeared to be practicing some form of sustainable behaviour in the home, a distinction in the findings suggests that only a small segment of respondents were truly *active* in their sustainable behaviour practices. These appear to have internalised their behaviour and its impact. *Performance* occurs where households are aware and concerned about sustainability issues and take a greater responsibility for their impact on the environment. This form of behaviour leads to '*active conscious consumers*'. As one interviewee proclaims:

> *"I think I have changed…I have changed definitely. I guess we are just a lot more aware now and since the wheelie bins I think that has really gotten people tuned in. Before I would say I don't care what happens to the environment or the ozone layer or anything like that but that was just kind of ignorance really but when you sit down then and you actually think about it…"* (Participant C2)

And another admits:

> *"I was thinking I was doing great as I was filling my recycling bin, overflowing…that I was doing great things for the environment, or so I thought until I read that book* [No Impact Man]" (Participant C1)

As mentioned in section 5.2.3, for some, their concern for the environment developed *secondary* to their behaviour change. '*Active conscious consumers*' can be compared with the portrayal of '*ethical consumers*' in the literature who have an awareness and concern for the environment (Etzioni, 1998; Harrison *et al*., 2005; Barr and Gilg, 2006). However, the *active* consumers in this study did not have positive pro-environmental attitudes prior to their behaviour change but rather, *post behaviour change*. This concept contributes significantly to current literature on ethical/green consumers. An additional contribution this framework makes to current thought on these consumers is that sustainable behaviours are influenced by both internal and external factors. Much of the early literature on these consumers assumes internal factors directly contribute to sustainable behaviour (Elign, 1981; Leonard-Barton, 1981; Straughan and Roberts, 1999; Harrison *et al*, 2005).

The '*active conscious consumers*' in this study have developed their pro-environmental awareness over time, perhaps firstly due to encountering external factors such as organisational requirements, cost implications, or policy. This initial engagement has helped develop a greater awareness for the environment. In turn, internal factors such as knowledge and attitudes have resulted in these consumers taking a *performance* approach to sustainable behaviour practices; they appear to be *actively* engaging with the sustainable consumption practices.

Passive Conscious Consumers

The majority of respondents in this study practice sustainable behaviour, but not out of concern for the environment. Here, households are passive in their consumption behaviours. *Conformance* occurs where households are more directly influenced by external factors as they simply conform to institutional demands and structures. This form of behaviour leads to '*passive conscious consumers*'. Some examples of this passive behaviour include:

"*To be honest with you, when the bin man wanted it done that way…we didn't give it a lot of thought prior to that*" (Participant B1)

"*I recycle because the bin is there so I might as well be using it*" (Participant CTB1)

"*I don't think that legislation and changes are always the way to go. Sometimes it is just too much for people and people don't like to think that they are forced into things either, that is just human nature…but sometimes I guess we just have to be*" (Participant CB1)

These consumers do not actively engage in sustainable behaviours out of awareness or concern for the environment, but nonetheless their behaviours are sustainable. The identification of this type of consumer and how their sustainable behaviours have developed, significantly contributes to the discussion on how to achieve long-term sustainability. External factors such as social and cultural context and regulation take precedence over internal factors such as pro-environmental awareness and concern in determining sustainable behaviours for '*passive conscious consumers*'. For example, although participants do not report a reduction in their water consumption currently, they believe that wastage of water is widespread. Participants do not hesitate to suggest that regulation is necessary to alter the behaviours of individuals and households:

"*There is a lot of waste, I know, even just in my house, and if you add up all the houses it must just be scandalous because there are people in this world that don't have clean water and we are just letting it run down the sink. And really the only way to change that, and I don't really agree with the charges, but that will enforce changes*" (Participant CTB1)

Therefore, respondents are aware and recognise the need to conserve water but are relying on structural agents to determine when, and to what extent, their behaviour

will change. This supports Eckhardt *et al*. (2010) notion of '*institutional dependency*' whereby consumers rely on governments or institutions to decide what is socially responsible. This passive attitude differs greatly to how '*attitudes*' are presented in the literature (Leonard-Barton, 1981; Roberts, 1995; Straughan and Roberts, 1999; Harrison *et al*., 2005; McDonald *et al*., 2006). Traditionally, attitudes are viewed from a positive, pro-environmental perspective and were thought to influence sustainable behaviour. This study suggests that individuals have a passive attitude towards changing behaviours and once a sustainable behaviour practice is facilitated, they readily change their behaviours. Waste management and recycling behaviours among households were readily adopted when waste management companies dictated how their waste was to be sorted and collected. Behaviour change did not occur because of an overriding responsibility to care for the environment. Despite the criticism of the use of attitudes as a guide to behaviour (Devinney *et al*, 2010) it is important to note here the significance of these *passive attitudes* and the possible link to legislation as a way of increasing sustainable behaviours of the general population.

This research has shown that despite respondents not portraying much concern for pressing environmental issues, their behaviours, albeit passive, are having a positive net result for the environment – termed as '*passive positive behaviour*'. This '*passive positive behaviour*' may play a crucial role in addressing sustainability issues. These findings suggest that trying to increase environmental *concern* in a view to encourage voluntary change by consumers may not be the only option, or indeed the most effective. Perhaps a more sustainable and practical approach to achieving sustainable consumption may be to *facilitate* responsible behaviours for consumers through governance, legislation, structural mechanisms or other influential means; resulting in the practice of '*passive positive behaviour*'.

In light of my findings then we must ask the question: is sustainable behaviour *intended* in the case of ethical consumers actively choosing to be sustainable or is it *imposed* whereby consumers are behaving in a sustainable manner but not because of any ethical motivation or intention? If the latter is the case, which this study

suggests, this calls to question the notion of voluntary sustainable behaviour change being the only answer to our over-consumption issue. Perhaps mandatory behaviour change, whereby governments and institutions set the infrastructure and tone for compulsory behaviour change is a more viable solution for long term sustainability? Rather than focusing on *concern*, we should focus on *behaviour*. The findings in this research suggest that concern does not have any particular relevance in changing households' consumption behaviours, at least not in initiating behaviour change. Sustainable consumption practices have developed in the home context through a mixture of internal and external factors, where the overwhelming majority of this behaviour change has been *passive* in nature.

5.3 Chapter Conclusion

This chapter presented a comprehensive discussion on the overall findings of this research by providing clear answers to the sub-questions and the main research question. In answering the first sub-question, while it is important to acknowledge, as discussed in Chapter 3, the limitations arising with respect to the survey instrument, the findings nonetheless suggest that schoolchildren conceptualise sustainability as an action-oriented solution to environmental damage caused by human consumption and they recognise that improvement in our everyday behaviours is required. The survey findings suggest that Green-School children have a heightened sense of awareness and concern for the environment, and report significant competency in practicing sustainable consumption. Children confirm that they discuss and have learned about the environment primarily from their teachers within the school. This progression of both awareness and pro-environmental behaviour practice suggests that the Green-Schools programme is successfully shaping the pro-environmental behaviours of this young generation. The second sub-question asks whether there is a transfer of behaviour across contexts (from school to home) and the findings indicate that there is transference occurring, in the form of '*positive pester power*'. This is defined as children pestering their parents (or members of their household) to behave in a positive way (i.e. practice sustainable consumption). The final sub-question asked how households identify and practice sustainable behaviours. This was discussed under the four main themes of waste,

energy, water, and transport. The findings confirm that sustainable behaviour practices such as waste management, energy efficiency and water conservation are practiced in the home to some extent but transport reduction does not occur; households rely heavily on their cars as the main mode of transport. Where sustainable behaviours are practiced in the home they seem to be passive in nature as an overwhelming majority of participants discuss behaviour change occurring in direct response to external factors.

These sub-questions lay the foundation to answering the main research question: In the context of the Green-Schools Programme, how are sustainable behaviour practices developed in the home? The overall findings of this research indicate that households do practice sustainable behaviours, in varying degrees, and these practices have developed from both internal and external factors. The overall findings to the main research question is presented in Figure 5.1. The internal and external factors are presented in Table 5.1.

Internal and external factors directly influence the development of sustainable behaviours practices (waste management, energy efficiency, water conservation, and transport reduction). In turn, these behaviours occur in a *performance* or *conformance* manner in the home, leading to either '*active conscious consumers*' or '*passive conscious consumers*'. Both these consumer types are discussed in detail. Only a small segment of respondents were truly *active* in their sustainable behaviour practices. These appear to have internalised their behaviour and its impact. *Performance* occurs where households are aware and concerned about sustainability issues and take a greater responsibility for their impact on the environment. The findings of this research indicate that this concern for the environment may occur *post* behaviour change. The majority of respondents in this study practice sustainable behaviour, but not out of concern for the environment. Households are passive in their consumption behaviours. *Conformance* occurs where households are more directly influenced by external factors as they simply conform to institutional demands and structures.

This research has revealed that despite respondents not portraying much concern for pressing environmental issues, their behaviours, albeit passive, are having a positive net result for the environment – termed as '*passive positive behaviour*'. These findings imply that a practical approach to achieving sustainable consumption may be to facilitate responsible behaviours for consumers through governance, legislation, structural mechanisms or other influential means.

Chapter 6

Conclusion

6.1 Introduction

The main aim of this thesis was to explore how sustainable behaviour practices have developed in the home, given that at least one member of the household attends a Green-School. This study has achieved this aim and offers unique contributions to literature on sustainability, environmental policy and sustainable consumption. The discussion offered in the previous chapter forms the basis for the key contributions and implications of my research on theory, practice and policy offered in this chapter. This includes insights on how my research fits within, and extends, the literature relating to sustainable consumption; how my research can influence practice in terms of marketing implications and the operation of the Green-Schools programme; and the implications for environmental policy and regulation in this context. The chapter will conclude with a discussion of the limitations of my research and suggestions for future research.

6.2 Key Contributions and Implications

Overconsumption in industrialized countries continues to present major challenges to achieving the objectives of sustainability. In his book *Prosperity without Growth*, Jackson (2009) highlights two crucial aspects of sustainable consumption: the importance of *behaviour change* and the *role of government* in providing the appropriate infrastructure for sustainable consumption to occur. Likewise, Peattie (2009, p.112) calls for progress in the area of sustainable consumption and suggests that we need to '*structure consumption choices for the uninformed and unconvinced in ways that offer progress towards sustainability*'. To achieve a sustainable society we need a greater understanding of how to transform conscious consumption into long-term sustainable consumption. The findings of this study shed considerable light on this area. The following section will develop the theoretical, practical and political contributions and implications of my research.

6.2.1 Theory

The findings of my research contribute to the following discussion on the theoretical perspectives of sustainable consumption. My research offers insight into how sustainable behaviours are developed in the home, considering that each household had at least one member attending a Green-School. Much of the early research on sustainable consumption looked at the purchasing and consumption behaviours of the '*green consumer/citizen*' segment which included the ideal ethical consumer (Webster, 1975; Leonard-Barton and Rodgers, 1980; Elign, 1981; Leonard-Barton, 1981; Roberts, 1995). More recently the focus has shifted to those consumers who seem to be on the fringe of ethical consumption and are generally regarded as having an awareness of environmental concerns but not consistently including these concerns in their consumption decisions (Barr & Gilg, 2006; McDonald *et al*., 2006; Szmigin *et al*., 2009; Prothero *et al*., 2010). The majority of these studies looked at consumers' ethical purchasing behaviours rather than their general consumption behaviours. My research significantly contributes to this literature by broadening the focus of consumption to deal with everyday sustainable practices in the home. While this thesis reflects on some literature that discusses ethical purchasing rather than general ethical behaviour, theory on how consumption decisions occur in everyday contexts is important to contribute to the wider discussion of sustainability, outlined in Chapter 2.

The findings of this thesis contribute in a particular way to the sustainable consumption debate, and progress thought on how to overcome the impact human consumption and disposal has had on our planet. While consumer purchasing behaviour is not addressed directly in this research, the findings offer insight for sustainable/green marketing and in particular social marketing. The way in which consumers practice sustainability in their homes offers real value to marketers who try to advertise to '*green consumers*' and it sheds light on how effective social marketing campaigns could be developed to advance and sustain long-term behaviour change. Discussion on how my research contributes to theory on sustainable consumption will be discussed in relation to relevant themes in the

literature: consumer segmentation; attitude-intention-behaviour gap; and facilitating behaviour change.

Consumer Segmentation

Understanding how behaviours are developed and practiced in an everyday context has important implications for pro-environmental consumer segmentation literature. This research focused on the everyday behaviour practices of consumers which have led to the identification of two types of consumers that practice these behaviours: '*active conscious consumers'* and '*passive conscious consumers'*. This conceptualisation of consumers in the everyday contributes to the earlier consumer typology outlined in Table 2.1. The consumer types identified in this study fit within the '*Conscious Consumer/Citizen*' and '*Mainstream Consumer/Citizen*' categories. The reason the active and passive consumers identified in this research fits into two categories is because I feel that there is (almost) no consumer in Irish society that is not practicing sustainable consumption in some manner. The issues with over-consumption remain, but it must be acknowledged that progress in the area of sustainability has developed in households in Ireland.

The '*passive conscious consumers*' identified in this research highlight that some consumers do not have any pro-environmental concerns but are behaving sustainably. When asked to discuss their actual behaviour practices, they are behaving in a pro-environmental manner, albeit passively. Their concerns do not align with sustainability principles but their actual behaviour is sustainable. Behaviour may be pro-environmental but it is driven by external factors rather than internal factors such as positive attitudes or concern. This may explain why these consumers report no *concern* for the environment in previous studies. The findings of this study imply that their behaviour is not motivated by concern but rather by external factors such as family influence, structure, policy, social norm, or other external factors. Therefore, some of these individuals may be inaccurately represented in the literature; considered '*oblivious*' to environmental issues when asked about their concern for sustainability or climate change. However, regardless

of their lack of *concern*, their everyday behaviours may be pro-environmental, and most importantly, are positively contributing to long-term sustainability. Young *et al*. (2013) alluded to this phenomenon arguing that attitude change is not necessarily a pre-requisite for behaviour change, and my work would seem to confirm their assertion.

Alternative consumer types identified in the literature suggest a more accurate portrayal of how sustainable behaviour is practiced in the everyday as they bear similarities with the '*passive conscious consumers*' identified in this research. '*Conscious consumers*' are conscious and concerned about their consumption levels but are flexible in their behaviour choices and balance the desire to remain within a consumer society while paying respect to their environmental and social responsibilities (Szmigin *et al.*, 2009). '*Conformists*', in a similar way dutifully perform some sustainable consumption practices such as recycling or reduce meat consumption but they do not portray a sense of concern or responsibility for the environment. They are practicing sustainable consumption out of guilt or peer pressure rather than an inherent desire to be environmental (Leonard-Barton and Rodgers, 1980).

Similarly, '*Selectors*' are not devoted to sustainability but act in a green or ethical manner in one aspect of their consumption but grey in all other consumption practices. These selectors are positioned as the largest group in society and *'select an aspect of sustainable consumption on which to focus'* such as being avid recyclers but otherwise lead *'consumption-oriented lives'* (McDonald *et al*., 2012, p.455). Similarly, the '*Blind Green Consumer*' engages in green consumption acts but not out of concern for the environment but rather motivated by personal circumstances such as financial constraints. Again, in a similar way '*Conservers*' are categorized as people who perhaps grew up in an environment where waste aversion was paramount; these consumers may have been exposed to poverty or someone in their household experienced poverty and thus, a frugal attitude was instilled (Leonard-Barton and Rodgers, 1980).

What these particular consumer labels have identified is that sustainable behaviour practices are occurring for a multitude of reasons. Understanding sustainable consumption from the view of the consumer has led to a vast and confusing array of consumer types. The earlier grouping of consumer types in Table 2.1 simplified the segmentation of consumers in this context. Consequently, the two consumer segments that emerged from this research, '*active conscious consumers*' and '*passive conscious consumers*' contribute to the understanding of how behaviour occurs in the home context.

Attitude-Intention-Behaviour Gap

Literature on sustainable consumption now agrees that information campaigns that successfully convey information to individuals may not necessarily change individuals' behaviours (Eckhardt *et al*., 2010). Verplanken and Wood (2006) argue that habits, which dominate much of consumers' everyday behaviours, are very difficult to change and awareness campaigns that appeal to consumers may change *attitudes* but, due to the entrenched nature of habits in their everyday lives, fail to change their actual *behaviours* (Hobson, 2003; Southerton, 2012). My research endorses this point. This has led to the rich discussion on the reasons for the attitude-intention-behaviour gap (Belk *et al*., 2005; Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Shaw *et al*., 2007; Carrington *et al*., 2010; Eckhardt *et al*., 2010; Carrington *et al*., 2014).

Following Schaefer and Crane's (2005) call for studying the problematic nature of sustainability from a social and cultural theoretical perspective, this study explored sustainable consumption from the perspective of the everyday sustainable practices in the home context. This perspective has shed light on the problematic issues and barriers of progressing sustainable consumption. Viewing sustainability from this perspective enriches our understanding of what sustainable consumption is and/or might be and where roles and responsibilities for achieving sustainable consumption lie.

The findings of this study highlight that studying intentions or concerns for the environment may not necessarily result in an accurate portrayal of behaviours. Some consumers are behaving sustainably but attitudes or intentions did not play a part in motivating their behaviour. In the case of the majority of households in this study, external structures or forces were directly influencing sustainable behaviours rather than any overriding concern or intention to behave ethically. This finding extends our understanding of why an attitude-intention-behaviour gap may have emerged in the literature. In this study, behaviour change does not necessarily rely on personal attitudes or intentions, and it is fair to say attitudes don't indicate likely behaviour. Thus, studying attitudes and concern for the environment may have resulted in a skewed representation of behaviour in this context. This study explored reported behaviours in the home and uncovered that sustainable behaviours are occurring *in the absence of* positive attitudes towards the environment.

Facilitating Behaviour Change

Consumption practices are usually situated within a wider social context and thus treating decision-making as a positivistic act abandons the cultural and social norms that surround everyday practices of consumers (Schaefer and Crane, 2005; Adams and Raisborough, 2010; Peattie, 2010; Carrigan *et al*., 2011; Southerton, 2012). Verplanken and Wood (2006) argue that the only circumstance in which this positivistic view of behaviour change through information-led campaigns can effect behaviour change is when the environmental cues that individuals rely in their everyday lives are disrupted, such as changing jobs or moving house. They also discuss McKinlay's (1993) concept of '*upstream*' interventions, which prevent unwanted behaviours occurring rather than trying to remedy the consequences of behaviours after they have occurred, a nod to Albert Einstein's observation "*A clever person solves a problem. A wise person avoids it*". Upstream interventions involve large-scale macro-level changes that *facilitate* the performance of desired behaviours.

The Green-Schools programme used in this study is a form of '*upstream*' intervention. Schoolchildren are presented with a structured method of segregating their recycling and waste in their school and therefore their uptake of this behaviour change occurs easily. This has proven a successful means of educating and facilitating sustainable behaviours among children in the school context, rather than simply providing children with information about the advantages and disadvantages of their waste disposal options (Hobson, 2003; Verplanken and Wood, 2006). Children appear to have been socialised with regards to their environmental behaviours in their school (Ward, 1974) and this has resulted in '*positive pester power*' occurring at home. These educated and skilled children are resocialising their parents in the home. Their active participation in the Green-Schools programme at school appears to have enabled them to directly influence the skills and behaviours of those at home and this adds to the literature on reverse socialisation in this context (Ballantyne *et al*., 1998). Downstream interventions, such as information campaigns about green products aim to alleviate the negative outcomes of consumption whereas, upstream interventions, such as the Green-Schools programme or improving bus network efficiency to encourage less reliance on cars, aim to prevent such outcomes in the first place (Verplanken and Wood, 2006). In light of my findings, this upstream method which *facilitates* the performance of sustainable consumption may prove crucial in ensuring long-term sustainability.

The extant literature on behaviour change and sustainable consumption focuses on the individual and their rational choices and does not, for the most part, account for the relations between individuals in this context (Dolan, 2002; Carrigan *et al*., 2011). Consumers are likely to find a convenient way of justifying their consumption choices (Eckhardt *et al.,* 2010). Institutional dependency is used by households in this study to explain their consumption choices as they see the enforcement of ethical choices as a responsibility of the government and/or organisations. In this case there is a lack of individual responsibility (Eckhardt *et al.,* 2010). This lack of responsibility is also highlighted by Carrigan and Attalla (2001) as they suggest that consumers may rely on legality; view acting within the law being sufficient to be perceived as socially responsible.

It has also been suggested that individuals may perform sustainable acts even without having pro-environmental attitudes, because their work structure, systems, culture and/or rewards facilitates such behaviour (Young *et al*., 2013) and the findings in this study reinforce this idea. This moves away from the notion that raising environmental consciousness encourages behaviour change and places behaviour change as occurring within the social and cultural boundaries of an individual's context (Dolan, 2002; Schaefer and Crane, 2005; Young *et al*., 2013).

The notion of *facilitating* behaviour change rather than just relying on *motivating* the better nature of the individual to consume in a pro-environmental manner is beginning to yield interesting results (Carrigan *et al*., 2011) and this study contributes to this discussion. Paying closer attention to the habits, social processes, contexts and structures within which consumer behaviour occurs has been acknowledged as a neglected aspect of many of the studies in the ethical/green consumption context (McDonald *et al*., 2006; Chatzidakis *et al*., 2007; Carrigan *et al*., 2011). Focusing on information-led intervention campaigns that try to change consumers attitudes and behaviours without due consideration for the socio-structural factors which sustain individuals everyday habits is flawed (Verplanken and Wood, 2006). Moving towards a more sustainable future thus requires a combination of technological innovation, regulation, investment, financial incentives, organisational change, and education (Wells *et al*., 2011).

All consumption has important social roles and purposes therefore, sustainable consumption needs to take into account the cultural and social aspects of consumption (Schaefer and Crane, 2005) and my research endorses this point. Rather than relying on individual responsibility to conserve the planet, a more collective and socially bound commitment to sustainability is suggested to encourage a greater uptake of pro-environmental behaviours (Schaefer and Crane, 2005). The question identified from this research is how far *encouragement* will go in achieving our long-term sustainability goals? May we also need policy to ensure that individuals, households and communities are behaving sustainably? This study explored how

sustainable behaviours developed in the household and considered the social interaction between Green-School children and other members in the home.

Exploring consumption from the perspective that it is embedded in social and cultural practices of people's everyday lives offers a valuable contribution to sustainable consumption literature, which too often focuses on the individual, rational choice perspective of consumption (Dolan, 2002; Schaefer and Crane, 2005). Consumption is not an act determined by the consumer in isolation (McDonald *et al*., 2009). Working within the dominant social paradigm (DSP) to change consumer perceptions and acceptance of pro-environmental behaviours may be the substantive task for industry and government policies to achieve long-term sustainable behaviour change in society (Kilbourne, 1998; Schaefer and Crane, 2005; Peattie, 2010). It is suggested by Lorenzoni *et al*. (2007) that targeted and tailored information provision must be supported by wider structural change if sustainability is to be realised in the daily lives of citizens. Consumer behaviour in this context is determined by industrial, political, and social structures as well as individual values, practices and aspirations (McDonald *et al*., 2009).

6.2.2 Practice

The conclusions of this study have important implications for corporate strategy and marketing in this context. Undoubtedly, corporations have a role to play in achieving sustainable consumption and some progress has been made through CSR strategies, as discussed in Chapter 2. This study reveals that households are largely influenced by institutions and organisations in determining their consumption behaviours. The findings reveal that '*Conformance'* occurs in households whereby consumption is more directly influenced by external factors, such as institutional demands and structures. Despite respondents not portraying much concern for pressing environmental issues, they are behaving responsibly in relation to waste, energy and water. Their behaviours, although passive in nature, are nonetheless having a positive net result for the environment – termed as '*passive positive behaviour*'. These findings imply that a practical approach to achieving sustainable consumption may be to facilitate responsible behaviours for consumers through governance,

legislation, structural mechanisms or other influential means. This reiterates the importance of the role industry may play in achieving the aims of sustainability going forward. If industry wishes to avoid a situation where legal obligations get entwined with ethical obligations (Carroll, 1999) they should focus on developing CSR strategies that effectively deal with their environmental impact and the implications their products have on consumers' ability to cope with the environmental burden (e.g. households trying to deal with excess packaging). Porter and Kramer (2006) discuss this type of CSR as Corporate Social Integration (CSI), stressing the importance of firms in taking specific responsibility for environmental issues that affect their operations and products. Consumers in this research have communicated their frustration with product design (excess packaging) and how this has negative implications for them on a practical level in the household. They discuss the burden of the responsibility placed on them for ensuring that products/packaging are being disposed of responsibly. As the findings of this study suggest that consumers are passive in their uptake of sustainable consumption and will largely follow environmental guidance from companies/governmental regulations, I argue that corporations need to look more closely at the environmental impact of their products and packaging in the first instance, and play a greater role in ensuring sustainable consumption among their consumers. If responsibility for environmental issues are more evenly distributed along the supply-chain it may relieve the frustrations and burdens, which are perceived as unavoidable by respondents, and assist in our progress towards sustainability. Although corporations are reporting on their sustainability agendas and producing CSR strategies which may include informing consumers though green marketing and using eco-labels, this study suggests that households require practical solutions to their everyday problems of disposing of excessive packaging and largely rely on external factors such as institutional regulations and structure to determine their consumption behaviour.

The marketing discipline has received much criticism for encouraging consumption that has led to waste generation, pollution, and the deterioration of natural resources, all of which are destroying the planet. In contrast, green marketing has attempted to remedy the negative consequences of the marketing practice through the promotion of '*green*' products and promotional messages encouraging consumers to consume

less (Peattie, 1999; Shaw and Newholm, 2002; McDonald *et al*., 2006; Emery, 2012). Green marketing emerged in the 1980s and 1990s due to increased attention environmental issues were receiving in the corporate world. It was perceived in the early 1990s that a rapid increase in green consumerism was signalling a dramatic and expected shift in consumption towards greener products (Prothero, 1990). However, this did not occur as expected and led to extensive research on the attitude-intention-behaviour gap (Belk *et al*., 2005; Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Shaw *et al*., 2007; Carrington *et al*., 2010; Eckhardt *et al*., 2010; Carrington *et al*., 2014). Green marketing techniques focused communication messages to the green consumer segment (Elkington, 1994). However, this study suggests that consumers' behaviour in this context is influenced largely by external factors and not an inherent concern for the environment, which green marketing was largely relying on to encourage purchases of green products. This study reveals that media communications have only mildly assisted in raising awareness of environmental issues but more importantly, do not seem to act as a catalyst for behaviour change. Respondents in this study report that knowledge of sustainability increases their consciousness but does not necessarily influence their everyday behaviours. This has important implications for green or sustainable marketing. The realisation of sustainability objectives will depend on accepting the limitations of marketing and acknowledging the requirement of regulatory constraints (van Dam and Apeldoorn, 1996). These authors argue for regulation in the market system which both ecological and green marketing have neglected. In the absence of established regulation of the industry perhaps a focus on social marketing may yield more practical results?

There is increasing support for the social marketing approach to sustainable behaviour change in this context as it focuses on positioning pro-environmental behaviours as the norm and socially accepted (Peattie, 2009; Barr *et al*., 2011; Rettie *et al*., 2012). This accepts the social and cultural view of consumption (Schaefer and Crane, 2005) and positions *social practices* as central to the behaviour change effectiveness (Spaargaren, 2003), which this research has suggested results in sustainable consumption (the Green-Schools programme focuses on sustainable

behaviour practices such as recycling, turning off lights, harvesting rain water, etc. to effectively change behaviours of schoolchildren).

The conclusions of this study also have important implications for the Green-Schools Programme. The Green-Schools programme is an environmental education programme that acknowledges long-term, whole school action for the environment. It introduces environmental issues to children through active learning and participation in the school and encourages them to extend this behaviour out into their homes and the local community. This study explored if these environmentally educated, sustainable actors extend their behaviour practices beyond the school gate. The findings suggest that these schoolchildren are displaying signs of '*positive pester power*' in their homes where they are acting as catalysts for behaviour change. However, the transference of behaviour is not consistent across practices or exercised by all children, but it is recognised that other factors in the home may contribute to this lack of transference (e.g. ownership of sustainable practices by parents).

The findings of this study indicate that more work could be done in relation to the management and organisation of the Green-Schools programme, both to increase the '*positive pester power*' these children can impart in the home and expand the overall impact of the programme on society. Although acknowledging that the Green-Schools programme is currently contributing positively to the development of sustainable practices both in the school and in the home, potential improvements of the programme have surfaced from this research. Improvements include the following:

- The programme currently has no direct link with ethical/sustainable purchasing. This is an area of huge contention in the sustainable consumption context. Given that the programme is successful in imparting positive behaviours among schoolchildren and their homes (through positive pester power) the programme has potential to have a much greater impact on achieving wider aims of sustainability in relation to purchasing. This is an

area that should be added as a theme to the programme. I acknowledge the difference of this theme in relation to the established themes, given that schoolchildren largely do not have the capacity to actively practice this theme themselves; ethical and sustainable purchasing has greater links to the schoolchildren's parents. But given that this study has revealed that schoolchildren impart '*positive pester power*' to practice sustainable behaviours, there is potential for these schoolchildren to impart '*positive pester power*' in terms of purchasing within the home. It may also be important to inform these schoolchildren of sustainable purchasing to further their potential in becoming the sustainable generation of the future.

- The overall management and coordination of the programme from a primary school, secondary school, and third-level needs to improve if the '*Sustainable Generation*' identified in this research are to be realised in the future. Some respondents discussed how teenagers in their home were proving a difficulty in ensuring compliance of environmental practices. Preliminary interviews that I undertook with two teenagers of a second-level Green-School suggest that the continuity of the programme from primary to secondary level is not optimal and behaviour practices in second-level schools are not consistent with the robust environmental behaviours that had been practiced by them at the primary-level school. This suggests that the work that is done by the Green-Schools programme at primary-level may be lost in transition and this is an immediate area for concern.

A refinement of the Green-Schools programme would result in greater potential for an upwards push from young generations in achieving long-term sustainability. If the concerns that have surfaced from this study are addressed, the scope and continuity of the programme may allow for sustainable behaviours to be normalised in society and assist in the success of future social marketing campaigns.

6.2.3 Policy

The findings of this research contribute to current thought on policy in the area of sustainable consumption. Voluntary behaviour change, towards pro-environmental

behaviour, has not materialised in a significant way (Carrington *et al*, 2014). This is presented in the literature as an attitude-intention-behaviour gap (Belk *et al*., 2005; Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Shaw *et al*., 2007; Carrington *et al*., 2010; Eckhardt *et al*., 2010). This gap suggests that even those consumers who consider themselves '*green*' or '*ethical*' consumers do not always follow through on their positive attitudes or intentions to behave sustainably. This has very important implications for sustainability. If those consumers who are presented in the literature as being aware and concerned for the environment are not consistent in their behaviours to support such concerns, where does that leave us with regards to achieving the aims of sustainability and the aims set out by UN and EU policy for the environment? This literature (on the attitude-intention-behaviour gap) discusses consumers who have identified themselves as ethical consumers. My research does not use such a group but rather focuses on households of Green-School children who are considered to have some awareness of environmental issues due to their child attending a Green-School but do not necessarily have any commitment to sustainability concerns. What this study has found is that these consumers *are* practicing sustainable consumption in their homes, but they do not discuss any overriding concern for the environment. These households rely largely on external factors to determine their behaviour; such factors as social interaction with family and friends, corporate policy of waste management companies, social norms, and governmental policy, among others discussed in Chapter 4. Positive findings show that consumers are competent in managing their waste (in terms of recycling) and energy usage in the home due to the external factors that impact on these behaviours; corporate policy and economic implications respectively. What these findings suggest is that households *are* behaving sustainably, which has very positive connotations for achieving the aims of sustainability. These behaviours have developed and are supported by policies and structures from corporations and governments.

Findings also suggest that households feel under pressure to deal with excess packaging that they believe is unavoidable. Here, it is believed that corporations need to take a greater responsibility for the impact their products have on consumers' lives and the issue with excessive waste. But what are corporations doing about such

environmental issues, or more importantly, how are governments tackling this corporate-level issue? Governments have the responsibility and duty to ensure that responsibility for environmental issues are placed appropriately on corporations and consumers. If governmental policy were to tackle issues with corporate responsibility more vehemently, taking an '*upstream*' approach (McKinley, 1993; Verplanken and Wood, 2006) to solving environmental issues then this would set the right conditions under which consumers could behave. If there were less packaging on fruit and vegetables under governmental rules, then the end-use of such plastics would not become an issue. Relying on consumers to appropriately dispose of such packaging would no longer be a concern because the problem would be removed from the supply-chain. Recalling the common phrase '*reduce, reuse, recycle*', the first action is to '*reduce*' and surely this is the obvious step we need to take to mitigate our overall impact on natural resources. However, as literature has suggested (Belk *et al*., 2005; Chatzidakis *et al*., 2006; Auger and Devinney, 2007; Shaw *et al*., 2007) even the most ethical consumers do not consistently behave in accordance with their beliefs and concerns. In addition, these ethical consumers are not the majority in society so the efforts that they do make will not have the monumental positive impact on the eco-system that is needed to ensure our sustainability as a planet going-forward. In the past it has been argued that governments have side-stepped the real forces behind consumption issues (Hobson, 2002) and have mainly focused on the individual-level rather than the corporate-level; targeting citizens to follow a sense of duty or responsibility for the environment (Barr *et al*., 2011). Rather than continuing to rely on voluntary behaviour change, the findings of this study suggests that governments need to play a much more active role in setting the right conditions under which consumers/citizens can behave. Jackson (2005) argues that governments must:

- Ensure that incentive structures and institutional rules support pro-environmental behaviour
- Enable access to pro-environmental choice
- Engage citizens in initiatives that empower
- Exemplify the desired changes within government's own policies and practices.

Ultimately, governments should hold the responsibility for providing the right *situation* where citizens can act in a pro-environmental manner (Jackson, 2005). The findings of this research support Jackson's view.

Therefore, going forward, policy may play a pivotal role in facilitating behaviour change for those members of society that do not have any pro-environmental concerns. Policy frameworks '*fundamentally shape everyday household consumption*' (Pape *et al*., 2011, p.25) and the potential for policies to achieve sustainable consumption at the household level have been highlighted in this study. Households have changed their behaviour, albeit passively, in response to policy frameworks. The realisation that households are mostly passive in their acceptance of sustainability practices suggest that regulation is a key factor in combating the enormous over-consumption issue that the planet is faced with. Much has been done at UN and EU level to set national standards and limits on carbon emissions. But perhaps a closer look at consumption from a household perspective may assist in shaping policy that effectively combats negative consumption occurring in this context. This includes policy at both industry and household level.

6.3 Limitations

While this study has made valuable contributions to the sustainable consumption field it is not without limitations. My personal views and behaviours no doubt have had some impact on the direction this study took and the questions that were asked at interview stage. Although researcher bias was bracketed prior to interviewing and I did not consciously influence the interview process, my particular knowledge set and interests may have had an impact on the development of certain concepts during the course of the interviews, and to some degree may have influenced the interpretation of these interviews at analysis stage. However, my ethical opinions are not overly domineering. It would make for a different study if I was indeed a devoted ethical consumer. I can relate and empathise with the dilemmas presented by the participants in this study. However, the various behaviours that were reported throughout the interviews with these '*conscious consumers*' highlighted the

complexity of behaviour in this context. While I related with some reported experiences in relation to sustainable consumption, others recounts were in contrast to what I had previously known. Thus, the limitation of personal interest in this subject matter was abated by the fact that I am a self-confessed '*conscious consumer*' and can relate, in part, to the participants experiences but do not feel in any way superior or more knowledgeable about the ways in which sustainable consumption is experienced in everyday consumer lives.

The data presented in this study stems from self-reported behaviours. Self-reporting studies have received criticism in the past as discrepancies in narrating actual behaviours have arisen. Socially desirable responses have distorted research findings in the past and remain a concern for research that has an ethical dimension (Carrigan and Attalla, 2001; Auger and Devinney, 2007; Carrington *et al*., 2010; Devinney *et al*., 2010). I was acutely aware of this limitation throughout the interviews and remained non-judgemental in the framing of questions to ensure there was no preconceived notion of what may constitute as a '*right'* or '*wrong*' answer. Participants were advised prior to commencement of the interview that the main interest of the study was to understand their individual experience of the phenomenon under study, thus accurate accounts of behaviour practices were required.

An additional methodological limitation is acknowledged regarding the survey used for this research, which was adapted from a survey used by An Taisce in 2001. The survey was adjusted from the original version to more appropriately suit the aims of this study however, it is acknowledged that survey instruments are open to continuous improvement and a poorly constructed survey can have negative implications (O'Leary, 2010). The guide proposed by O'Leary (2010, pp. 183-186) was used in refining the original An Taisce survey in light of the aims of this study. The survey was not subject to statistical analysis for this particular study but if it were to be used in the future for such purposes, or indeed for future exploratory purposes, it may need to be additionally refined, where appropriate. Using a mixed method approach for future research should consider the methodological limitations

aforementioned, including giving additional thought to the use of a survey as an enhancement or sampling tool. A larger sample size for the survey would allow for greater statistical analysis and use of its findings.

Another limitation of this study is that it is only a snapshot of the sustainable behaviours of these children and parents at one point in time. The nature of sustainable consumption, which is influenced by social and cultural structures and norms, may change over time. Water charges were discussed in the interviews as a distant reality but currently these water charges are being implemented and have been met with significant opposition from the public. The views among respondents on water conservation and water charges may take a different tone now due to public interest in the water debate. Thus the findings presented in this thesis are representative of household behaviour at one point in time.

The Irish context is recognised as a possible limitation to this research. Ireland has a history of successful social policy such as the plastic bag levy implemented in 2002 and the smoking ban implemented in 2004[6]. These policies were successfully implemented and were met with relatively little opposition from citizens. Thus, studying the role of environmental policy in the context of this research recognises that Irish consumers/citizens are familiar with, and largely accept, social policies that require behaviour change. The reliance and/or acceptance of such environmental and social policies may differ in other countries.

Sample size is another limitation of this research. Although data saturation was reached for this particular segment of participants it may prove beneficial to increase the sample size to include more parents/guardians of one, two, three and four Green Flag status schools. Some Green Flag status schools are slightly more represented in this study than perhaps envisaged and did not include any parents from Green Flag schools that have attained four green flags. The significance of this is typically the

[6] Ireland was the first country in the world to introduce a social policy that prohibited smoking in the workplace including public houses/bars, restaurants, offices etc.

'*transport*' theme is the fourth theme in the series of green flags. The fact that this theme may not have been under review by the surveyed schools may have had an influence on the awareness and practice of sustainable travel. The transport theme slightly differs from the other themes on the programme as there is an inseparable tie between the parents and school in terms of achieving sustainable transport practices. An Taisce are currently researching the effectiveness of the transport theme (Green-Schools Ireland, 2015) and I will also suggest this is an area for future research.

Due to the fact that the sample chosen were not extensively aware of environmental issues, it proved somewhat difficult to initiate long conversations about environmental behaviours in the home. While some participants were more aware than others on the connection between some questions and the environmental debate other participants were not. However, interestingly as interviews developed some participants proved to be quite environmental in their descriptions of their behaviours but did not directly relate their behaviours to being ethical or sustainable. Thus, the development of interview technique proved crucial as interviews progressed but had the sample been more environmentally aware and made connections between behaviour and sustainability more easily it would have provided a greater focus on the discussion of sustainable behaviours throughout the interviews.

6.4 Suggestions for Future Research

The conclusions of this thesis have inevitably raised questions that could be addressed in future research. The following are some areas I suggest for future research.

This thesis has paved the way for further research on the presence of *active* versus *passive* consumer behaviour in this context, focusing on *behaviour* and not solely on attitudes, motives and intentions for sustainable consumption. Taking social practices as a starting point in different households or consumption contexts would

result in a richer understanding of sustainable consumption as practiced by both active and passive consumers. Viewing consumption as a social and cultural practice that cannot be separated from the system that supports it would further our understanding on how we can structure sustainable consumption within contexts and normalise it.

Future research could extend the scope of behaviours to explore ethical purchasing. How might internal and external factors influence ethical purchasing? Is there a case where consumers are not aware that what they are purchasing is good for the planet and their reason for purchasing is not for environmental reasons? These consumers need to be re-placed or accurately represented within the consumer typology to show that they are in fact having a positive impact on the environment, regardless of their attitudes, motives or intentions. This would advance the concept of '*passive positive behaviour*' which was identified in this study.

Future research involving the Green-Schools as a research site is warranted. This has proved to be an interesting site in relation to the development and long-term viability of sustainable consumption. This study suggests that schoolchildren who take part in the Green-Schools programme while in primary education are well informed on the practical implications of their behaviour on the planet and are equipped with the skill set to perform sustainable acts. This sustainable behaviour is consistent within the school (as the programme requires whole school action for the environment) and to some extent this pro-environmental behaviour is transferred across contexts to the home, where they continue to perform sustainably and some schoolchildren actively try to influence others behaviour in the home context. To further explore this behaviour change it would be interesting to explore how these schoolchildren behave with regards their well-established sustainable behaviours when they transition into second level education. Do these Green-School children sustain their sustainable behaviour competencies when they enter a different school environment? Given that some parents in this study identified '*teenage hormones*' as a barrier to ensuring sustainable behaviour is practiced in the home, does environmental behaviour change with age or structural environment within the school context?

In relation to the Green-Schools it may also be valuable to include schools which have achieved at least 4 green flags in a future study. These schools have successfully worked through all the themes of waste, energy, water and transport. A future study could also include the schools that were involved in exclusively promoting the Green Home programme. This would reveal whether, when given explicit direction to do so, if school children can become greater catalysts for behaviour change in the home. It would be also be interesting to know why these households participate in the Green Home programme, whether there is an underlying concern for the environment or whether households participate because their behaviour change is being easily facilitated.

Finally, I suggest broadening the scope of the current study to look at Eco-Schools in other national contexts and their potential impact on behaviours in the home. Future research could also look at the remaining non-Green-Schools to explore if schoolchildren's behaviour differs both in the home and school context. And to advance our understanding on how sustainable behaviour occurs in the home in greater scope, general households (without Green-School children) could be explored.

6.5 Chapter Conclusion

This thesis has explored, in the context of the Green-Schools programme, how sustainable behaviour practices have developed in the home context. The findings of this research contribute to the discussion on how to progress sustainability and in particular how to achieve sustainable consumption by members of society. The literature review, outlined in Chapter 2, discussed current thought on the role of corporations, governments and consumers in achieving sustainable development and consumption. Corporations have traditionally responded to the sustainability debate with CSR agendas and green marketing campaigns (Freidman, 1970; Carroll, 1991; McWilliams and Siegel, 2001; Peattie and Crane, 2005; Porter and Kramer, 2006; Alves, 2009; Prothero *et al*., 2010). Governments have contributed to the environmental issues through legislation and policies to reduce carbon emissions

(UNCED, 1992; European Commission, 2013a; IPCC, 2014). The role of consumers has been given widespread attention by academics (Webster, 1975; Leonard-Barton, 1981; Etzioni, 1998; Harrison *et al*., 2005; McDonald *et al*., 2006; Szmigin and Carrigan, 2006; Peattie, 2009; Eckhardt *et al*., 2010; Prothero *et al*., 2010; Cherrier *et al*., 2012; Carrington *et al*., 2014).

This research contributes directly to literature on the role of consumers in achieving sustainable consumption and contributes indirectly to the literature on the role of corporations and governments. Importantly, what my research suggests is that the Green-Schools programme is having a positive impact on the environment and sustainable behaviour practices can be achieved across households when certain internal and external factors facilitate behaviour change. Well-informed schoolchildren are having a positive impact on current behaviours in the home, to some extent, and their environmental awareness and ability to practice sustainable behaviours is likely to continue to have a positive impact over time. The Green-Schools programme ensures that future generations are educated in the necessity of, and skills for, practicing sustainable consumption. Over time, as these schoolchildren become adults, they may have the ability to alter the current DSP to one that incorporates pro-environmental concerns.

For the majority of households in this study, external factors are pivotal to effective behaviour change. Respondents are willing to change their unsustainable behaviour practices but rely on institutional direction to facilitate their behaviour change, such as environmental policy. Attitudes to behaviour change are overwhelmingly passive in nature therefore, once the desired behaviour change is facilitated, members of households adapt and change their behaviours. This has interesting implications for the future development of sustainable behaviour practices in the household context.

To conclude this thesis, I revisit the opening quote by Ehrenfeld and Hoffman (2013, p.1)

> '*…Indeed, sustainability has reached into all areas of business, politics and society. The world, it would seem, is on the road to a sustainable future. Or is it?*'

In light of the literature review and the findings and discussion presented in this thesis, I believe that we are indeed on the road to a sustainable future. But that road is delicate, and the success of the journey critically depends on the decisions and behaviours of corporations, governments and consumers.

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Appendices

Appendix 1

Ms Claire O'Neill,

Department of Management and Marketing,

O'Rahilly Building,

University College Cork

Dear Parent/Guardian,

My name is Claire O'Neill and I am currently doing research as part of my PhD degree at UCC. This research project is coordinated by An Taisce/Green-Schools Ireland. I will be surveying pupils in your child's school in the coming weeks regarding this research. Please refer to the information sheet that was given to your child in class. To further this research, I would like to speak with parents/guardians of Green School pupils. There is no obligation to get involved as participation is voluntary.

If you would like to participate, please give your details below and I will contact you. All information received will be kept entirely confidential.

Kind Regards,

_____

Claire O'Neill

Please cut along dotted line and return with consent form to your child's teacher.

I am available for a brief interview relating to this research ☐

Name:

Contact Details (Phone number):

Appendix 2

An Taisce Survey 2001

School Name & Address:_____

Date:_____

Are you a: Boy ☐ Girl ☐

What age are you?_____

1) ***Do you live in a*;**

a) City ☐ **b**) Town ☐ **c**) Village ☐ **d**) Rural Area ☐

2) How many people live in your household?
_____

3) Do you feel environmental problems are;

a) An urgent problem ☐ **b**) A problem for the future ☐

c) Not a problem ☐ **d**) Don't know ☐

4) CAREFULLY read the following statements and answer 'True', 'False' or 'Don't know';

a) ***'Human activity has no effect on the state of the environment'***

True ☐ False ☐ Don't know ☐

b) ***'The 'greenhouse effect' is caused by the hole in the ozone layer'***

True ☐ False ☐ Don't know ☐

c) ***'Cars are not a major cause of air pollution'***

True ☐ False ☐ Don't know ☐

d) ***'It is better to prevent waste than to recycle waste'***

True ☐ False ☐ Don't know ☐

e) ***'The greenhouse effect does not cause any changes to the earth's climate'***

True ☐ False ☐ Don't know ☐

5) Answer the following multiple choice questions;
How long does it take for an aluminium can to decompose?

1-2 year ☐ 20 - 30 years ☐ 80 –100 years ☐

What percentage of household waste in Ireland goes to landfill for disposal?

Around 10% ☐ Around 50% ☐ Around 90% ☐

Paper & cardboard make up what proportion of Irish household waste?

Around 10% ☐ Around 30% ☐ Around 70% ☐

On average how much paper does an Irish person use per year?

Around 7kg ☐ Around 70 kg ☐ Around 170kg ☐

How do you hear/find out about environmental issues?

Newspapers/Magazines/Books ☐ TV/Radio ☐

Teachers ☐ Family/Friends ☐

Internet ☐ Other ☐

If other please state_____

6) Do you do any of the following at home;

Composting? Yes ☐ No ☐ Don't know ☐

Recycling? Yes ☐ No ☐ Don't know ☐

What things are recycled? Paper/Cardboard ☐ Aluminum Cans ☐

Glass Bottles ☐ Other ☐ Please state_____

7) Have you discussed environmental issues in the last month;

At home ☐ With your friends ☐ In the classroom ☐ Not at all ☐

8) Do you encourage others (e.g. family, friends, classmates, etc.) to be more environmentally friendly?

Always ☐ Sometimes ☐ Never ☐

9) Do you own a mobile phone?

Yes ☐ No ☐

10) Do you have access to the Internet at home?

Yes ☐ No ☐

11) Answer the following questions;

a) Do you drop litter on the ground?

Always ☐ Sometimes ☐ Never ☐

b) Do you take part in a local environmental projects (e.g. clean up a beach, park, street etc.)?

Always ☐ Sometimes ☐ Never ☐

c) Do you try to save tap water? Always ☐ Sometimes ☐ Never ☐

d) Do you turn off lights when leaving a room for a short time?

Always ☐ Sometimes ☐ Never ☐

e) Do you buy products that are environmentally friendly?

Always ☐ Sometimes ☐ Never ☐

12) How do you get to and from school everyday?

Walk ☐ Cycle ☐ Car ☐ School Bus ☐

13) What do you think of the following statement:
'THERE IS NOTHING I CAN DO ABOUT THE STATE OF THE ENVIRONMENT'

Do you: Agree ☐ Disagree ☐

If there are any environmental issues that you feel strongly about please mention them in the space provided below

Appendix 3

Questionnaire

Are you a: Boy ☐ Girl ☐

What age are you? _____

1. **Do you live in a:**

a) City ☐ b) Town ☐ c) Village ☐ d) Countryside ☐

2. **How many people live in your household? _____**

3. **How many Green Flags does your school have?**
_____

4. **Do you think it is important for your school to have a Green Flag?**

Yes ☐ No ☐

If you answered "yes", please state why you think so below:

_____

_____

5. **Do you feel environmental problems are:**

a) An urgent problem ☐ b) A problem for the future ☐

c) Not a problem ☐ d) I don't know ☐

6. How did you hear/learn about the environment?

a) Newspapers/Books ☐ b) TV/Radio ☐ c) Internet ☐

d) Teachers ☐ e) Family/Friends ☐ f) Other ☐

7. Are <u>you</u> responsible for doing any of the following <u>at home</u>:

a) Composting Yes ☐ No ☐ Don't Know ☐

b) Recycling Yes ☐ No ☐ Don't Know ☐

c) Saving energy Yes ☐ No ☐ Don't Know ☐

8. Does everyone in your household do the composting?

Yes ☐ No ☐ Don't Know ☐

9. Does everyone in your household recycle?

Yes ☐ No ☐ Don't Know ☐

10. Does everyone in your household try to save energy?

Yes ☐ No ☐ Don't Know ☐

11. Have you discussed environmental issues in the last month:

a) At home ☐ b) With Friends ☐ c) In the classroom ☐

d) Not at all ☐ e) Other ☐ If other - please state:_____

12. Do you encourage others (eg. family, friends, classmates) to be more environmentally friendly?

Always ☐ Sometimes ☐ Never ☐

13. Do you do any of the following while you are <u>at home</u>:

Put dry litter (eg. paper, clean plastic bottles) in a recycling bin?

Always ☐ Sometimes ☐ Never ☐

Turn the tap water off while you are brushing your teeth?

Always ☐ Sometimes ☐ Never ☐

Turn off lights when you are leaving a room for a short time?

Always ☐ Sometimes ☐ Never ☐

Unplug your PlayStation/Xbox/Nintendo/Mobile Phone charger/Computer etc. when you are not using them?

Always ☐ Sometimes ☐ Never ☐

I do not own any consoles/mobile/computer etc. ☐

14. Does <u>anyone</u> in your household ask you to do any of the activities listed in Question 13?

Yes ☐ No ☐

If "Yes" please state <u>who</u> (eg. sister, father, etc.) _____

15. Do you ask anyone in your household to do any of the activities listed in Question 13?

Yes ☐ No ☐

If "Yes" please state what you encourage them to do:

_____

16. How do you travel to school on most days?

Walk ☐ Cycle ☐ Car ☐ School bus ☐ Other ☐

17. What do you think of the following statements:

"There is NOTHING I can do about the state of the environment"

Agree ☐ Disagree ☐

"There is NOTHING my family can do about the state of the environment"

Agree ☐ Disagree ☐

"Green Schools HELPS the state of the environment"

Agree ☐ Disagree ☐

"Caring about the environment is IMPORTANT to me"

Agree ☐ Disagree ☐

18. If there are any environmental issues or topics that you feel strongly about please mention them below:

_____

_____

_____

_____

_____

Appendix 4

Department of Management and Marketing, UCC in association with

An Taisce – Green-Schools

Information Sheet

Purpose of the Study

I am conducting a research study as part of my doctoral work at UCC. The study is concerned with the environmental awareness and behaviours of schoolchildren and their families in Ireland. Green-Schools Ireland is part of an international programme aimed at educating, encouraging and rewarding sustainable behaviours. This research will look at the progress of these aims. Your child's school has been chosen because it has achieved Green Flag status.

What will the study involve?

The study will involve a 10-15 minute survey to be completed within your child's classroom hours. Pupils will have help available to them if any difficulties arise in answering the questions. No personal detail will be recorded or used as part of this research. All the information given by pupils in this survey is anonymous.

Why has your child been asked to take part?

Your child has been asked to take part in this research because they have been educated on key sustainable behaviours while attending a Green-School.

Does your child have to take part?

No, participation is voluntary.

If you **do not agree** with your child taking part in this study you ***do not have to take any further action.***

If you **do agree** with your child taking part in this study ***please sign the consent form*** attached. You/your child will have the option to withdraw from this study at any time prior to the commencement of the survey. Please use the contact details given overleaf to withdraw, if desired.

Will your child's participation in the study be anonymous?

All information gathered from the surveys will be entirely anonymous (and all data presented in the study will be anonymised).

What will happen to the information which your child gives?

The data gathered for the purpose of this study will be kept completely confidential. On completion of the research project, the information will be retained for a further six months and then destroyed.

What will happen to the results?

The results will be presented in the research report (thesis). They will be seen by my supervisor, a second marker and the external examiner. The thesis may be read by future students on the course. The study may be published in a research journal or used by An Taisce as part of the Green-Schools Programme.

What are the possible disadvantages of taking part?

I don't envisage any negative consequences for your child taking part in this study.

Who has reviewed this study?

This study has been approved by An Taisce – Green-Schools and reviewed by the Social Research Ethics Council, UCC. .

Any further queries?

If you need any further information, you can contact me:

Claire O'Neill

Mobile: 086-3727433

Email: clairectb@gmail.com

If you agree for your child to take part in this study, <u>please detach and sign</u> the consent form overleaf and return to your child's teacher.

Consent Form

I agree for my child…… to participate in this research study.

The purpose and nature of the study has been explained to me in writing.

I am agreeing for my child to participate voluntarily.

I understand that I can withdraw my child from the study, without repercussions, before it starts. (Please contact me via contact details provided if you wish to do this)

I understand that anonymity will be ensured in the write-up.

I understand that information gathered anonymously from this survey may be quoted in the research report and any subsequent publications if I give permission below:

Please tick one box

I **agree** to quotation/publication of information from the survey ☐

I **do not agree** to quotation/publication of information from the survey ☐

Signed……. Date…….

Please give this signed consent form to your child to return to their teacher **on or before Thursday 14th June 2012**

Thank you for your cooperation.

Appendix 5

Description of the Project

Aims of the project:

This research project aims to look at the impact of an Environmental Education Programme, namely Green-Schools Ireland, on perceptions and reported sustainable behaviours. Research will initially focus on surveying 5th class schoolchildren of Green-Schools and follow up with interviewing parents/guardians in the home. For the purpose of ethical considerations in this research, approval is sought for surveying schoolchildren, whom are under the age of 18. Researching the knowledge and views of these schoolchildren are a key aspect to this research. It is proposed that these environmentally educated schoolchildren may influence sustainable behaviours in other social settings such as the home. Therefore establishing their perceptions and reported behaviours is paramount to advancing this research aim.

<u>Key aims of researching Green School 5th class pupils:</u>

1. Establish their views on environmental concerns
2. Establish what they view as sustainable behaviour
3. Establish where they practice sustainable behaviours
4. Establish if they believe all human behaviours impact the environment
5. Establish who they believe is responsible for protecting the environment
6. Establish where they first learnt about environmental concerns
7. Establish how they feel about and behave regards environmental issues in school
8. Establish how they feel about and behave regards environmental issues at home
9. Establish whether they encourage sustainable behaviours at home
10. Establish who is responsible for the main activities within the home

Brief description and justification of methods and measures to be used:

A survey is deemed the most useful instrument in researching schoolchildren as it has been previously used by An Taisce to great success. The questionnaire used in this research is adapted from one that was used by An Taisce in 2001 to research opinions and behaviours of 5th and 6th class pupils in Green-Schools and Non-Green Schools. Wording is used appropriately so as pupils aptly understand what each question is based on. Surveys are deemed appropriate when quantitative results are required. For the purposes of this research, the quantitative data produced will be used to frame the questions asked in the following step (interviewing parents/guardians) of the overall research.

Participants: recruitment methods, number, age, gender, exclusion/inclusion criteria:

- Participants: 5th class primary schoolchildren
- Recruitment methods: Schools are selected by An Taisce and cooperation from the teacher and parents/children will be prearranged. A survey will be distributed among pupils.
- Number of Participants: Approximately 90 pupils
- Age of Participants: Approximately 11 years old
- Gender: Male and Female
- Exclusion/Inclusion: Participants will have previously confirmed whether they are participating in the survey through parental consent forms. All participants will also have an option to opt-out of the survey on or prior to the day of participation. Contact information will be provided if exclusion is desired.

Concise statement of ethical issues raised by the project and how you intend to deal with them:

The ethical issue that arises in this research is that of researching schoolchildren under the age of 18. Prearranged informed consent and verification on the day of surveying will eliminate any participants that do not wish to partake.

Arrangements for informing participants about the nature of the study:

A letter will be sent to the parents of all pupils in the participating 5th classes, along with the consent form. In addition to this, a brief overview will be presented to the participating pupils on the day of research and explained by the researcher. All queries and concerns will be answered by the researcher.

How you will obtain Informed Consent:

Two weeks prior to commencement of research an information letter and consent form will be sent to the parents of all schoolchildren in the participating 5th class in each of the schools. (This information sheet and consent form is attached). These will be distributed, with the coordination of An Taisce, through the 5th class teacher in each of the schools. A period of 5 school days will be allowed for return of these forms. Only children that have returned the signed consent forms will be included in the research. There will be strict adherence to this on the day of the research. Coordination from the teacher will be sought to verify which students have returned

signed consent forms. All students that did not return the signed consent forms will not receive a survey and will not be included in this research.

Outline of debriefing process:

A discussion will be held, approximating 10-15 minutes in length, post completion of the survey. This period of time will be used to gather any additional queries or opinions on the completed survey and explain to the participants the purpose of their contribution.

Estimated start date and duration of project:

Dissemination of Information Sheet and Consent Forms: 30th April 2012

Collection of Consent Forms: 7th May 2012

Estimated start date of research: 14th May 2012

Duration of research: 2-3 weeks

Signed,

_____

Claire O'Neill

Department of Management and Marketing

UCC

Appendix 6

In reply to queries regarding the project entitled "Exploring the Impact of an Environmental Education Programme on Perceptions and Reported Behaviours" #125

1. **Who developed and adapted the questionnaire?**
   The questionnaire was developed by Dr. Michael John O'Mahony, Education Unit, An Taisce, 5A Swifts Alley, Francis Street, Dublin 8.
   The questionnaire was adapted by the main researcher of this project – Claire O'Neill

2. **Interviewing parents or guardians is a next phase of the research? Is the researcher applying separately for ethical approval for this?**
   Yes, this is the next stage of this research.
   No, the researcher will not be applying for ethical approval for this phase of the research because the subject matter of the interviews will be based on perceptions and behaviours around sustainability and, as such, is non-controversial and participation is voluntary.

3. **Recruitment method: are all the schools participating or are they randomly selected by An Taisce? Are there criteria for this?**
   Three Green-Schools will be selected based on the level/stage of the Green-Schools or Green Flag award programme they are currently working on. Therefore all schools chosen will have the same level of environmental education. The schools will be agreed by both An Taisce and the researcher. Each of the chosen schools will be given the opportunity to participate and if they choose not to, another school will be approached to participate. There will be one school chosen from each of these areas: rural, urban and suburban.

4. **Is it parents of the participating students that will be canvassed in the next phase of the research?**
   Yes.

5. **Include the survey with the application. Does the survey reflect the key aims of the research?**
   The survey was included in the application. An additional copy is provided with this resubmission along with the document containing the key aims. The questions that reflect the key aims are numbered alongside each aim.

6. **Given that the data will not be anonymised please let the Committee know how the data will be stored and for how long.**

   All the data will be anonymised, as stated in the consent form that will be sent out to parents. This document also contains information on how long the data will be stored for (6 months). This form was included in the initial application and a copy is also included with this resubmission. The data will be in the possession of the main researcher only and will be destroyed after the 6 month period post research completion.

Appendix 7

ucc
Coláiste na hOllscoile Corcaigh, Éi
University College Cork, Ireland

Oifig an Leas - Uachtaráin Taigh
agus Nuálaíochta
Office of the Vice President
for Research and Innovation

Urlár 4, Bloc E,
Áras na hEolaíochta Bia,
Coláiste na hOllscoile Corcaigh,
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Ms Claire O'Neill,
Management and Marketing

2nd May 2012

Dear Claire,

Thank you for submitting your revised research (project entitled Exploring the Impact of an Environmental Education Programme on Perceptions and Reported Behaviours #125) to SREC for ethical perusal. I am pleased to say that the amended proposal is acceptable and we are happy to grant approval

We wish you every success in your research.

Yours sincerely,

S Hammond

Sean Hammond

Chair of Social Research Ethics Committee

Professor Anita R. Maguire BSc PhD CChem MR
Vice President for Research and Innovation

Appendix 8

Reflective Journal Entry – June 2011

I began my PhD with several thoughts as to what I may study, this was partially influenced by my master's thesis but I was primarily concerned with studying a topic that I was passionate about, or at least had some connection with. My past studies and personal interest in food and health led me to looking at this area to see if there was anything that I could study however nothing really struck a chord. I was working at the time, and had been for the previous few years, in a health food shop. This was a very big part of my life and I absolutely loved working there. One thing that always fascinated me was, living in a small town, a lot of 'locals' would never have stepped foot inside the shop. People that knew I worked there used to ask me what we sold, who shopped there, how the business was doing, who owned it etc., but still, would never step foot inside the door. Their curiosity was not enough to affect the physical act of walking in the door of the shop. This interested me. I was completely aware that not everybody had the interest or desire to visit a health shop but for some, I believed, they were in some way held back by something that didn't allow them to steer their body in the door.

I read some literature on the customer I was so familiar with throughout the years; the voluntary simplifiers and ethical consumers. I had learned so much from them already through my daily interactions with them. These people are different, especially in a small rural community. But their knowledge and passion for what they believe in drive their consumption. These people by no means look 'well off' and yet buy the perceived 'more expensive' ethical food that we sold in the shop. These are an interesting group of people, but for me, they weren't the problem. They were visiting the shop every day. They were active. It was the people that used to ask me about the shop but never set a foot inside the door that interested me. And in a small town there aren't many shops to choose from but yet they did not explore all their options. They were unwilling to even have a look. Now, granted some people who I term as 'traditional locals' would come into the shop and they may just buy a loaf of bread or a bag of porridge oats and never look left or right for what else was

in the shop, but at least I felt they were stepping inside the door. But I was curious as to why they never looked left or right either. They seem to have blinkers on.

I was even curious about my own attitudes and behaviours. When the health food shop opened in the town I knew I wanted to work there. Perhaps it was my interest in food, I don't know. I liked the look of it; it was different. But I was by no means an ethical consumer. My knowledge was very low. But I was willing to be open to it. To this day, I am sometimes amused by the beliefs, preferences and attitudes of some of the customers that come into the shop. Their way of life is very unique and seems, in part, cut off from popular culture. But one thing it is, to me at least, is a breath of fresh air. I would have always visited health shops prior to working in one. I was curious. I would only buy one or two things but I always had a look around. Since I started working in the health shop however, my preferences have changed. And this wasn't something that happened overnight. It was extremely gradual. There were some things that I would see customers buying and I just couldn't get my head around it. One of those things was incense sticks. I was curious one day so I bought them but was completely confused and unfamiliar with what I was supposed to do with them. I didn't buy another incense stick for years. Until one day I felt, somewhat strangely, ready. And now, I gladly buy incense sticks. But I do stick to the safe bets of lavender and rose. There are still items in the shop that I feel are too 'out there' for me. Some things that I have never tried, out of perhaps fear, unwillingness to admit I am that 'weird' or for a reason beyond my comprehension. I remember living in a house with three others when I was doing my masters. I was going through a bit of a tofu phase and I used to hide it behind things in the fridge for fear of what the others would think of me. I didn't want to be seen as too different. I think I have slowly, over the years, moved away from the traditional staple that I would have grown up with. I am not sure why but I know in part it was because of my exposure to the variety of different foods in the health shop. I now buy only cleaning detergents in a health food shop or whatever alternative is available in the supermarket. I will never ever buy any of the chemical sprays or oven cleaners that are available. I am so completely against them. However, when it comes to washing detergent I still buy the regular one in the supermarket. And I don't mind what brand, it's not that I am loyal to any brand. And it is not that the

natural washing detergent is less effective because it is effective. I have tried it. But I do still buy the regular washing detergent. And I am not sure exactly why. Perhaps because I think there aren't as many chemicals in it, but there are probably plenty chemicals in it. I guess I haven't got that far yet of committing to the natural alternative. Or maybe I will never get that far. Maybe I stop here.

So what I find interesting is that people's attitudes, motives, intentions and behaviours are varied and complex when it comes to ethical consumption. Some are excellent, at least externally at showing and acting out their beliefs through their consumption patterns. However, for the most part, I believe that it is far more complex than that. Simply dividing the consumer segment into ethical and non-ethical is unfair and misleading. We are all complex and our behaviours in this area of study even more so. This is where my journey of exploration begins.

Appendix 9

Interviewee CB4 23/10/12

To start with can you tell me what you know about the Green Schools Programme?

I suppose I do know a bit insofar as I have a sister who is a teacher and another one who works as a secretary in a Green School so I knew about it before I ever had kids. I have one in sixth class, one in 4th class and one in Junior Infants so I do have a fair bit of exposure to it. So again it has to do with the healthy lunch policy, tidiness, energy conservation…that is really my grasp of it now whether there is any more to it than that…now they are obviously after getting another flag and that is obviously mentioned at home.

Does the school ever send anything home to the parents about what they are doing with the Green Schools or anything?

They do to be fair because we get a newsletter every month from the school and there is usually something covered there about the Green Schools. But only really if they are working really hard for the next tick on the box or whatever. But they are very…and I have brought it up before over the years because I mean if you are doing something you are doing something…two of mine have at some stage been on the Green Schools committee and when they are on that there is even a greater awareness. What I don't understand then is that it doesn't relate at home because none of them can turn off a light. And if you go up to the school there are little notices everywhere and I know that when they were on the committee they had to go around to all the classrooms at lunchtime and turn off the lights so there are all those little things in place. So it does come up all the time really.

Do you see any of the behaviours come across into the home or do they just talk about what they do in school?

No…but they would be very aware of rubbish but I can honestly say the behaviour doesn't transfer because for the kids that is the behaviour at school and the behaviour at home has to be trained from home and that is just kids and I wouldn't say that it is any failing of the Green Schools or otherwise. I mean, it certainly can't hurt but with my children it only works in one place and when they are in another place it is different because even…now they do know about recycling at home and even my five year old will say every time he goes to the bin 'is this rubbish or recycling?' and I say 'what do you think' and he will say 'rubbish' and I'll say 'put it in the rubbish bin then' and he will say 'which one is the rubbish bin' and I will say 'the same one that you asked me about 55 times before, that one' (laughs) but that is boys for you…I definitely think it is a boy thing – it is not a failing of the learning that they are getting. They would be very aware of the healthy lunch policy but whether they do the healthy lunch policy because it is healthy or if it is because it's what they have

to do – it is because it is what they have to do. But that is kids that is the way they operate. If you tell them and even at that they will try to slip something in the back door if they thought it wasn't being monitored.

Can you tell me about your waste disposal?

Okay, well we are only living in Cork for a few years; we were living in Waterford before that, so it was slightly different there. Here we have recycling; a thing for bottles and we have a rubbish bin and the rubbish bin would incorporate everything that isn't recyclable and bottles and waste food. Now in saying that I never have any waste food because my father has dogs and we keep all the waste food for the dogs. In Waterford, and because we weren't near my father we had a brown bin which was waste food along with peels now I don't have a compost and I have to honest I just think composts…we lived in the country in Waterford and we had an acre and I would have composted there but I don't think composting works in small gardens…it is just not hygienic, it is not hygienic around small kids, I don't care what you do there is just too much work involved to getting out of it what you should so my peels do go into the bin I'm afraid…call me a bad carbon footprint or whatever but you know it is just not something that would work for us. It is just too close to the back door, it stinks too much it draws rats…

When you were in Waterford did you have a compost bin?

Yes we had a compost bin and we had a brown bin…and when I think of it my kids were small at the time…my small fella used to be eating the teabags out of it…oh god…I used to have to keep it up on the counter because I used to keep it out in the utility room so it was a small brown bin basically that you had to get these breathable bags for them and they were expensive…and then you would put it into the big brown bin and that was collected along with the waste bin and whether they are still doing that now I don't know.

What exactly could go into the brown bin?

All the waste food and all the peels…so bread, cereal, peels…everything

Do you know what they did with that then?

Other than segregate it…I could find out for you because my father-in-law used to work for the council and he used to collect it but I never asked him what they did with it.

At home now, does everyone in the house know the system and go along with it?

Yes, I would be very stringent.

Would there ever be mistakes?

My husband is actually the main offender and it would be things like queen cake cases that he would put into the recycling and I say ‘lads, it dirty, can’t’ but I am actually a little bit anal about it and I would be one of these people that has to fold everything into it to compact it so…my husband’s mother is very keen on all that so she would be saying to me ‘don’t so that, wash it out, flatten it, etc.’ but no they do they all wash everything out now but they might not be very good at letting things dry that is the only thing. But that would mostly be a yoghurt carton anyway which is plastic which dries out anyway so it’s okay.

What would have made you set this system up at home – either in Waterford or here?

I suppose when the recycling bin was introduced and then obviously it does hugely reduce on your rubbish and I have to be honest I hate rubbish I would be one of these people that go down to the beach for the summer and I make the kids put on their rubber gloves and go up and down the beach picking up the rubbish because all the stuff comes in from the trawlers because it is not the people on the beach it is the fishermen throwing them over board and I think ‘really?...in your profession…really?’ so I suppose we were always into that. It is a no brainer really isn’t it…I just don’t understand people that don’t have any respect for things like that and sometimes I think we could take more responsibility and there is a degree of guilt for not having the compost bin but it just doesn’t work for me and that is just it…life is too short…

What would you do with old clothes that you wanted to get rid of?

I generally find a home for them and we would recycle so it would either go to cousins or friends or indeed it comes the other way as well. I have a friend of mine and another girl too up in the school that give me clothes for my small fella and we would just recycle everything so things like football gear I would generally bring back down to the soccer club – I don’t throw out clothes especially when you spend money on them it is awful to just throw them out. I resent giving them to the people at the front door who claim they are for charity and they are not for charity. The very odd time if I feel there is stuff that is not wearable or anything like that there is a friend of mine that works for Enable Ireland so I give them to her.

Can you tell me about your energy use in the house?

I am probably the one that is the most efficient so I wouldn’t use the tumble dryer I would hang them out as much as I possibly would and failing that they are on a clothes horse. Tumble drying is the last desperate option. The kids are desperate for lights it does my head in. I actually have ordered these things now at the moment that you can put in the plughole that turn colours for the kids to tell them come out of the shower. They have them in England, a friend of mine has them ordered online for me…they are not cheap though…they are about a tenner each but you put them in the plughole of the shower and you can set it and then depending on your water

usage it goes orange to tell you that you are nearly at the end and it goes red to tell you right turn off the water and get out. So they are very handy…very handy with kids because my kids are at different stages where my eldest fella is past the phase so he actually wants to have a shower now but the other two you still have to catch by the ears and say 'you need a wash' (laughs) now in saying that I wouldn't be one for washing them every day of the week…very much Wednesday and Sunday which is plenty for them because they are not dirty other than that because their hands and faces are washed every day. I probably wash clothes a bit too much if I am honest…so in terms of energy conservation there that wouldn't be great but I just can't bear them to be in dirty clothes. With the TV's I would complain when the husband is at home and the kids and there is lots of TV's on and I think that is where our biggest usage is…the TV's. If I am cooking dinner and I am cooking a roast I tend to do everything in the oven…so I do things like that but I am sure it could be better but I am certainly not the worst.

Would the children ever turn off the TV's after use or their Xbox or PlayStation if they have one?

They do because I have it beaten into them but they wouldn't do it because of the green schools or anything like that unfortunately. I really believe…and I know I sound like an ole fart when I say this but when I was at home I didn't give a damn about the TV being on or the lights being on or anything like that and I was thinking what are the parents talking about but now that I am paying the bills…and I honestly think that is what it comes down to. Now I did start fining them 20cent if they left the lights on (laughs) and that fairly focused their minds. It just doesn't seem to have a correlation because they will just do what is the laziest and the easiest. They do know that they are supposed to do it but it is just that learned pattern and it has to be learned in a pattern and we have moved house quite a bit now over the last few years because we only moved here 4 years ago and we were renting and then we built our own house there last year and obviously energy conservation would have been a huge factor in that for the insulation and the solar panels and all that sort of thing and we put in a stove that has a back boiler so we did all those type of things so that would have been big on our minds…whether it related to the kids…no, it just doesn't. I think that it is learned patterns within an environment with children, definitely. The thing is they do know it but if nobody is going to get on their case then they won't be bothered. And you know what I think it is the same for adults. I genuinely think that none of us would have started recycling only we had to. None of us will start conserving water until we have to. It is human nature and it is not just kids or not just adults and I think that some people are definitely more aware and better at it than others and more responsible that other but that is just the way of the world.

You mentioned when you were building your house that you put in good insulation and solar panels etc. what was the main motivator for that?

I suppose wastage…I hate waste…I mean you can see that I give my food to the dogs and give my clothes to others…I just hate waste. I don't know, maybe that is just the way that I was brought up. My aunt who died a few years ago, she was 92, she boiled the kettle in the morning and she put that boiled water into a flask for the day. But you know what it stands to reason…why are you boiling the kettle six times?! So yes, it is wastage really and we built our house in Dungarvan as well and none of this information as there…well maybe it was there but we just weren't aware of it. As a result I used to find that the fire would be on but it would only be heating the room that it was in and if there was nobody in the room then it was just going up the chimney and then I would be cooking in the kitchen and I would have the oil heating on because of the rest of the house and then if I wanted to have a bath that night I would put on the immersion. It was all extra, extra, extra…and you are paying for all of that. And while we have always been lucky enough that we can afford to pay for all of it but it is just an awful waste. So when we moved then I put a lot of thought into the back boiler stove and it may not have been the actual stove I wanted as such and we run it from waste wood…anything that was left over from the build we just cut up and we are using that at the moment. So it is mostly wood that we burn and that heats all the radiators then and the water and then obviously if it was a sunny day you would have the solar panels. I haven't turned on the immersion in a year…and we do have gas heating but we only need to put that on for an hour and it heats up the house. But you know it is very hard to do up an old house like that. It is very hard to go backwards and you would need a lot of knowhow and I honestly think that there aren't really enough energy consultants out there really who will give you the big picture because everyone will sell their own wares. We had two other things as well that we didn't actually do…we had the option of putting in a rain-harvesting unit and I don't know if I am half sorry now that I didn't do that but it was just a cost issue really in the end. And we didn't put in the heat recovery which is basically a system which filters the air but, what my understanding of it was at the time it was being sold to us, that it takes air out of the hot places in the house and recycles it to the cooler places so I thought it was a great idea but in actual fact that is not what it is…it is really more of an air conditioning unit and they are expensive and really at the end of the day you are sucking on this pure air that is in the house all the time but it is not really pure because you cannot open windows or anything. So we didn't get it because I would have all my windows open and leaving all the fresh air through.

If you had got the rain-water harvester what could you have used that water for?

Washing…you can't drink it. I don't know will we be sorry because of the whole water charges but it was all a bit new and we didn't look into it enough. And then money…it came down to money too. It didn't jump out at me I suppose. Our architect was very keen on it

What do you think about the water charges?

I understand that people waste water but I really resent having to pay it. It is just one thing after another. I don't know you just get to a certain age and you are just paying for everything. And we are lucky enough because we have jobs and we are not living on €100 a week like you hear people on the radio and we are lucky in that position

What did you think of the plastic bag charge when it came in first?

I have no problem with it…I always bring my own bags…end of. I hate paying for things like that anyway…I think I am tight when it comes to things like that…spending your money for no reason. I would rather spend my money going out for a nice coffee.

If you were ever stuck in the shop and you didn't have your own bags with you what would you do?

I would give them to the kids to carry (laughs) and in desperation I would pay for one but only in desperation.

When you are buying things like fruit or veg would you buy it loose or packaged?

I actually have a vegetable man that delivers to me so there isn't any packaging and it is all locally sourced…he come to me for years. And I love the fact that he comes because the stuff lasts and I know some people might think it is a luxury but you know I think I spend abou €25 on veg every week and that is it. I have it for the week then and I might have to run for a bunch of bananas but that would be about the height of it. But you know I am at the stage with my kids that if we are out of bananas eat apples and if we are out of apples eat oranges until it is gone and there was a time when they were younger that you would have an array of everything and then you are throwing things out…and I hate throwing things out.

Looking at your childhood versus your kids childhood do you think there was more waste back then or do you think there is more waste now?

There is more waste now…definitely. Even when you buy yoghurts even the way the carton is in a paper sleeve or in a box, it actually drives me nuts. There is definitely more waste now but they are bombarded now. Even look at cereals…my god…my children would be nearly calling the ISPCC because there is only Weetabix and Ready Brek in our house but I mean at the weekend they are allowed to have Rice Krispies or Special K or whatever but it pains me to see them eating it. If they were always there they would be having them every day but I just don't subscribe to it. And you know I would be sooner giving them pancakes on a Saturday morning rather than them. I mean we try not to but gosh we all have the odd Chinese takeaway but there is definitely more waste now sure it stands to reason because there is much more processed stuff now than when we were kids I don't ever even remember cooked ham in a packet. It was always sliced in a bag and even at that you had jam half the week (laughs) whereas my kids are shocked if there is no ham. And

in those plastic containers the ham is probably plastic anyway so you are probably getting a whole deal on plastic.

Can you tell me about your transport – what is your main mode of transport?

Car…for the school run and if I am honest we use two cars for it because my husband will bring two if the kids and I will bring one. Not good…but having said that he is coming down to the bank anyway – he works in the bank here – so they come down as far as there with him and they walk the rest of the way. And then my small fella has to be brought in separately because the boys' school is separated. It is just the logistics of it so I just bring him down and go for my hours walk and back home. And I would never really do it in any other form of transport. I am very reliant on the car.

Is the school too far from your home to walk?

Yes…well you could walk it I suppose but it would take you 45 minutes to walk it which is just that bit too far really. We are at the other side of the village and now it is walkable but like I said he comes as far as the bank and they walk from there then.

Are the cars petrol or diesel?

Petrol

When you are choosing your cars what are the things that you would look out for?

Well I am driving a '07 and my husband is driving a '08 and we are actually due to change and we are actually in that debate at the moment with regards to efficiency etc. but that is only ever in our life's history that that has come up. Because obviously petrol has gotten so expensive so it is because of price really and tax. Should it be about the environment concern – probably, and I suppose we are very reliant on our cars but then like if you live here the bus is too expensive…it is mad. Now my son is going to secondary school next year and he is going over to Rochestown so he will have to get the bus but the bus will cost us €25 a week and that is just for one child. And that is just to go 20 minutes and back. That is very expensive. To me, it should only be about €30 for the month. And even the bus out from town, I got it a couple of times and I am sure it is something like €6.50 which is mad. There really isn't any alternatives here…there is no train so everyone is in cars. There is no other option really unless you get up on your bike and I mean you can't bring three kids on your back.

Would you know anything about electric cars?

Not an awful lot really but again it is not going to fit three kids along with all the gear you know! If I was on my own maybe I would think it was a great idea but it is not practical for us really because we have 45 loads of soccer gear…but do I think

electric cars are good –yes. Have they taken off – no. I have seen the charging points but not the cars. Are there alternatives – even to be fair, I have just finished up work there recently, but I was driving into town and even at that the bus wasn't really an option for me because it just doesn't go from the right place at the right time but I think it is a case of…do I like my car?…yes, probably. I think Irish people are very reliant on cars.

Do you think that the efforts people are making, such as the recycling that you do at home and say giving your clothes to other people, do you think that those little things are making a difference?

I suppose I would like to think on some level it is. I definitely think that the whole recycling of clothes should be done more I don't think anybody should be looking down their nose at it because I mean I have plenty money to be buying clothes – and I don't mean to be funny – but I mean if someone is going to give you a bag of clothes that are perfectly good and have only been worn by one child, and I know the person, and they are all washed, what is the big deal?! And I know some people would have a huge issue with that. I don't have any issue with that. Now I am not buying in the second hand shops either but then, I don't have to. I wouldn't be against them either because I mean if you have to put something on your back you have to put something on your back. So I know from the clothes point of view I certainly don't overdo it and I certainly don't subscribe to all the designer stuff or anything like that and I mean don't get me wrong I like my clothes but it is not necessary for the kids to be in all designer or anything like that. So is that making a difference? It must be making some difference but it is only going to make a difference if enough people do that kind of thing. I think it is better now that the recession has come along because people are more willing to be open to things. Even when my kids had made their communion I had a pair of shoes that were perfect because they had only been worn once and the shirt and the whole lot, and because we hire the blazers above, there is no great expense but I went up to the school after the communion and I said here you go this is for some child that can't afford it next year. And I just think there is some mother that will get a white shirt and a brand new pair of shoes that were only worn once and won't the child be grand in it you know…and they will look lovely and the same as everybody else and they won't get a heart attack because they can't afford it. That would be my driving force and it is something that I would always be saying to my husband to just be thankful for what we have and I would be trying to say it to the kids. Does it make a difference – I don't know about landfill or anything I think we are still generating way too much stuff but is that all our fault? I don't know really because it is very, very difficult to make choices that do not involve an awful lot of packaging. Certainly when you are shopping and I can do my meat and veg certainly without packaging to be fair. The milk is delivered to the door but again it is all packaging. There is still way too much…our recycling bin is stuffed every two weeks. But it is very hard to avoid it because everything you have is in double packaging. I suppose it has to make a

difference rather than shoving it all into the one rubbish bin but I have friends of mine that I know that don't give a continental about it and they throw everything into the one bin. And it is funny when we go to Spain on holidays now there is no recycling there. Everything is thrown all into the one bin. And I actually feel uncomfortable doing that I would be keeping it separate in two bins and I just think it is a habit and the kids will grow up with that habit but whether it is making a difference to the rubbish tips…I guess it must be but I guess it is only as good as it is put into practice really. But it does become a way of life really. I went to Spain recently with the girls and we just kept everything separately and we were all laughing at each other because we were all so anal about it (laughs)

Okay that is it, thanks very much

Interviewee G2 26/10/12

To start with can you tell me what you know about the Green Schools Programme?

I know that, for example in the kid's school, they are going for their 3rd Green Flag in one of the schools and the school where my older daughter goes they are going for their 2nd Green Flag. I know that one of them is to do with conserving water, one of them is to do with waste and recycling. I know there are different flags for different things. I know the youngest child would have been mad to get on the Green Schools committee. I don't think it was his input I just think he wants to be a part of it. Telling people to turn off the lights and watch the water that kind of thing. I know that it is educating the children on conservation of water, rubbish management and just general management.

Do you know anything the school has done to get their Green Flags?

My daughter said in her school that they had to show their ESB bills and that is how they knew that the electricity was being conserved. I also remember my son telling me about projects that they were doing on water but don't ask me what they were now I can't remember but I do know they were having meetings and asking for the push taps so that they could conserve water rather than leaving the taps on so the push ones stop automatically. I know that they have compost bins and you can send them in all your batteries, they have the recycling bins for those. I am almost certain that they have the bottle banks as well, no I don't use them because I have my own but I am almost certain they have them as well.

When they are getting their Green Flag are the parents invited or are the parents involved in any way?

No, I don't think they are…I could be wrong in saying that but I can't remember being invited to anything. It may have been general as in written in the newsletter but I can't remember them inviting us up personally. It would be written in the newsletter alright and would say what sportsperson would be there for it.

Would you notice any difference between your older children and younger children?

Yes, a huge difference. Even with my eldest girl I never remember her talking about it when she was in school. I would never have heard her on about recycling, even though that is something that I would have done for years anyway because of the waste management in the house, but she would certainly never be saying turn off the lights or turn off the water. I could see it with my second girl as she left primary school they were going for their Green Flag so there was definitely more of an emphasis on it and there isn't much of a difference in them in age, between her and the older girl because one of them is 22 and the other is 18, but in that sense they are

very different. And then definitely with the younger ones now they know everything – they know all about recycling and what goes to the bottle bank etc. Now I wouldn't say that they are great at implementing it either, wouldn't say that they are fantastic at it but they would make the effort. The batteries could be forever lying around the house and I would say look do you want to bring them into school or will I bring them up to Tesco or whatever…but they know not to put a battery in the bin. They would be aware of where not to put things. But as for lights and water I would still say they are not great at that. They would walk out of a room and leave a light on and I would have to be saying to them but that has to do with the cost of it really.

Can you tell me about your waste disposal at home?

I don't have a compost bin. I did toy with the idea of getting one onetime but I just have this thing that it could draw rats so I just said no so I just put them into my ordinary bin. So the refuse gets collected one week and the recycling another week and the glass is collected once a month. Clothes I would recycle with Enable Ireland or whatever bag comes through the door, I wouldn't have a preference once it is gone. I would bring all my electrical stuff back to the Weee recycling site. You can bring everything over there you can bring vegetable oil, paper, everything. I think you pay €2 or something for your recycling but you can bring your electrical stuff over for nothing so if you have an old computer or an old TV you can just bring it over there for free. Now say if I bought my kettle in Tesco I can bring my old kettle back to them but it must be buy one to bring back one, that is the way with all the shops.

How is it set out at home?

I have a recycling bin and I have an ordinary bin

Would everyone comply with what you have set out?

They would, occasionally someone would go to throw something in the bin and I would have to say 'stop! don't throw that in there' but in general they are fairly good.

What made you set it up like this?

I had to because of my waste collection company. As well as that though we all want to do our little bit so even if they weren't I would definitely be keeping my recycling separate because what is the point in putting all that into the waste bin…

At the end of two weeks would you have more recycling or more waste?

Definitely more recycling…I have to get the kids to stand on it to push it down and even at that I would be putting out a separate bag as well

If you were grocery shopping, would you buy your fruit and veg loose or in the bags?

I'd buy them in the bags

Is there any reason you would buy the packaged one?

Well, mostly with me it is because I have four kids and I have to buy in bulk anyway so obviously they would come in bags. That is the only reason really. I don't think of packaging when I am shopping.

With meat, would you buy that at the butchers or the pre-packaged?

Depends on the price (laughs) if there is a special offer on the packed meat I would buy it. Recently I have been buying it at the counter but both ways they are being packaged.

When you get home and you take your meat out and either if it was just the bag or if it was in the packaged container what would you do with it?

I would tip it into the bin

What did you think about the plastic bag charge when that came in?

I think it is right. I know that I wouldn't go outside the door now to go shopping without my bags. I would be very slow to buy a bag now it think they are gone up to 25c. and I think that is a lot to be charging for a bag. I work in Tesco in the cash office, part-time, but nowadays very, very little people come into the shop without a bag. Everyone brings a bag. Actually I was in Barcelona recently and they had the bags on the counter and then it struck me, god we are dead right to have the recycling, because everyone was taking one and I mean that is what we all used to do here before. And then what were we doing with all those bags…it didn't make any sense. You see everyone coming into Tesco now with a bag and you would even see men coming in with bags and once men are doing it now I think it has definitely caught on. It would kill me now if I had to get a bag, and it does happen that you forget to bring one in the odd time but I would try to carry out as much as I can without having to get a bag. I hate the fact that, and I am not being mean, but I hate paying 25c on a bag that I know will probably break and it is no good. I would prefer to buy the recycling bags for a €1 so at least I can use that again…and to be fair those bags are very strong.

What is the waste control like at work?

Their waste control is very good. And in relation to the environment the lights go on and off when you go into a room, the lights go on and off automatically – they are fierce into their carbon footprint. Now don't get me wrong I know it's not all good either. In the office where I work most of the stuff we use would be recyclable… we use recyclable paper anyways but then you would get someone throwing an apple into the recycling bin or something like that. But in general people are good. Up in our canteen we have three bins so there is waste, recycling and plastic. So it isn't bad

at all. They are very good and because of all the packaging they have they would have compressors for all the boxes. They are all piled up and taken away. I don't know what happens to them one they are taken out of the back yard. I can see them piled up and ready to go but I don't know what happens to them…I haven't a clue

Okay, can you tell me about your energy use at home?

I would be desperate…I would be very inclined to plug things out, or turn the switch off at least. The children aren't great at all. Especially the eldest girl…I say it to the young ones and I suppose it will sink in but for her, everything she has in on a charger. I went up to her room the other day…well I was just passing her room and I saw a red light on and I went in and sitting on her bed was the laptop and it was charging obviously but I could feel the heat…I got a fright…the house could go on fire. She is the only one that when we go away my husband would ask 'did she turn off the straighteners, did she turn off this, did she turn off that' so I actually find myself checking an awful lot after her. We keep giving out to her and we keep saying it to her and she would tell us that she is after getting very good but she is after getting more conscious because my husband would freak at her if he saw that straighteners being left on. So she is not great. The others are a lot better at turning off things.

Would TV's be left on standby or would they be turned off at the switch?

No, as a matter of fact they would nearly be left on all the time. From about 6 o clock onwards someone would be watching the TV and if they weren't nobody would turn it off. They might come out for a while and then they would go back in so I'd say they just couldn't be bothered more than anything.

With regards to the house itself have you invested recently in any insulation or solar panels?

Yes, we have. Last year we had the little beads pumped into the house. My husband is a contractor anyway so he converted the attic so he would have put in the insulation that was necessary at that time when we did that. Then we got more insulation inside because we have an extension on here and when we got the grant obviously for the cavity walls they put even more insulation in here to the extension. This kitchen used to be smaller so anytime that he extended he would have dry lined walls. The windows are all double glazed. I would love the solar but it is expensive to get done and I suppose in the long run it might pay for itself but we just don't have the money for it so that is the end of that. But I would love that I think it is a great idea. We could be more efficient with our heating I think because we have a boiler, it is oil central heating, but I think we should have the boiler on a timer because we only tend to turn it on and off as we need it but I find coming into the winter now that the house is cold in the morning so the first person up will turn on the heating for a while, for maybe an hour or two and then we would turn it off and they would all be very good with that. But I suppose it would be better to have it on

a timer so it can go on and off during the day, but then I suppose certain days then we aren't here so what is the point in having it on…but I suppose it would be good for the house in general but I suppose that is just more oil. We bought one of those little stoves and that is the best thing we ever bought. You can burn wood and coal in it and my husband, being a carpenter would have, or a friend of his knows someone that wanted their land cleared anyway so we have a lot of logs from there out the back so we would use a lot of those for our heating in there and once that is on it is roasting. There used to be an open fire there but we didn't actually use that room then but we do use that room now because of the fire in there. What we have inside in another room, which is more like a junk room at the moment there is no actual fire place but there is an artificial fire place there. And there actually is, which I think is a very good idea, and I am actually looking to replace it online but I can't seem to find one…we bought this house about 15 years ago and there was an electric fire but there was no elements in it so what happened is it has an effect of an open flame fire but it is actually connected to the radiator and whatever happens when the radiator gets hot the hot air comes out through the vents in the fire…something about water being heated underneath from some pipe or something…I don't actually understand the mechanism of it but that is what happens so obviously it was costing whatever it did for the fan to go but it wasn't like an electric fire where you have heat coming out too. I am trying to replace it now because it is gone a bit dated and I was going to do up that room anyway.

Can you tell me about your water use in the house?

Oh we are shocking…I am absolutely dreading the water charges coming in. I eldest daughter *lives* in the shower so she is just a nightmare. As the lads are getting older now too they are using it more. Obviously after every match there is a shower. We do use the shower an awful lot. We have been in this house 15 years and we have replaced that shower 3 times…so it is well used. With the dishwasher I wouldn't be conscious of how much it would cost or how much water it is using…the same with the washing machine…I just need them and that is it. I wouldn't put the dishwasher on empty or half empty either is would be absolutely completely packed…it would be full to the brim before I put it on. I mean we wouldn't go out would taps running…they are not extravagant like that but I suppose with 6 people in the house you would use a lot of water.

Do you know if they leave the tap on when they are brushing their teeth?

They would…I think it is a habit they have now…I would be conscious of it myself.

How do you feel about the water charge?

I feel…well I suppose like everybody I hate paying it but at the end of the day I do believe that we should be paying for our water and I think that, from what little I do know, our quality of water is quite good in this country…well in Cork, I do know that it is meant to be quite good. I would drink the water from the tap no problem. It

is actually bizarre because we have a little mobile home down in Fountainstown and when we are down there, there is nothing at all wrong with the water coming from the tap, but I won't drink it. I will always have bottled water. I just have this thing in my head. I think what it is from is…you know the waste that is out in Haulbowline…this mound of waste that is meant to be out in Haulbowline…I have this thing in my head that the water we are drinking is coming from there…and it is fine up here and I mean I have no idea where the water is coming from but I just have that idea in my head that it is coming from there so I won't drink it. And I am even having this thing about leaving the kids swim in the water down there. I have this thing about the mackerel that I am eating…they are beautiful but they could be coming from in there…someone was saying that it is fine because it is not being touched but if they touch it and start to clear it away that it will seep out into the sea and this is all in my head when it comes to the water. At home I have no problem drinking the water...whether I am crazy or not I don't know…that is just me (laughs) and I would have a problem paying for something then if the quality isn't good.

Did you ever have any trouble in the cold winters with your water?

We had one burst pipe alright…we were very lucky because the woman next door's water froze and others around but ours didn't.

Would you ever have worries about water shortages?

No, I can't see it.

What is your main mode of transport?

Car…for the school run we are always in a rush so I would drop the kids to school but then I would walk myself as well, especially to bring the dog for a walk and I would go for the walk around the time that my son gets out of primary school so we'd walk home from school then. The other make their own way home except for my other son I collect him because of the weight of his bag more than anything. But I actually collect three kids on that run and we share it…the other parents would collect too so I don't mind that so I would just do that twice a week. I would walk to work in the summer and walk home no problem. I would bring the car to do my shopping and I would bring the car in the winter. When I go to work in Tesco we have a specific car park so you still have a bit to walk…now it is not a great distance but still it is nearly easier for me to walk from the house than it is to walk from the car park to the shop…so if I could do without the car I would.

What is the main motivator to walk?

I suppose when I am going to collect my son it would be the dog because we have to walk him twice a day. I think as well in the summer it is nice to be out rather than sitting in the car but in the winter I would drive most places to be honest.

Is the car petrol or diesel?

Diesel

Why would you have bought diesel?

When we were upgrading the car most of them were made after 2008 and most of them were diesel and then they also had the lower tax band which at the time was an incentive.

How do you feel about the electric cars?

They cost an arm and a leg don't they...and I think they eat up electricity…I don't even know what they charge people to buy them but to run one I would imagine would be expensive and a lot of bother…to keep charging the car. I feel that I don't need anything else to be charging…everything seems to be something that needs to be charged now.

Looking at your childhood and say looking at your children's childhood – where do you think there was more waste?

Definitely when we were younger…we never recycled anything. Everything went into the bin. I suppose we were never educated on it. My parents do it now, obviously they do, because they have to. I think it was something that came in and we all learned about it and it was a case of 'okay ya, we will all do our bit for the environment and that is great' so yes there is a big difference now. But in relation to when we were growing up we never had a mobile phone we never had Xboxes…everything is electrical now. My ESB bill is always very expensive, which is why I am always shouting and roaring at them (laughs) there is so much more now, we have two laptops and one computer…the girls are constantly on the laptops and I suppose it is all social networking or whatever…and my eldest girl probably does a lot of college work on it. But then again you know it is probably saving because I don't think I ever bought her a book so I guess from an environment point of view that is very good.

Do you think that the little things that are being done such as recycling or what they do for the Green Schools Programme, do you think that they are making a difference?

I do think it is making a difference…it is definitely making a difference…it must be cutting down if you are bringing your recycling bags and not bringing 10 or 15 plastic bags into the house that has to be a good thing…it has to be good for the environment. I know you can use those plastic bags too for little waste bags around the house but at the same time we don't really need them at all. I do think that the whole thing about having your waste and having your recycling…that has to be beneficial.

Do you think that it will keep on?

I do, I think that we are educated in that way now and I think to be fair my eldest is 22 and my youngest is 12 and you are looking at two totally different people I those 10 years and I am not saying that she won't recycle or anything like that – she would, but there is no way she would have been as educated as he would be on it. There is definitely an emphasis in the schools on it and I think that going for these flags and the achievement of getting it I think definitely makes them more aware. I was speaking to my daughter the other day and she said they were going for their water one now or something and I was asking her what would you do for that and she was saying 'make sure everyone turns off the taps and so there is no wastage of water' and then she was saying that there are all these things around the school that…their theme is 'Finding Nemo' and I was thinking what has that to do with it and she said that they put stuff up around the place saying 'don't forget Nemo' so they are more conscious of it. So it is constantly being rammed down their throats, as it were, so it can't be a bad thing. And I am hoping that a small bit of it would rub off here at home while she is in the shower (laughs). And another thing, to be fair, all the supermarkets have little places for your batteries…they all have the amenities there and even with the clothes if you go up to Super Valu there is a clothes bank there if you have nowhere else to put them. But even myself now I fi have stuff that I just couldn't recycle or give to charity I would cut them up and use them for cleaning cloths and obviously when I am used them after a while I will throw them in the bin but they get another bit of use. I don't know what else to do with things like that so that is all I can do with them. But I mean kids grow out of clothes…they don't necessarily rip them they just grow out of them so there is nothing wrong with them and I would have no problem saying that, definitely when the kids were younger, that I would have gone to a second hand shop and bought something nice and I would have gone very often because thankfully I had the means of clothing my kids but I would have no problem taking something and just washing it and using it for them if I thought it was nice. I wouldn't tell them though (laugh) especially nowadays because everything is new and trend…but I know for a fact that Tesco…I remember one time in the store room they had a mount of clothes and they were putting them into black bags and someone asks where they were going and someone said they were going in the bin…now I don't know how it all works but there was something about it that they couldn't sell them…so we actually said to them to stop! you can't do that! And I think it was at the manager's discretion at every different store so we said can we not just give them to charity so what they wanted us to do then was to remove the price tags I think it must be if someone tried to return something to the store…so we sent them all into the Cancer shop at the time and they were absolutely ecstatic. So you could pick up some things in charity shops that aren't second hand at all they are new. The second that that they had loads of clothes they offered them to the staff first for half nothing and they gave that money to our charity of the year at the time so it was the same thing really. So I think there is more awareness now of don't throw that stuff out we can do this with them and so on…but I would go to second hand shops and I would still go now to pick up some second hand books if I was going on holidays and I would never really buy them new I

would just pick some up in the second hand shop. So I think people are definitely…long ago people would have definitely thrown those books in the bin so I think it is great that there is more of an awareness of it now…and another point now as well is that when I am down in the mobile home there are two bin on the actual site and I know that the first time we were down there we had this little bin in a very small area so I wouldn't recycling and I would just throw it all into the one rubbish bin and I tell you…the guilt I had…because I knew I what I was doing was wrong and I would be thinking…I know I should have a second little bin for the recycling. But I suppose I was just being lazy or not having the space but now I have two. I now have two little small bins so one is for recycling and one is for waste but the guilt that I used to feel before that I felt like I was actually committing a crime it was that bad…I felt very, very guilty about it. The same way I feel if I am walking the dog and I don't pick up the doggie litter…I would feel awful about it. I just couldn't walk on…and then when I see people walking on and not giving a damn about it I just think it is so wrong. I suppose we are all different.

If you were abroad on holiday would you be conscious of recycling?

It would depend where you are. If you are in a hotel room I would tend to leave all my recycling there together so that is fine. If I was in an apartment…I would be inclined to recycle, yes. I think it depend what country you are in too because some of them are great but then the likes of Spain isn't great in comparison to us. One time I went with my husband to a big recycle centre and it was great. I was shocked at all the things you could recycle. Things that I didn't even know you could like cooking oil and things like that. All the sections were separated out it was set up really well, it was great. I remember another time them as well there was a big recycling thing up in Wilton or they would have it in other places as well and you can leave your electrical stuff or your paints and let's be honest about it we all have bits and pieces of paint left over so I love when I see that advertised because I can do a cleanout then and go up there. You just feel you are doing your bit. I will tell you something frightening actually I was bringing the dog for a walk and I was going across a little bridge that there is a little river running underneath and you would always see ducks there and my dog one day decided to go for a swim and he came out of that water black…black in oil. I mean totally and utterly destroyed. I was mortified when he came out because I was thinking how am I going to walk him home and myself and my daughter spent ages trying to get him clean and I thought first that it was mud but it was thick, thick black oil. So I rang the environment crowd and I got passed between about four places but I said to them I am not worried about the fact the dog was dirty it is the fact that it could have been a child because if a child slips in there they won't come out alive. Now somebody told me that people in a house nearby, they have since left, used to bring all their oil over there and dump it in but I don't how true that was…so it is scary…we don't know the half of what is going on.

Okay, that is it…thanks very much

Interviewee B3 10/10/12

To start off with can you just tell me what you know about the green schools programme?

To be honest I know very, very little about it in a since that I wouldn't have read any documentation about it. All I do know is that it is there. What I would know would have come directly from my kids and we would also see the green flag as we pass the school every day. So in terms of criteria or what it actually means, how it is maintained, the underlying criteria judging whether or not it is retained – I have absolutely no idea.

What do your children communicate to you about it?

There was a buzz about it when they were going for it. I think that must have been almost two or three years ago. My eldest daughter would have been talking about and even my youngest daughter would have been…she is in 6th class now, but she was very much into it. Very much into it…But for my older child there would have been a teacher in the school and I think she played a huge role in communicating to the kids what was happening. She was an older teacher and her remit in the school, if I can remember correctly, was not only teaching but I think she looked after the garden. And she would have been very much interested in that. My older daughter is now in third year so she has been out of that school now for 3 years.

Do you know if the school she is in now if they have a green flag?

They may have…but I haven't heard of her saying it…I'm trying to think now because I drop both of them off there for hockey and I'm trying to think if they have a green flag outside it…I can't say…

You mentioned that your younger daughter who is now in 6th class would have been quite into it – can you recall anything that she may have said or anything that she may have been doing that you would notice as being green?

Where you would have spotted it…it is going back a while now…but where you would have seen it would have been the use of the bottles. At one stage there would definitely have been a bit of resistance to using or reusing water bottles and I'm not sure of the safety associated with that but we came to the agreement that they would use a bottle for a week and then they would use a new bottle and that came from that initiative. I remember that came from there.

So did she want to reuse the bottle?

Yes, but as parents that fitted in with us too because the last thing I wanted to be doing was paying over euro times two per day for water! But certainly they bought

into that early on. That was the only thing. And it would come up in discussions alright but I can't remember…it was something the kids…they enjoyed doing it. And when they came home it would have been an item for discussion…but it was one of those discussions that went in…and went out (laughs)

Are you aware of anything that the school did in particular to get their green flag?

No, I don't.

When they got their green flag were parents involved in any way?

There may have been…but both of us are working and to be honest those are the kind of things that you sacrifice really. I mean you would love to do them but you just don't have the time.

Okay, can you tell me about your waste disposal at home?

What we have now…we recycle. We have a system that it was weight based but now it's not – it is a standard charge. But we would recycle so we have a recycle bin in the house for plastic and cardboard. So that is just the one bin and that is recycled every other week. And then we have land fill and that is collected every alternate week. Then we would also have compost so under the sick there is a bucket there for all compost material so all the compostable stuff would go in there and then obviously all the bottles would go into a bottle bank.

Does it all get collected?

Yes, except for compost. We compost that ourselves. It goes into a compost bin…and it never seems to fill up…it just seems to go away somewhere (laughs)

Can you just describe to me what goes into each bin?

Okay, into the compost bin it would be all vegetable material, teabags, coffee. No cooked product. We would have a problem because we live near a river so if we start putting in stuff like that we would have a problem with vermin very, very quickly. So what would go into the main bin – anything that we can't recycle or anything that we can't put into the compost bin.

Does everyone in the house obey the bin system?

Absolutely. I have absolutely no problem with that. The only problem is that nobody in the house except me empties the blasting things. So they will fill the recycling bin to overflowing…you could walk into my kitchen and there would be plastic bottles rattling around the floor…

Would they all wash them out?

Yes, they will wash them out but the interesting thing there is when the water charges come in it's a case of – if you see somebody washing say a yoghurt carton like one of the kids were doing this morning and they were rinsing that out and that is going to be interesting when the water charges come in because I'll be saying to myself well I'm paying money for that water…what do we do…

How do you feel about the water charges?

I think it makes a huge amount of sense.

Why so?

Well, we can't just keep throwing water away…it is posed as a real cost and I do believe that the user should pay.

Do you do anything at home at the moment to conserve water?

This year we have replaced a dishwasher and we have replaced a washing machine so one of the first criteria we would have looked at that we would have never looked at before would be how much water does the machine actually use and they would be the two big users of water in the house. The other thing – and it is not necessarily reserving water it is more conserving energy. We tend to use an electric shower rather than the shower than runs off the oil central heating because I have noticed that they would use it for a shorter amount of time when using the electric one. My kids are clean (laughs)

So you would use it in an energy sense?

Yes, but water too because it does use a lot less water. But they have the choice, the two of them are sitting there except if you turn on the one from the tank, the emersion, it fires out a hell of a lot more water. So you might say that using the electricity is cheaper but actually when you look at it, it is actually more effective. Because you always just use the water you use and it is never sitting in a tank, even with the best insulation it does go cold. So you would be turning it on for a shower and suddenly they don't take the shower. So that's it but other than that, no.

Do you have any solar panels on your house?

No, we don't. But we spent a lot insulating. We spent a huge amount of money insulating the house.

What that recently?

Yes, it is an old house. We moved into it about four and a half years ago so we had to insulate internally so plaster board would have been put on the internal walls as opposed to externally or in the cavity. The cavity was full of crap. Really bad quality stuff and we couldn't pump new stuff in on top of it.

Do you think you would be energy aware with any everyday activities such as watching TV or the lights being on in the house?

I do – the others don't. So a good example there would be first of all shouting at them in the shower but beyond that, I tend to go to bed last and I will notice that they will vacate a room or if I don't go to bed last and I go down into our conservatory which is where everything tends to happen – the sky box would be on, the TV would be on standby, the Wii would be on standby, and we also have an external disc drive for films and that would be on standby. So if I am going to bed, all of those bar the sky box just in case my wife could be taping something for college or something like that, I would leave the sky box on just in case something is set up to record but everything else I will turn off…the others…forget it. The other one – and I'm not sure if this makes a huge amount of savings – but because we are not in the house throughout the day, we are working and the kids are in school, if we need hot water to wash something up we will heat just the required amount of water rather than turning on the immersion we just use the kettle. And I know kettles are notoriously inefficient in that regard but you are only heating what you use. Whereas on Saturdays when we are around and that is when all the actual cleaning gets done that is when the immersion goes on. But Monday through Friday at 6 o clock instead of turning on the immersion and heating that up and using half of it – and that is the other thing that I notice is that the piping from the immersion to the sink is not insulated so once you turn on the hot water it takes an age for hot water to reach the sink which means that when you turn the hot water off you have an awful lot of very hot water in the pipe that is only going to go cold. So that is my logic for using the kettle because I am only heating what I know I will use, even though per unit it might be more expensive I do use it all.

Have you always been aware about energy usage?

Every household in Ireland – have you ever heard Des Bishops skit about leaving the immersion on? It is engraved in our culture – you do not leave the immersion on! (laughs) anything else but not the immersion. That just seems to be a cultural thing for some strange reason. That would be the main thing. Other things like you take the small car whenever you can rather than the big car – even though the girls prefer the big car. So we bring them to school in the Volvo. That just chews petrol in comparison to the small Fiat. But they don't like going to school in the small Fiat, and I can understand that too. I think when they go into secondary school suddenly they become much more aware. So a bright yellow Fiat does not fit the image (laughs).

Okay, as you are mentioning transport – can you tell me your main modes of transport?

Car – we have a Volvo and a very small Fiat. We are on a bus route but it is the 8A and the service is regular but there are huge laps of time between service so I could

get it here at quarter past five which is just too early for me and as well because Ella works in UCC we are pretty efficient. We can leave our house at five past or ten past eight we drop the girls off at their schools and then we carpool in here so we only take one car in and if you think about it – it is one car and four people so it is actually very efficient in that regard.

Is the car petrol, diesel?

Petrol…

When you were making the choice to buy both of your cars what were the criteria?

Divorce! I'm serious. My wife would not get into a diesel. Absolutely not. She comes from an agricultural background and buying a diesel car was just…farmers. And I wanted to get a diesel car an ever since I have been giving out to her.

Why did you want a diesel car?

It was the cost – the efficiency. It's about 10c a litre less and you get about 20% more fuel efficiency and in the city they are better again because they work off a pressurised system so they are more efficient in city driving.

Can you tell me what you know about hybrid car or electric cars and how you feel about them?

I don't know what the merits actually are associated with them – the reliability…hybrids make a lot of sense. Every time I touch the brake I realise that is just wasted energy and I would prefer to use that. So hybrid cars – yes, if they were more efficient and less expensive…at the end of the day it is an economic decision. When times were good sure, you could just say I am going to pay and be environmentally friendly – but now…I think a lot of households are looking at it and the economics have to stand up as well.

What is your overall view on eco-friendly? What is your honest take on the increase emphasis on the environment?

My honest take on it – two different perspectives. First of all we live out in the countryside and when you are out in the countryside, especially for an urbanite, I appreciate what that brings with it. We moved out there because we wanted to give our kids part of that. So in terms of sustaining that so for instance we have a septic tank and I have no issues at all with regards to septic tank charges and stuff like that and only god knows what the implications of that might be at some stage…I have no idea, but I have absolutely no real issue with that. Longer term, bigger picture – I tend to be fairly nihilistic so my view is that life will go on in this planet. We have been here…what…the universe is 13.7 billion years the earth is about 4.7 billion years, we arrived 3 million years ago in some shape or fashion. We will go…and

something else will emerge. And 'life' will go on. So in that regard and looking at the bigger picture in terms of sustainability…life, just because of its very nature, is sustainable. Now, when you go into issues such as the hardship caused so for example because we are sending so much CO2 into the atmosphere that means that we have got effects somewhere which affects the quality of life or basic survival – that does concern me. But overall – we are going to go anyway. My main motivation would be – what we have now is worth preserving and I do see the need to reuse but a lot of it would not be environmental but in the sense that it just makes sense. If every person in China wants a fridge where are the resources going to come for that? We have to, just on a very pragmatic basis, reuse what we have.

Here at the University, are you aware of any environmental incentives?

Carpooling…that has definitely taken one car off the road for us. Absolutely no doubt about it…We would take in two cars just because of the flexibility it gives you, even though you very rarely use that flexibility but you would still have brought in two cars.

Can you explain the carpooling system here?

Basically it means that two people who have entitlements to bring in a car, if they hand back one key, basically a space is reserved until 10am. Now we are quite fortunate in that even if we are dropping the kids off we can be here for 8.30am so we would still get a space but before carpooling we would have brought two cars in so one would come in really early and then the other one would come in…so if someone wanted to work late just because it is convenient they would do it whereas now – we would work at home. So it has definitely pulled one car off the road. There will be occasions that we would have to bring the two cars and then we would have to use the pay car park and you really don't want to be doing that.

What was the main motivation to take that one car off the road during the week?

There is a real cost there. We would have got the space anyway simply because of the logistics. If you were dropping kids off to school in Douglas you wouldn't of got a space so if you were to go over there in the mornings chances are that our car would be one of the first in there. So it definitely was to take one car off the road. Because you just did the math. You are saving probably a quarter of a tank in the Fiat in a week. It does force you to be a lot more organised and where it does catch you actually is with child minding because now you become really reliant on the child minder. Because if she phones up then the one car leaves campus and you still have one person waiting behind and that is where the two cars would have given flexibility before. So this has actually changed our behaviour completely.

Have you noticed any other changes in this building – say with the waste collection?

No, I have never seen any changes.

If you are ever in any of the restaurants or cafés around campus would you take any notice of the waste disposal?

I don't spend much time in the cafés here and if I am we always tend to bring in made lunches so we are not buying a whole lot of stuff. And if we are buying, and it has nothing to do with green it is just personal preference, a tea in the main restaurant I always prefer it out of a mug as against those paper cups. Now whether or not that stands up environmentally as I know it has to go into a dishwasher and so on but it is purely a personal preference. To what extent students use it – I can see the bins there and I don't use them because I don't need to. We bring our rubbish home and it goes into the compost. So you'd spot it but I don't know if people use it.

Do you think that from what you know about what they do at the Green Schools and what people are doing now do you think it makes a difference?

When I look at Green Schools and again because it has been a couple of years since that initiative was undertaken and I can't remember a whole lot of the detail but what you can certainly remember is a general tone to it. The kids really loved it. It got into them and they enjoyed it and it was a topic of conversation when they came home so in that regard what it had done was it positioned green initiatives very positively in their minds and when you see your kids enthusiasm for something it really does put it up to you. Because if a child comes home enthusiastic you can't dismiss it…that's horrible and would be an awful thing to do. So you find yourself buying into it. So certainly the coupling of that with the pay for disposal of waste certainly did have an effect. What is the saying…people are searching for solutions to problems and good feelings…the good feelings certainly comes from the kids because when they bring that enthusiasm to it and the solution to the problem is the actual recycling but to be honest you get a much better feeling when you let your kids see that you are buying into it and see them buy into it and to see them as agents of change in a household because nine times out of ten we are telling them what to do, this is a situation where it gave them an opportunity to say 'listen this is what we are doing…what are you doing?'

Did they ever grow any vegetables or plants in school?

Again, that particular teacher, who has subsequently retired, she was very much into plants and things like that so my eldest daughter would have been exposed to that. But my kids aren't into plants really.

Do you have a vegetable patch at home?

No, we don't have a vegetable patch. We have a huge garden with a lot of trees and flowers and stuff like that. But we don't have a vegetable patch; it is just on the margin because by the time we have the plants sorted out the last thing we want is another responsibility. We have apple trees but we don't even have time…it sounds

awful…we don't even have the time to go down and pick the apples. So what happens is that there are horses across the way, across the other side of the river so we go down and pick the apples off the grounds and throw them over to the horses. It sounds awful but that is just what happens.

So you would really not consider a vegetable patch then?

No, definitely not. For me to cut the grass it could take two hours. And that is just the grass, so if someone said to me about a vegetable patch I would just say dream on. We are doing enough for the environment now with our trees.

Okay that's about it – thank you!

Comments made after tape recorder was turned off and I was leaving the interview

We should have two bins. That has to be the first place to start. If I looked down and saw two bins in my office I would throw my waste fruit into one and my paper into the other…and it is not that it would be a reminder…it tells me that there is a right and a wrong way of doing this.

My daughter came home and said that she would like to get involved in the Green Schools Committee but a girl that she doesn't like is in it so there was no way she was going to join it.

Spoke about campus bike: I never see that as a green thing – I see it as a practical thing. I need to get from one end of campus to the other in a short space of time. It makes sense.