

Anti-Consumption And Materialism In Consumer Behaviour: A Value Orientation Perspective

By

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DEDICATION

This thesis is dedicated to none other than my mother Qaisra, my father Yaqub, my twin sister Fatima, my brothers Ali and Imran, my husband Usama and love of my life Meerab, my daughter. Alahamdulillah I am blessed to have you all in my life. I owe this thesis and much more to all of you.

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ABSTRACT

Starting from the premise that both anti-consumption and materialism are prevalent concepts in developed economies, this study firstly empirically explores if anti-consumption attitudes and materialistic attitudes are opposite to each other. Secondly, it examines how consumers in developed countries, such as the United Kingdom, find a balance between these contradictory attitudes, and if this balance could be used to classify these consumers into unique and distinct segments.

A theoretical framework is proposed based on the literature from anti-consumption, materialism, values, environmental consciousness, authenticity and wellbeing. Subsequently, correlations and regressions are conducted on survey data (N=288) from British consumers, to explore if values, environmental consciousness, authenticity and wellbeing have an inverse relationship with anti-consumption attitudes compared to materialistic attitudes. This is done to empirically assess whether the anti-consumption attitude is in fact opposite to materialistic attitude. Next, cluster analysis, using the two attitudes, was conducted on the data in order to explore if contemporary consumers hold different combinations of anti-consumption attitudes and materialistic attitudes and to see if these combinations could be used to classify consumers into a typology with different segments. Additionally, One-way ANOVA, post- hoc tests, discriminant analysis and χ^2 tests were employed to rigorously validate this typology of consumers. Value orientations, environmental consciousness, wellbeing, authenticity, age and education are used as external variables for the validation of the typology.

The thesis principally concludes the following: 1) anti-consumption and materialistic attitudes are opposite to each other as a) values that act as antecedents of anti-consumption attitude are opposite to values that act as antecedents of materialistic attitude; b) environmental consciousness is a positive predictor of anti-consumption attitude and a negative predictor of materialistic attitude and, c) the relationship of values, environmental consciousness, authenticity and wellbeing with anti-consumption attitude is opposite to that of materialistic attitude; 2) contemporary consumers can be classified into four unique segments in terms of the specific balance they acquire between their anti-consumption and materialistic attitudes. These segments are labelled as anti-consumers, materialistic consumers, dualistic consumers and disinterested consumers. The four groups in the typology exhibit different psychographic and demographic profiles according to the specific combination of anti-consumption and materialistic attitudes that they exhibit.

The findings from this thesis provide empirical support to the notion that anti-consumption is opposite to materialism, thereby responding to the call for empirical research (Lee and Ahn, 2016). More importantly, the development and validation of a typology of contemporary consumers in this thesis brings new understanding of consumers in the 21st century, thus adding to the existing knowledge in consumer behaviour and marketing. Marketers can benefit from the findings of this study as they can develop strategies for each segment in order to cater to their specific needs. Policy-makers striving to attain sustainability can benefit from this knowledge as they can determine which values to promote so as to sway people to consume in a sustainable way.

Keywords

Anti-consumption, materialism, attitudes, sustainability, consumer typology.

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Chapter 1

INTRODUCTION

1.1. Introduction

To live is to consume. Every living being needs to consume to live. For example, animals consume plants and other animals to survive, while plants consume carbon dioxide, light, minerals and water for their existence. Like other living beings, humans also need to consume to survive. However, unlike other beings, we humans have an array of choices about what and how we consume. This choice depends on the class we belong to and the level of economic development of the society we belong to (Gale, 2002). Though, arguably, the primary function of consumption could be serving basic human needs, however this is no longer true for the developed world (Belk, 2010; Hastings, 2012; Princen, 2002). For instance, consumption patterns of the American middle-class underwent a dramatic change throughout the 1980s and the 1990s. During this time, this class acquired possessions at a rate greater than ever observed in previous generations. In about the time span of twenty years, consumption became so important in America that the number of shopping centres became more than double the number of high schools. This resulted in individuals spending more time shopping than in playing with their children, essentially making these shopping centres into centres of the community (De Graff, 2001).

One possible explanation of this is the link consumption has with the displays of social status and achievement (Dermody et al., 2015; Rindfleisch

et al., 2009; Richins, 2004). Research indicates that many purchases made by the low-income groups are for the sake of meeting status requirements, while the high-income groups make certain purchases to display their wealth (Etzioni, 2004). Companies exploit this situation by constantly upgrading standards of socially necessary products (Dermody et al., 2015). As a result, consumers update and replace possessions with the newer versions so as not to be left behind (Schor, 1998; Knoedler, 1999).

Schor (1998) used Veblen's Theory of the Leisure Class to explain this behaviour. According to this theory the upper class in affluent societies use spending to demonstrate their social position, while the lower class makes efforts to copy the same attitude. "Keeping up with the Joneses" was an important phrase in America throughout the 20th century, representing a process where the middle-class constantly struggled to keep up with the consumption patterns of their neighbours. This reference shifted from neighbours to celebrities with lifestyles that were unachievable for the common person. The media played a special role in building the concept of what other consumers do and have (O'Guinn, 1997). With television representing affluent consumer behaviour as a common behaviour, individuals started believing that the world is an affluent place. As a result, products became significant in terms of the status they hold, and these objects were then used to reflect desired self-image and build a sense of identity, thus helping individuals reflect whom they want to be seen as (Schor, 1998; Schaefer and Crane, 2005; Rindfleisch et al., 2009; Dermody et al., 2015). This trend towards consumer culture motivated individuals to value achievements and things over relationships and people, making way for

materialism - “the belief that, compared to other goals one might pursue, it is important and valuable to prioritize the goal of attaining money and having many possessions (Kasser 2002; Richins and Dawson 1992)” (Kasser et al., 2014, pp. 1). At a layperson’s level it is a general tendency to link conspicuous consumption with materialism (Wong, 1997). Nonetheless, Wong (1997) establishes a clear link between materialism and conspicuous consumption. He elaborates that the two important components of materialism: display of success (Richins & Dawson 1991) and to arouse the envy of others (Belk 1985), links it to conspicuous consumption – public consumption of luxury products. Materialism became and still is the ‘dominant consumer ideology’ (Belk, 1987, p. 26) in modernised and developed economies (McCracken, 1988; Dermody et al., 2015; Kasser et al., 2014).

Despite being the dominant ideology, concerns regarding materialism can be traced back to the time of early Greek philosophers. For instance, Kilbourne and colleagues (2005) elaborate that Pythagoras required his students to relinquish their belongings before entering his school. Since ancient times, philosophers, such as Machiavelli, Thomas, Aquinas, Locke, Mandeville, Hobbs, Mill and Marx, Adam Smith, Bentham, Hume; and religions such as Islam, Christianity, Buddhism, Hinduism and Judaism have criticized materialism from different philosophic and religious perspectives (Belk, 1983). Likewise, in the present time many have their concerns about materialism, as it is shown to have a negative relationship with well-being (Ahuvia and Wong 2002; Burroughs and Rindfleisch 2002; Diener 2009; Diener and Biswas-Diener 2002; Kashdan and Breen 2007; Kasser and

Ahuvia 2002; Kasser and Ryan 1993; Sirgy 1998; Tatzel 2002; Lee and Ahn, 2016).

“A strong contrast to materialism” is anti-consumption (Lee and Ahn, 2016, pp. 18). Anti-consumption, as the antithesis of consumption (Lee et al., 2009b), is believed to be a counter movement that exists within a mass consumption society (Iyer and Muncy, 2009). Anti-consumption is said to be the opposite of materialism (Kaynak and Eksi, 2011; Lee and Ahn, 2016). That is to say, while materialism emphasizes “possessions and money for personal happiness and social progress” (Moschis and Churchill, 1978, pp.607), anti-consumption represents the attitude that declines to give resignation to the ideology of progress and material growth (Cherrier, 2009; Kozinets and Handelman, 2004; Schor, 2000). Lee and Ahn (2016) while discussing anti-consumption and materialism elaborate how the two should be compared with one another. They argue that even though the exact opposite of materialism is anti-materialism, yet “anti-materialism is a redundant term since it is nearly impossible to be truly anti-material” and though “anti-consumption and materialism are not exact opposites on the same continuum; however, they are antagonistic concepts and therefore it makes sense to compare them against one another” (Lee and Ahn, 2016, pp.24). However, the understanding that anti-consumption is opposite to materialism needs empirical support (Lee and Ahn, 2016).

Despite being opposite to materialism – the dominant ideology - a substantial percentage of the population scores high on anti-consumption (Nepomuceno, 2012; Etzioni, 1998; Choi 2011; Maniates, 2002; Markowitz and Bowerman, 2012). In fact, scholars like Choi (2011), Maniates (2002) and

Markowitz and Bowerman (2012) acknowledge that anti-consumption has become a major trend in the overall market and is now mainstream. Thus, theory suggests that both materialism and anti-consumption are important part of current culture of developed economies. Therefore, it is reasonable to argue that a consumer of present time would hold both anti-consumption attitude and materialistic attitude. However, an understanding of how these two contradictory attitudes together shape the consumers' behaviour needs attention.

Building on the above discussion, the present research first seeks to assess empirically if anti-consumption attitude and materialistic attitude are opposite to each other, and second aims to classify consumers in terms of the balance they hold between their anti-consumption attitude and materialistic attitude.

To serve this aim, the first chapter of this thesis is divided into six main parts. Section 1.2 offers an overview of the theoretical background of the current study. Section 1.3 discusses the research gap. Later on, section 1.4 provides the research aims and objectives of the study and formulates the research questions. Section 1.5 gives the justification for the study. The chapter concludes with section 1.6 which presents the structure of the thesis.

1.2. Theoretical background

1.2.1. Materialism at the heart of consumer culture

Consumerism is “the doctrine that the self cannot be complete without a wealth of consumer goods and that goals can be achieved and problems can be solved through proper consumption” (Murphy, 2000, p. 636). The current societies of industrialised nations are based upon consumerism and the growing notion of the citizen as consumer, making consumer culture the mainstream culture (Purohit, 2011; Etzioni, 1998; Fischer, 2001a; Schor, 1998; Shaw and Newholm, 2002; Zavestoski, 2002a). Consumer culture fosters materialism as an important component, resulting in development of a materialistic society (Purohit, 2011). Materialism, which is the primary focus of such societies, represents a structure of attitudes concerning the importance of attainment and ownership of objects (Moschis and Churchill, 1978). In such a culture, objects are thought both to help attain desired self-images and meet status requirements (Etzioni, 1998; Elliott, 1997). In doing so they provide a sense of identity and thereby help to build social relationships (Black and Cherrier, 2010). At the highest level, these possessions claim a fundamental position in a person’s life and are believed to provide the greatest source of satisfaction and well-being (Burroughs and Rindfleisch, 2002; Belk, 1985). They are considered more precious than relationships with other people (Rindfleisch et al., 2009).

Materialism has been labelled as the “dominant consumer ideology and the most significant macro development in modern consumer behaviour”

(Belk, 1987, p. 26) within developed economies (McCracken, 1988; Dermody et al., 2015). Thus, in today's materialistic societies one works hard to not only obtain materialistic possessions, but also to later upgrade, insure, maintain, replace and manage these possessions (Kasser, 2002) with the hope that this will increase one's wellbeing. Materialism fuelled by factors like global mass media, marketing activities and consumerism (Ger and Belk, 1996; Torlak and Koc, 2007) convinces consumers that they need products to meet competence, attractiveness and security needs (Kasser, 2002 in Torlak and Koc, 2007), thus resulting in an addiction to materialistic possessions. There appears to be an increasing global tendency of accepting this addiction to material goods (Torlak and Koc, 2007). For example, social acceptance of shopping to compensate for depression (De Graff, 2001), or consumption of luxury goods as a means of enhancing self-esteem (Schor, 1998) are acknowledged as commonplace. In fact, materialism is seen as the dominant ideology in developed economies (Dermody et al., 2015, p. 1478).

Materialism, though not a problem in itself, results in an increased level of consumption (Rumbo, 2002) which results in using up our finite resources, waste generation and greenhouse gas emissions (Alexander & Ussher, 2012; Tukker et al., 2010; Markowitz, and Bowerman, 2012). Materialism also results in excessive buying (Nepomuceno and Laroche, 2015; Sun and Wu, 2011; Kasser 2002), consequently increased levels of production to meet this consumption are needed. This cycle of increasing production and consumption in industrialised consumerist societies results in an economic system that is acknowledged to be unsustainable (Rockstrom et al., 2009; Vergragt et al., 2014). This is evident from the fact that the current

pattern of consumption has resulted in the depletion of the earth's resources at a rate that is catastrophic for all the species on the earth (Krausmann et al., 2009; Vlek and Steg, 2007). It is identified as the most urgent crisis of our time (WWF, 2008), as Earth is not able to support unlimited growth in material consumption (Jagdish et al., 2011; Daly 1996, 2005; Meadows et al. 1972; National Research Council 1999; Speth 2008). This implies that materialism, though being a dominant ideology in the developed world, has consequences that work against sustainability (Kilbourne & Pickett, 2008; Rockstrom et al., 2009; Vergragt et al., 2014).

The environmental consequences of human activities linked to production and consumption systems become increasingly obvious, studied and measured during the second half of the 20th century. This led to the emergence of the concept of sustainability as a policy goal and an element of strategy for many leading businesses. It has also led to the emergence of concepts such as the 'green consumer' and research suggesting that environmental concerns are changing the attitudes of individuals away from being materialistic and towards being more conscious about their consumption behaviours (Markowitz and Bowerman, 2012)

Sustainable consumption is a broad concept that covers the interaction of ecological and social issues like human needs, environmental protection and quality of life (see Jackson and Michaelis, 2003, p. 14). Sustainable consumption considered across a range of disciplinary perspectives, including anthropology, economics, psychology, human geography, sociology, consumer behaviour and marketing (Dolan, 2002; Schaefer and Crane, 2005; Princen et al., 2002; Reisch and Röpke, 2004; Jackson, 2006; van Dam and

Apeldoorn 1996; Heiskanen and Pantzar 1997), is a growing field of interest for social scientists (Pepper et al., 2009).

1.2.2. Importance of sustainability in the present time

Sustainability is not a new concept. With the publication of “Limits to Growth” in 1972 by the club of Rome, the consequences for the earth due to the expanding economies of modern western societies became highlighted (Meadows et al., 1972; Fongers 2010). In 1987, the World Commission on Environment and Development produced their landmark report “Our Common Future” (World Commission on Environment and Development, 1987) which included what has since become a widely used definition of sustainability. The definition provided - “development that meets the needs of the present without compromising the ability of future generations to meet their needs” (Bansal, 2005, pp. 181) - has emerged as the prevailing description (Balderjahn et al., 2013; Bansal, 2005). This definition was later called the Brundtland definition (named after Chair of the World Commission on Environment and Development) and is seen as the starting point of a long, and still ongoing, discussion about what sustainability is (Costanza and Patten, 1995). Defining sustainability has, however, proved a complex task (Schaefer and Crane, 2005) and as a result there are over 100 definitions of sustainability (Labuschagne and Brent, 2005) with none being universally accepted.

In spite of this, sustainability and the concept of sustainable consumption have become increasingly prevalent in academic and policy

debates concerned with consequences of consumption. The fact that the period from 2005-2014 was announced as the United Nations Decade of Education for Sustainable Development by the United Nations General Assembly reflects that sustainability has become a crucial part of today's world (Fongers, 2010). A number of studies both in consumer behaviour and marketing literature can be found (Van Dam and Apeldoorn, 1996; Kilbourne, McDonagh, and Prothero 1997; Heiskanen and Pantzar 1997; Dolan, 2002) that are framed around sustainable consumption (Schaefer and Crane, 2005). Fisk (1974) first proposed the idea of a "Responsible Consumer" who would constrain their own consumption for reasons of environmental responsibility. However, it was only as sustainability-orientated research during the 1990s expanded that the consideration of ecologically conscious and ethical consumption gained popularity (Daniel and Sirieix, 2014). Green consumption was partly characterised by an avoidance of certain types of products. The first 'Green Consumer Guide' published in 1988 urged consumers to avoid products that endangered the health of others, caused unnecessary waste, involved cruelty to animals or adversely affected other countries (Elkington and Hailes, 1998). The idea of a deliberate refusal to consume as part of the pursuit of a more sustainable society was advanced by Wall (1990), but it was only later that such ideas were formalised into a concept of anti-consumption (Agarwal, 2013). A key development in the debate about sustainability and consumption is the split between the concepts of weak sustainable consumption and strong sustainable consumption (Fuchs and Lorek, 2005; Lorek and Fuchs, 2013). Weak sustainable consumption focuses on improving the efficiency of consumption (for example through

choosing options with less environmental impact), while strong sustainable consumption focuses on reducing the level of consumption within the developed countries (Sedlacko et al., 2014).

Though initially consuming differently (in terms of ethical and green consumption) was central to the sustainability debate, some scholars (Carolan, 2004; Schor, 1999) argued that problems associated with over-consumption could not be solved with yet more consumption, irrespective of how ethical and green that consumption became (Isenhour, 2010). It was argued that substantive progress towards sustainability also required consuming less, thus paving the way for a growing interest in anti-consumption (Agarwal, 2013; Prothero et al., 2011; Isenhour, 2012).

1.2.2.1. Anti-consumption as a vital element of sustainability

Many consumers have started acknowledging the fact that excessive consumption, prevalent in the present times in developed economies, does not help in attaining a healthy self (Schor, 1998). With ever-increasing stress and dissatisfaction resulting from the consumption of material goods, many individuals are choosing to live simpler lives, so as to bring more meaning to their lives (Markowitz and Bowerman, 2012; Zvestovski, 2002a; Shama 1981). Evidence shows that significant numbers of individuals in affluent societies are making changes in their lifestyles that entails earning less money as they question continued consumption growth (Schor, 1998; Hamilton, 2003). These individuals understand and question the negative impact that consumption has on, not only the environment, but also on their personal wellbeing (Markowitz and Bowerman, 2012). This has paved the way for

sustainable consumption research that examines anti-consumption behaviour (Agarwal, 2013; Prothero et al., 2011)

It has been identified that in general anti-consumers have moved from being a “minor stream of niche consumers” to “becoming a major trend in the overall market” (Choi, 2011, p. 117). As Maniates (2002, pp.199) put it “It’s quiet, counterculture, potentially subversive, but also mainstream”. Thus it is believed that anti-consumption is a mainstream trend that is now experienced and practiced by many within the general public. In fact, anti-consumers were identified as the fastest growing segment in the United State (Shama, 1985). More recently, scholars like Choi (2011), Maniates (2002) and Markowitz and Bowerman (2012) suggest that anti-consumption is now a commonplace type of behaviour.

1.2.3. Anti-consumption and materialism: contradictory yet prevalent in current culture

Anti-consumption is said to be opposite to materialism (Lee and Ahn, 2016; Kaynak and Eksi, 2011), which itself is embedded in the current culture and it is thus not possible to escape consumption (Lee and Ahn, 2016; Black and Cherrer 2010). Belk (1985) defines the opposite of materialism as adopting simplicity and self-denial from materialistic objects as a source of happiness. Therefore, following this understanding provided by Belk, anti-consumption is essentially opposite in nature from materialism because anti-consumption fosters simplicity and denial of material objects as sources of happiness. On one hand anti-consumers search for happiness and well-being

through non-materialistic sources (Lee and Ahn, 2016; Cherrier and Murray, 2007; Iyer and Muncy, 2009; Lee et al., 2009a; Cherrier, 2009; Etzioni, 1998; Fischer, 2001a; Zavestoski, 2002b; Shaw and Newholm, 2002). Whereas, on the other hand materialists look for happiness through possessions (Lee and Ahn, 2016; Richins and Dawson, 1992; Belk, 1985; Moschis and Churchill, 1978). However, materialism is reported to be negatively related to well-being and happiness (Lee and Ahn, 2016; Nepomuceno, 2012; Kashdan and Breen, 2007; Burroughs and Rindfleisch, 2002; Swinyard et al., 2001; Kasser, 2002; Wright and Larsen, 1993; Richins and Dawson, 1992; Belk, 1984). Although not tested empirically, anti-consumption is seen as a means of attaining greater happiness and well-being within a consumerist society (Lee and Ahn, 2016; Cherrier and Murray, 2007; Iyer and Muncy, 2009; Cherrier, 2009; Etzioni, 1998; Fischer, 2001a; Zavestoski, 2002b; Shaw and Newholm, 2002). Lee and Ahn (2016) through qualitative analysis support that while materialism has a negative relationship with consumer wellbeing, anti-consumption - being opposite of materialism - has a positive relationship with well-being. However they emphasize the need for empirical research in this regards.

In summary, anti-consumption and materialism though opposite to each other (a detailed discussion of the two being opposite is presented in chapter 2) are significant components of the culture within the industrialised economies, such as the UK. Therefore, it is reasonable to argue that consumers of such economies would hold both anti-consumption and materialistic attitudes.

This phenomenon of individuals holding conflicting attitudes is not alien to marketing literature. Theories like cognitive dissonance (Festinger, 1957) and

ambivalence are well-established concepts in the bedrock of knowledge. Cognitive dissonance theory stresses attitude change and according to it an individual can hold conflicting attitudes. When an individual is simultaneously aware of two inconsistent cognitions, tension is generated and this is called cognitive dissonance. Furthermore, should discrepancies develop among cognitions, individuals are motivated to restore harmony.

A similar concept that acknowledges that an individual can hold conflicting attitudes is the gradual threshold model (GTM) of ambivalence (Breckler 1994; Thompson et al., 1995; Priester and Petty, 1996). Ambivalence has gained central position across different disciplines when focusing on attitudinal research (Priester et al., 2007). According to GTM, an individual can hold conflicting reactions to attitudinal object (Cacioppo and Berntson 1994; Larsen et al., 2001; Otnes et al., 1997; Williams and Aaker 2002; Priester et al., 2007). These conflicting reactions combine to produce a state of experienced ambivalence. The reaction could be either positive or negative and whichever reaction is greater is called “dominant”, while lesser reaction is called “conflicting”. According to GTM, there is less ambivalence if there are more dominant thoughts and feelings of one valence (either positive or negative) held by an individual. Though a detailed discussion of both cognitive dissonance theory and GTM could be very interesting, it is beyond the scope of this thesis. The main point is that both these theories support the idea of an individual holding contradictory attitudes.

More recently, it is argued that people generally have thousands of attitudes and our behaviour usually results from more than one attitude. That

is to say, a cluster of attitudes rather than just one attitude influence our behaviour (McCroskey, 2015). Thus, it is reasonable to argue that both anti-consumption attitude and materialistic attitude would affect consumer behaviour.

1.3. Research gap

Materialism is strongly identified with consumption (Lee and Ahn, 2016). It is supported that materialism results in loss of control over wise consumption behaviour (Lee and Ahn, 2016). Materialism promotes material possession as central focus of ones life and results in individuals losing control over wise consumption behaviours. This has been referred to as being caught in the loop of materialism (Pieters 2013), or falling into the trap of materialism (Sivanathan and Pettit 2010). Instead of making wise consumption decisions materialistic people “allow material possessions to play a central role in their lives” (Sirgy, Lee, and Rahtz 2007, 346). On top of this, contemporary companies use a vast array of techniques to make sure that consumers follow their desires and buy an ever-increasing amount of goods/products. Cherrier and Murry (2004), while following Baudrillard’s approach, propose that marketing has trapped and commodified consumers by fulfilling the manipulated needs. They elaborate that consumers have to spend more time working in order to increase their consumption power. In this way, there is a trade-off between one’s freedoms and expensive cars, exotic vacations, nice homes and fancy clothes. Though consumers think they are in control of the objects they buy, the trade-offs between freedoms and these

objects suggests otherwise. However, in opposition to the marketing and production efforts - which have resulted in increased materialism and unsustainable levels of overconsumption within industrialised economies, along with its consequences - anti-consumption has also been on the rise (Choi, 2011; Humphery, 2010; Bech-Jessen & Vaaben, 2010; Agarwal, 2013; Banbury et al., 2012; Webb et al., 2008). Gerard Hastings (2012), in the *Journal of Social Marketing*, asks:

“When a supermarket chain attains such dominance that it covers every corner of a country the size of the UK, threatens farmers’ livelihoods with its procurement practices, undercuts local shops and bullies planners into submission, it becomes reasonable to ask: does every little bit really help? Once the 100 billionth burger has been flipped and yet another trouser button popped, it is sensible to wonder: are we still lovin’ it? As the planet heats up in response to our ever increasing and utterly unsustainable levels of consumption, it is fair to question: are we really worth it?” (P. 223)

Many have raised such questions and as a result, despite living in today’s materialistic society, individuals are embracing anti-consumption practices that result in reducing consumption within their lives (Hutter, and Hoffmann, 2013; Schor, 1998; Hamilton, 2003). Thus, making both materialism and anti-consumption important and prevalent in developed countries presently. Previous research has pointed out the importance of both anti-consumption and materialism in understanding consumer behaviour. However, the understanding that anti-consumption and materialism are opposite to each other (Kaynak and Eksi, 2011, Lee and Ahn, 2016), needs to be explored empirically (Lee and Ahn, 2016). Although studies can be found

on both materialism and anti-consumption separately, apart from one study, no study has yet looked at the two attitudes simultaneously so as to empirically explore their apparent inverse relation with each other. Lee and Ahn (2016) discuss how anti-consumption and materialism could be seen as opposite to each other (discussed in detail in chapter 2). However, they do not provide empirical support to this understanding and therefore call for “future empirical research” (Lee and Ahn, 2016. Pp. 43) thus providing a gap to be filled.

To fill in this gap, this thesis attempts to explore empirically if anti-consumption and materialism are opposite to each other (Lee and Ahn, 2016). The opposite nature of anti-consumption and materialism can be examined through different means. For example, value orientation can be useful to explore if anti-consumption attitude and materialistic attitude are opposite to each other. That is to say if anti-consumption attitude and materialistic attitude are opposite to each other, then they should relate to opposite values. Anti-consumption is proposed to be a means of reflecting one’s personal values (Kozinets and Handelman, 2001) and there is a need for an understanding of the values that drive the phenomenon (Johnston and Burton, 2003; Ozanne and Ballantine, 2010). Studies could be found that look at materialism and values (for example Burroughs & Rindfleisch, 2002; Pepper et al, 2009; Kilbourne et al., 2005; Karabati & Cemalcilar, 2010) but none that look at values and anti-consumption, thus presenting a gap that this study endeavours to fill.

Another psychographic variable that has been linked with anti-consumption (Kaynak and Eksi, 2011; Chen and Chai, 2010; Chatzidakis and Lee, 2013) and materialism (Kilbourne and Pickett, 2008) is environmental consciousness. A consumer is said to be environmentally conscious if (s)he is aware of the ecological impacts of one's consumption behaviour and has a concern to reduce those impacts through consumption decisions (Tilikidou, 2013; Schwepker and Cornwell, 1991). Research shows environmental consciousness to be one of the antecedents of anti-consumption (Kaynak and Eksi, 2011), while materialistic consumers are shown to relate negatively to pro-environmental behaviour (Kilbourne and Pickett, 2008). Researchers like Dermody et al., (2015), Hartmann and Apaolaza-Ibañez (2012) and Kilbourne and Pickett (2008) indicate that environmental concern plays a major role in determining why individuals do or do not engage in sustainable (anti)consumption, hence its inclusion in this study. Similar to the case of values, if anti-consumption attitude and materialistic attitude are opposite to each other, then environmental consciousness should have an inverse relation with the two attitudes. Thus, this relationship between the two contradictory attitudes – anti-consumption and materialistic – and environmental consciousness needs to be explored empirically.

Additionally the concept of authenticity - being one's real/true self and acting in congruence with one's values (Erikson, 1959; Maslow, 1976) – can be used to examine the opposing natures of anti-consumption and materialism. This is also highlighted in both anti-consumption and materialism literature. It is argued that current cultures based around materialism provide limited means to attain authenticity (Forgas, Williams, and Laham, 2004) and that

individuals use anti-consumption to attain authenticity in their life (for example Zavestoski, 2001; Zavestoski, 2002b; Cherrier, 2009; Agarwal, 2013; Lee et al., 2009a),. Therefore, if anti-consumption is opposite to materialism then authenticity should have a positive relationship with anti-consumption and a negative relationship with materialism.

Lastly, the relationship of wellbeing with anti-consumption and materialism could be useful to explore inverse nature of the two attitudes. That is to say, if anti-consumption relates positively to wellbeing then materialism, being opposite to anti-consumption, would relate negatively to wellbeing (Lee and Ahn, 2016). Though Lee and Ahn (2016) find support for the above said relationship between anti-consumption, materialism and wellbeing through qualitative data, they call for empirical research in this regard.

Thus, an inverse relationship of anti-consumption attitude and materialistic attitude with value orientations, environmental consciousness, authenticity and wellbeing could be useful to assess empirically if anti-consumption attitude and materialistic attitude are opposite to each other.

Moreover, as the theory suggests that both materialism and anti-consumption have become an integral and visible part of the cultural landscape of developed nations, it is reasonable to argue that a consumer of present time, of such economies, would hold both anti-consumption attitude and materialistic attitude. However, an understanding of how these two contradictory attitudes together shape the consumers' behaviour needs attention (Daniel and Sirieix, 2014). As an individual's behaviour is affected

by a cluster of attitudes rather than just one attitude (McCroskey, 2015), the question arises as to what possible balance, between anti-consumption attitude and materialistic attitude, the consumers of developed nations acquire. And whether consumers, when analysed in terms of the balance between their anti-consumption attitude and materialistic attitude, can be classified as either anti-consumers (holding high anti-consumption attitude and low materialistic attitude) or as materialistic consumers (holding high materialistic attitude and low anti-consumption attitude) [given that the two attitudes are opposite to each other]? Or can we identify specific types of consumer that integrate a particular degree of materialistic and anti-consumption attitude into their behaviours? In order to answer these questions, this thesis seeks to develop and validate a typology of consumers in terms of the balance they exhibit between their anti-consumption attitude and materialistic attitude.

Psychographic variables are commonly used in segmentation studies to validate the cluster solutions (Michaelidou, 2012). Following similar lines, this research seeks to provide a deeper understanding of consumer behaviour by not only proposing a typology of consumers based on different combination of their anti-consumption and materialistic attitudes, but also by validating the typology by examining differences among the clusters in the typology in terms of their psychographic profile (values, wellbeing, environmental consciousness, and authenticity) according to the specific combination of anti-consumption and materialistic attitudes that they may exhibit.

This understanding is vital to building a grand theory of anti-consumption, which is much needed, (Lee et al., 2009b). The next section presents research purpose, questions and objectives for the present research.

1.4. Research purpose, questions and objectives

The two main purposes of this research are, to first empirically assess the inverse relation of anti-consumption and materialism and secondly to propose a typology of consumers based on the balance between their anti-consumption attitude and materialistic attitude. The research questions that underpin the main theme and provide direction to this study are:

Q1. In what ways anti-consumption and materialism are opposite to each other. Moreover, can the inverse relation between the two attitudes be empirically assessed?

Q1a. What values act as antecedents of anti-consumption attitude? Are these values opposite to the values that act as antecedents of materialistic attitude?

Q1b. Is environmental consciousness a positive predictor of anti-consumption attitude and a negative predictor of materialistic attitude?

Q1c. Does authenticity and wellbeing have a positive relationship with anti-consumption attitude and a negative relationship with materialistic attitude?

Q2. Can a classification system/a typology of consumers based on different combinations of anti-consumption attitude and materialistic attitude be developed; and if so, can it be appropriately validated?

Q2a. What are the possible combinations of anti-consumption attitude and materialistic attitude that individuals can hold? Can these combinations be used to classify these individuals into different segments/clusters?

Q2b. Could the developed segments vary in terms of value orientations, environmental consciousness, authenticity and wellbeing, depending on the specific combination of anti-consumption attitude and materialistic attitude that they may hold?

These questions provide the central focus of the present study. In order to answer the above questions research objectives are required to serve as a guideline for the researcher and to tell them what they must do in order to carry out the research (Burns and Bush, 2006). The research objectives set for this study are as follows:

1) To examine if the relationship between values, environmental consciousness, authenticity, and wellbeing and anti-consumption attitude is opposite to the relationship between these four variables and materialistic attitude.

Face-to-face and self-administered surveys were conducted among Cardiff consumers. Questions were asked in terms of their anti-consumption attitude and materialistic attitudes. Data was also collected for four psychographic variables (value orientations, wellbeing, environmental consciousness and authenticity). Correlation analyses using SPSS version 20 were done to examine the relationship of the four psychographic variables – value orientations, wellbeing, environmental consciousness and authenticity – with the two opposing attitudes: anti-consumption and materialistic . This was done in order to see if the two attitudes had an inverse relationship with these psychographic variables.

2) To empirically examine if the values that act as antecedents of anti-consumption attitude are opposite to the values that act as antecedents of materialistic attitude.

The survey data collected through face-to-face and self-administered questionnaire from Cardiff consumers was then analysed using simple multiple regression analysis in SPSS version 20 to see if the values that were antecedents of anti-consumption attitude were opposite to the values that were antecedents of materialistic attitude. Regression analysis was also used to explore if the values that were positive predictor of one attitude, acted as negative predictor of the opposite attitude.

3) To segment/classify consumers in terms of the balance between their anti-consumption and materialistic attitudes.

The survey data collected through face-to-face and self-administered questionnaire from Cardiff consumers was then analysed using cluster analysis in SPSS version 20 to see if a typology of consumers with different segments/clusters exists on the basis of different combinations of anti-consumption and materialistic attitudes. This was done to understand if distinct clusters of consumers existed based on their attitudinal balance.

4) To find out whether anti-consumers and materialistic consumers are two distinct segments of consumers that coexist within society.

Results of cluster analysis were used to indicate if two distinct clusters, one of anti-consumers and one of materialistic consumers existed. Furthermore, relation of these contradictory clusters with contradictory values was examined to see if the clusters relate to opposite values. In addition, analysis was conducted to see if these clusters have an inverse relationship with wellbeing, authenticity and environmental consciousness.

5) To find out whether the segments/clusters in the produced typology could be validated.

Survey data was collected for four psychographic variables (values, wellbeing, environmental consciousness and authenticity). ANOVA and Discriminant Analyses using SPSS version 20 were conducted in order to find out if the clusters in the typology produced, based on different combinations

of anti-consumption and materialistic attitudes, were differentiated in terms of these psychographic variables. This was done to validate the emerging typology.

Moving the literature forward, the present study attempts to building a grand theory of consumer behaviour in general and anti-consumption in particular. Drawing upon the anti-consumption literature, materialism literature, value theory, environmental consciousness literature, wellbeing literature and authenticity literature the present study attempts to provide empirical evidence of anti-consumption attitude and materialistic attitude being opposite to each other. Furthermore, the present study also investigates the existence of different segments of consumers according to the specific combination of anti-consumption attitude and materialistic attitudes that they may exhibit.

1.5. Justification for the research

There are several reasons to undertake this research including the following:

a. Anti-consumption and materialism: A missing link in consumer behaviour research.

As the literature indicates, materialism is at the heart of current culture (Dermody et al., 2015). At the same time, anti-consumption has moved from being a niche to being a mainstream trend (Choi, 2011). Though, not proven empirically, anti-consumption is said to be opposite to materialism (Kaynak

and Eksi, 2011; Lee and Ahn, 2016). The contemporary consumer of developed nations is in a situation where messages promoting both anti-consumption and materialism are abundant and a consumer's behaviour will be potentially influenced by both these trends. Researchers have examined consumers in terms of their anti-consumption attitude and materialistic attitude separately. However, it is unclear how these two opposing attitudes together shape consumer behaviour. Thus, the examination of how general consumers find a balance between their anti-consumption attitude and materialistic attitude is yet to be done.

This thesis, through examining and segmenting consumers in terms of the balance they attain between their anti-consumption attitude and materialistic attitudes, attempts to understand how different consumers have reacted to the current culture. The typology of consumers produced and validated in this thesis will not only corroborate the existence of anti-consumers and materialistic consumers as two distinct segments of consumers, but will also help to better understand those consumers who do not fall into the two abovementioned segments.

b. The potential contribution of this research to anti-consumption literature

The fact, that a complete understanding of consumer behaviour needs knowledge of not only consumption behaviour, but also anti-consumption behaviour has resulted in bringing to the attention of researchers the phenomenon of anti-consumption (Chatzidakis and Lee, 2013; Lee et al., 2010). Despite its importance in understanding the full range of sustainable

consumption and consumer behaviours, anti-consumption remains a comparatively under-researched area (Lee, et al., 2009; Kozinets et al., 2010; Iyer and Muncy, 2009; Lee et al., 2010). Although a number of studies can be found that have attempted to explore the phenomenon (for example: Lee et al., 2011; Cherrier, 2009; Etzioni, 1998; Black and Cherrier 2010; Shaw and Moraes, 2009; Chatzidakis and Lee, 2013), yet there is a lack of empirical work in this area (Lee et al., 2009b; Bekin et al., 2005; Lee and Ahn, 2016). The present study seeks to answer this call by providing empirical validation of anti-consumption and materialism being opposite to each other. This is done through (1) an examination of opposite values and inverse level of environmental consciousness as antecedents of anti-consumption attitude and materialistic attitude and (2) by showing an inverse relationship of anti-consumption attitude and materialistic attitude with wellbeing and authenticity. This novel knowledge is important, as policymakers striving to promote greater sustainability could understand what values lead towards anti-consumption and what values lead towards materialism. Policymakers can then use this understanding to promote the values that lead towards anti-consumption in order to make greater progress towards sustainable development.

c. The growing importance of anti-consumers

According to Choi (2011), as a backlash to “the contemporary expansion of mass production and marketing” ordinary people “are becoming tired of mass-production and excessive marketing” and consequently they are “increasingly purchasing only what is needed”. As a result, anti-consumers,

who were a “minor stream of niche consumers”, are now “becoming a major trend in the overall market” (Choi, 2011, p. 117). This suddenly increasing segment of the population should not be overlooked when exploring consumers’ behaviour (Bekin et al., 2005). Although from a business perspective, anti-consumption might seem like a possible threat for some companies at first – if consumers buy less, companies earn less – however, as it becomes a major trend (Choi, 2011), ignoring anti-consumers could be a long-term strategic mistake (Dobscha, 1998). Thus, the present research attempts to not only validate existence of anti-consumers as a distinct cluster, but also attempts to understand how this cluster is different from other clusters.

d. Potential contribution of this study to consumer behaviour literature

The present study seeks to bring novel insights into consumer behaviour by attempting to classify consumers in terms of the balance between their anti-consumption attitude and materialistic attitudes. This classification system, if successfully developed, can help understand how consumers have adapted in the current culture where both anti-consumption and materialism are significant and prevalent. Furthermore, if a typology of consumers is developed, it will give marketers a chance to understand different segments/clusters in the typology. Marketers can then use this knowledge to develop strategies best suited for each segment accordingly.

1.6. Structure of the thesis

To achieve the research objective charted in section 1.4, this thesis is divided into seven chapters. The first chapter offers an overview of the theoretical background of the current study. Chapter 1 highlights the significant position both materialism and anti-consumption acquires in the contemporary culture. This chapter not only gives an initial understanding of what materialism and anti-consumption are, but also highlights the fact that materialism is contradictory to anti-consumption (Kaynak and Eksi, 2011; Lee and Ahn, 2016). In spite of being opposite, both anti-consumption and materialism are shown to be important components of current culture and thus play a very important role in shaping the consumer behaviour. Chapter 1 also addresses the research gap, research questions, and research objectives. It also provides justification for the research. The chapter concludes with an overview of the structure that this thesis follows. Figure 1.1 presents a roadmap to the thesis.

The focus of the next chapter is to review the literature on materialism and anti-consumption. Chapter 2 begins by discussing literature on materialism. Once a clear understanding of materialism is developed, the chapter moves on to discuss how anti-consumption is opposite to materialism. After clarifying the opposite nature of materialism and anti-consumption the chapter moves on to a detailed discussion of anti-consumption. The chapter clearly defines what anti-consumption is and which acts could be considered as part of the phenomenon and which acts, though similar, cannot be so considered. This is followed by an examination of the motives that can lead

towards anti-consumption. Chapter 2 also discusses the different types of anti-consumption attitudes identified in anti-consumption literature. The chapter concludes by highlighting the significance of studying anti-consumption by indicating differences between anti-consumption and similar behaviours.

Chapter 3 begins with a discussion on the literature in relation to consumers' attitudes. Specifically, anti-consumption and materialistic attitudes are discussed, which are then used to propose a typology of consumers to understand how anti-consumption attitude and materialistic attitude together shape consumer's behaviour. The chapter then discusses literature on several aspects of consumer behaviour that are highlighted in both anti-consumption and materialism literature. Specifically literature on motivational values, environmental consciousness, wellbeing and authenticity is discussed with an aim of (1) using these concepts as a basis of differences among the segments of the typology proposed and (2) as a means to empirically explore the idea that anti-consumption and materialism, as attitudes, are opposite to each other. From here 12 hypotheses are developed.

Chapter 4 discusses the design and methodological approach adopted by this study in order to test the hypotheses developed in chapter 3. The chapter firstly provides the justification for following the critical realism philosophy. This is followed by a discussion of the divergent approaches to the research design. The rationale for the use of research design and the research method adopted by this thesis are also postulated. Next are described the sample and sampling procedures. A justification for choosing sample from Cardiff consumers and using convenience sampling as the sampling technique

is also stated. Next, a preliminary study of Cardiff consumers' understanding of anti-consumption via two focus groups is discussed. This is followed by a discussion on the instruments used and the design of the survey questionnaire. Next are discussed the results of the two pre-tests of the questionnaire. This is followed by a discussion about the survey design and data collection. Lastly ethical issues are considered.

Chapter 5 presents the basic statistics related to the respondents' demographic profiles and the constructs studied. The chapter first discusses non-response bias, which is then followed by a discussion of the general configuration of respondents who participated in the study. Section four presents an overview of how the respondents answered the survey questions related to the attitudes and different aspects of wellbeing, environmental consciousness and authenticity. Fifth, reliability and dimensionality of the scale used in the study is discussed. Lastly, data preparation and screening is done to ensure that the data meets the requirements for multivariate analysis that are to be conducted for testing the 12 hypotheses.

Chapter 6 deals with the hypotheses testing. This chapter is divided into three sections. The first section involves manipulating the data into a variety of different types of analyses with the aim of exploring empirically if anti-consumption attitude and materialistic attitude are opposite to each other with respect to their relationship with value orientations, wellbeing, environmental consciousness and different aspects of authenticity. The second section involves data analyses that examines if the consumers could be classified on the basis of the different combinations they hold for their anti-

consumption attitude and materialistic attitude. The third section attempts to validate the produced classification/typology by identifying differences between the clusters in the typology in terms of their wellbeing, value orientations, environmental consciousness and level of authenticity experienced. Demographic differences among the clusters is also examined. Prior to conducting each statistical analysis, it was checked if data meets the requirements for the specific analysis.

Chapter 7 presents a summary of the main research findings along with the key contributions of the present study. The chapter also offers avenues for future research and outlines the limitations of the research. Chapter 7 ends with the study's main conclusions.

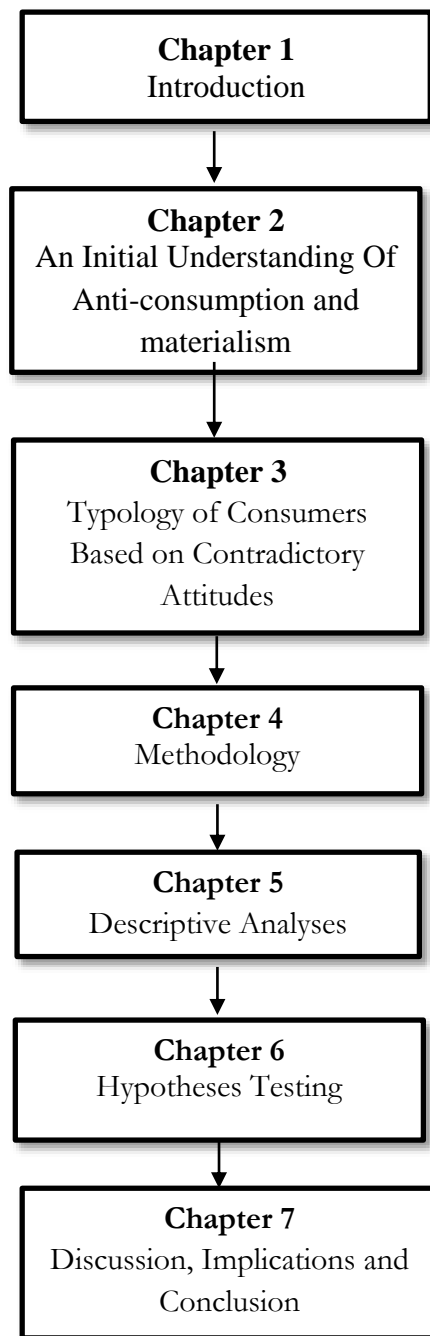


Figure 1.1: Roadmap to this thesis

Chapter 2

AN INITIAL UNDERSTANDING OF ANTI-CONSUMPTION AND MATERIALISM

2.1. Introduction

The two main aims of the thesis are to first provide empirical validation of the opposite nature of materialism and anti-consumption, and secondly to explore consumers of current era in terms of their anti-consumption and materialistic attitudes. In order to achieve these goals it is important to gain an initial understanding of anti-consumption and materialism. The chapter starts by reviewing literature on materialism, so as to provide an understanding of what materialism is. This is followed by discussion of what could be opposite of materialism, which makes way for anti-consumption. A detailed discussion of what is anti-consumption follows. Once a clear understanding of materialism, anti-consumption and their inverse relationship is obtained, the next chapter provides means to empirically explore their inverse relationship along with means to develop and validate a typology of consumers in terms of different balance between the two attitudes an individual may acquire.

2.2. What is materialism:

Materialism is defined differently, yet similarly, in the fields of psychology, economics and consumer research (Torlak and Koc, 2007; Vandana and Lenka, 2014). The definition given by Ward and Wackman (1971, p. 422) describes materialism as “an orientation which views material goods and money as being important for personal happiness and social progress”. While Belk define materialism as “the importance a consumer attaches to worldly possessions” (Belk, 1984, p. 291). Belk’s (1984) understanding of materialism is as a consumer orientation that entails the personality traits of envy, non-generosity and possessiveness. According to Belk (1984) materialism represents the importance a consumer assigns to worldly possessions, and at the highest level of materialism these possessions gain a central place in one’s life, which are then believed to provide the greatest sources of satisfaction and dissatisfaction.

Materialism has also been studied as a personal value. Richins and Dawson (1992) suggested that materialism is a personal value that gives importance to the ownership of material possessions. Their study classified material value into three categories: happiness (material possessions associated with well-being), centrality (material possessions have a vital role in life), and success (material possessions as a source to judge one’s success). The first dimension under this definition of materialism is acquisition as the pursuit of happiness; this dimension suggests that the difference between low and high materialists is the difference between importance given to possessions over experience, personal relationships, achievement, etc. While

the second dimension, acquisition centrality, suggests that materialists are anticipated to place acquisitions and possessions at the center of their lives. The last dimension – success – elaborates that highly materialist individuals define material well-being as evidence of social status and success.

The conceptualization of materialism given by both Belk (1984) and Richins and Dawson (1992) have been acknowledged and applied widely in consumer research as well as in personality psychology, nonetheless, they are not free from criticism. For instance, Solberg and colleagues (2004) express that Belk's scale is linked to neuroticism and negative emotions and therefore, if used in exploring relationship of materialism with wellbeing might produce spurious results. Likewise, literature on materialism reveals that the materialism scale developed by Richins and Dawson (1992) works better as uni-dimensional construct (Richins, 2004; Karabati and Cemalcilar, 2010). Another criticism of Richins and Dawson's (1992) scale is potential problems associated with reverse-worded items which makes it unfit for cross-cultural comparisons of materialism (Griffin et al., 2004; Wong et al., 2003).

Another conceptualization of materialism given is that by Moschis and Churchill (1978). In their study Moschis and Churchill (1978), while conceptualizing and analysing a general model of consumer socialization, introduce the concept of materialism for the first time in empirical marketing research (Belk, 1983; Richins and Dawson, 1992). They specified agent-learner relationships as the key socialization process, with age/lifecycle positions and social structural variables acting as antecedents, and learning properties as the outcomes. Materialistic attitudes were one of the seven

learning properties. Moschis and Churchill (1978, pp.607) define materialistic attitudes as “orientations emphasizing possessions and money for personal happiness and social progress”. The individuals with materialistic attitudes try to live a life that is filled with material possessions.

Csikszentmihalyi and Rochberg-Halton (1981) take a different perspective towards materialism. They categorize materialism as “instrumental materialism” and “terminal materialism”. Instrumental materialism represents individual’s belief that satisfaction in life can be gained through performing some activity enabled through possessions, while terminal materialism take place when consuming an object is seen as the only essential thing in life (Belk & Pollay, 1985).

Literature could be found that reveals the role of influence of the peers (Achenreiner, 1997), family communication system (Bindah & Othman, 2011; Moore & Moschis, 1981), a country’s culture (Gupta, 2011), exposure to television advertisements (Buizen & Valkenburg, 2003; Churchill & Moschis, 1979; Goldberg & Gorn, 1978), and retail stores (Goldberg et al., 2003) in influencing and increasing materialism.

Though looked at differently, the main understanding about materialism is the tendency of a person to place worldly possessions at the centre of their lives and to think of these possessions as necessary for their living, thus making these possessions everything for the materialistic individuals (Lenka, 2014; Lee and Ahn, 2016; Ahuvia and Wong, 2002; Belk 1985; Richins and Dawson 1992; Richins and Rudmin 1994; Sirgy 1998). Materialism has been labelled as the “dominant consumer ideology and the most significant

macro development in modern consumer behaviour’’ (Belk, 1987, p. 26) within developed economies (McCracken, 1988; Dermody et al., 2015). Thus, in today’s materialistic society one works hard to not only obtain materialistic possessions, but also to later upgrade, insure, maintain, replace and manage these possessions (Kasser, 2002) with the hope that this will increase one’s wellbeing. Materialism fuelled by factors like global mass media, marketing activities and consumerism (Ger and Belk, 1996; Torlak and Koc, 2007) convinces consumers that they need products to meet competence, attractiveness and security needs (Kasser, 2002 in Torlak and Koc, 2007), thus resulting in an addiction to materialistic possessions. There appears to be an increasing global tendency of accepting this addiction to material goods (Torlak and Koc, 2007). For example, social acceptance of shopping to compensate for depression (De Graff, 2001), or consumption of luxury goods as a means of enhancing self-esteem (Schor, 1998) are acknowledged as commonplace. In fact, materialism is seen as the dominant ideology in developed economies (Dermody et al., 2015, p. 1478).

2.2.1. Negative consequences associated with materialism:

Though, materialism is the dominant ideology in the developed world and is not harmful in itself, it is linked with overconsumption (Rumbo, 2002), which has consequences like use up of finite resource, waste generation and greenhouse gas emissions (Alexander & Ussher, 2012; Tukker et al., 2010; Markowitz, and Bowerman, 2012). In this way, materialism has consequences, which are against sustainability.

Additionally, a myriad of research could be found that shows a negative relationship between materialism and wellbeing (Ahuvia and Wong 2002; Burroughs and Rindfleisch 2002; Diener 2009; Diener and Biswas-Diener 2002; Kashdan and Breen 2007; Kasser and Ahuvia 2002; Kasser and Ryan 1993; Sirgy 1998; Tatzel 2002). Although, materialism is argued to have some positive impact on wellbeing in developing countries (Smith, 1863), the relationship between wellbeing and materialism in developed countries is shown to be negative (Lee and Ahn, 2016).

Research also shows materialism to be linked with lack of control, as materialistic individuals lose control over their consumption decision and get trapped into the trap/loop of materialism (Sivanathan and Pettit 2010; Pieters 2013). This lack of control results in lowering self-determination and meaning in life (Kashdan and Breen, 2007). Materialism has also been linked with traits such as non-generosity, envy (Belk, 1985) and selfishness (Bauer et al., 2012). Materialism makes individuals focused on ones own wellbeing rather than the wellbeing of others and thus negatively impact the ability of individual to focus on macro level concerns like community or environmental issues (Lee and Ahn, 2016; Burroughs and Rindfleisch 2002; Kilbourne and Pickett 2008). Given that individuals do not want to regard themselves as inconsiderate, selfish and/or environemtally damaging (Kilbourne and Pickett, 2008), materialistic individuals may face a problem of incongruity between one's real self and one's desired self. That is to say, materialistic individuals would want to be considered environmentally friendly (desired self), yet they would actually be focused on their own self (actual self), and would face incongruity leading to dissatisfaction and lowered wellbeing.

Additionally research indicates that individuals holding high materialistic attitude face higher psychological dissatisfaction as they are never happy with what they have and desire more than what they have (Ryan and Deci, 2001; Diener and Seligman, 2004; Shaw, 2002). This effect has been referred to as hedonic treadmill or hedonic adaption (Brickman and Campbell, 1971; Lyubomirsky, 2011).

Despite a negative relationship with wellbeing, current consumer culture in the developed economies has materialism as the dominant ideology. Nonetheless, as consumption increased so did its effects on earth and its finite resources (Alexander & Ussher, 2012). Fortunately, the consequences of human activities did not go unnoticed and this gave rise to the idea of sustainability. The sense of sustainability, which has been increasing due to awareness, has resulted in changing attitudes of individuals from being materialistic to being conscious about their consumption behaviour. Under the sustainability debate, the focus has shifted from consuming differently to consuming less, leading to anti-consumption as a vital element of sustainability.

Anti-consumption is an important and emerging aspect of consumer behaviour and anti-consumers are seen to have a crucial effect on consumer behaviour in general (Bekin et al., 2005). The increasing interest in the concept amongst researchers can be seen by many special issues dedicated to the topic, including *Psychology & Marketing* 2002 (volume 19, issue 2), *Cultural Studies* 2008 (volume 22, issue 5), *Journal of Business Research* 2009 (volume 62, issue 2), *Journal of Consumer Behaviour* 2010 (volume 9,

issue 6), Consumption Markets & Culture 2010 (volume 13, issue 3), European Journal of Marketing 2011 (volume 45, issue 5) and Journal of Macromarketing 2013 (volume 33, issue 3).

2.3. Anti-consumption as opposite of materialism:

Anti-consumption literature has been developing over time and several studies exploring anti-consumption from different perspectives could be found in the bedrock of knowledge. Generally anti-consumption can be comprehended as means against consumption (Zavestoski, 2002; Lee et al., 2009), and is considered opposite of materialism (Lee and Ahn, 2016; Kaynak and Eksi, 2011). Lee and Ahn (2016) elaborate that “non/anti-materialism is opposite to materialism with both concepts occupying opposite ends of a continuum....While materialism focuses on acquisition of material possessions, non/anti-materialism focuses on rejection of material possessions” (Lee and Ahn, 2016, pp. 23). However, rejecting consumption completely is not possible (Black et al., 2010; Lee and Ahn, 2016) as materialistic things are needed for survival. Therefore, though technically non/anti-materialism is opposite to materialism, it is a redundant term. It is further argued that anti-consumption is a more appropriate contrast to materialism (Lee and Ahn, 2016). Anti-consumption, though opposite to materialism, is not similar to non/anti-materialism. For example, an individual who is against Nike would practice anti-consumption by not buying Nike shoes, however, an individual who is non/anti-materialist would reject the use of shoes all together. Given that non/anti-materialism is impossible, it is

argued that anti-consumption is a better contrast to materialism. And though opposite, both anti-consumption and materialism are prevalent and vital element of current consumer culture in the developed world (Lee and Ahn. 2016).

Lee and Ahn (2016) while exploring online blogs, give preliminary support to the understanding that anti-consumption and materialism are opposite to each other. In their study they show that anti-consumption and materialism are divergent on four constructs, namely;

- 1) Control over consumption: materialists have low control while anti-consumers have high control over their consumption decisions and desires.
- 2) Scope of concerns: materialists have narrow scope of concern as they are more focused on their own self, while anti-consumers have broad scope of concern as they are more focused on broader issues like concern for community or environment.
- 3) Material Desire: materialists have high desire to obtain material goods, while anti-consumers do not desire for material possessions
- 4) Source of Happiness: materialists try to find happiness through extrinsic sources like through money and material belongings, while anti-consumers find happiness through intrinsic sources, like by making good memories.

Though, in their study Lee and Ahn (2016) “for the first time”, provide support to the notion that materialism and anti-consumption are opposite to each other and relate to consumer wellbeing in opposite manner, they call for

“empirical validation” of the same (Lee and Ahn, 2016, pp. 43). Thus, making way for the first aim of this thesis.

However, before proposing ways to empirically support opposite nature of anti-consumption and materialism, it is important to understand what anti-consumption is. Next section discusses anti-consumption in detail.

2.4. What is anti-consumption

Table 2.1 gives an over view of the key studies in anti-consumption research. Studies could be found that explore benefit of anti-consumption (Alexander, 2012; 2013; Alexander & Ussher, 2012), along with disadvantages of anti-consumption (Lee and Male, 2011). Studies exploring different aspects of anti-consumption could also be found. This thesis aims to provide a basic understanding of anti-consumption so as to further utilize it in developing and testing certain hypothesis, therefore, though many studies related to anti-consumption are presented in table 2.1, discussing each one of them in detail is beyond the scope of this thesis.

Studies could also be found that explore motives behind anti-consumption (for example Etzioni, 1998; Cherrier and Murray, 2007; Harrison et al., 2005 in Helledie, 2014; Grigsby, M. 2004; Hutter & Hoffmann, 2013; kaynak & Eksi, 2011; Shaw & Moraes, 2009; Cherrier et al., 2011; Portwood-Stacer, 2012; Freitas, Kaiser, Chandler, Hall, Kim, and Hammidi, 1997; Graeff, 1997; Grubb and Grathwohl, 1967; Heath and Scott, 1998; Hogg, et al., 2000; Kleine et al., 1993; Levy, 1959; Patrick, et al., 2002;

Sirgy, 1982; Lee et al., 2009; Iyer and Muncy 2009), while some look at how anti-consumption is different from other similar behaviours like resistance or ethical consumption (Amine, & Gicquel, 2011; Chatzidakis & Lee 2013). Different definitions of the phenomenon are also available. Zavestoski (2002a) define anti-consumption as “a resistance to, distaste of, or even resentment of consumption” (p. 121). While, Penaloza and Price (1993, p. 123) define anti-consumption as “resistance against a culture of consumption and the marketing of mass-produced meanings”. Lee et al., (2009a) define anti-consumption as against consumption. More recently Basci (2014, p. 162), while suggesting a lack of proper definition of anti-consumption, defines anti-consumption as “the non-consumption, reduction-of-consumption or selective-consumption act that has a rational link to a societal and systemic problem on the local and/or global scene.”

Table 2.1: Review of Anti-Consumption Literature

Author and date published	Journal	Key findings
Alexander, S. (2011).	<i>Available at SSRN 1970056.</i>	This paper studies the Voluntary Simplicity Movement, with its definitions, justifications, and practices. It is suggested that in past voluntary simplicity was backed by personal, humanitarian, social and ecological grounds, but now it is motivated by the belief that one can live a meaningful, happy and free life while consuming very little.
Alexander, S. (2012).	<i>Available at SSRN 2009698</i>	It is argued that the consumer societies are developed in a manner that opposes practice of sustainable consumption. These economies will never follow anti-consumption as these societies have the desire for high income and consumption. The only way these societies drift toward sustainable life is if everyone together chose to leave consumerism and adopt reduced consumption lifestyle.
Alexander, S. (2013).	<i>Environmental Values</i>	Using a bottom up theory of political and legal transformation the paper argues that voluntary simplicity movement needs to progress, organize, politicize and radicalize if a degrowth society is to be developed.
Alexander, S., & Ussher, S. (2012).	<i>Journal of Consumer Culture,</i>	With overconsumption causing problems like environmental degradation, consumer malaise along with global poverty, there is need for more sustainable and just society. In order to achieve such a society the over consuming individuals need to adopt a lifestyle that is materially simpler. Under Voluntary Simplicity people are repelling high consumption lifestyles and are seeking, in different ways, an alternate high quality life with lower consumption. After situating the Voluntary Simplicity Movement in theoretical context, this article presents a foundational analysis of these new survey results.
Amine, A., & Gicquel, Y. (2011).	<i>European Journal of Marketing</i>	The article studies deviant behaviours of consumers. The study provides a broad and flexible framework that clearly differentiates and articulates the concepts of resistant and anti-consumption behaviours.
Ballantine, P. W., & Creery, S. (2010).	<i>Journal of Consumer Behaviour</i>	The paper highlights that an important characteristic of voluntary simplicity is reduced material consumption and to do so people get rid of clutter from their life. Thus positioning topic of disposition at a vital position for understanding of voluntary simplifier lifestyle behaviour. Through in-depth interviews with 12 current voluntary simplifiers the paper shows the importance of disposition, principally during the early stages of embracing the lifestyle. Further, this behaviour effect the day-to-day consumption behaviour of individuals.
Ballantine, P., Arbouw, P., & Ozanne, L. (2011).	<i>Building Connections</i>	The study highlights that for beginner voluntary simplifiers the biggest challenge is to resist influence of market in which their social ties and day-to-day activities are firmly rooted.
Basci, E. A (2014)	<i>International Journal of Business and Social Science</i>	The study looks at the anti-consumption literature with the aim of providing a holistic understanding of the phenomenon. It is highlighted that globalization and consumerism is bringing unhappiness and disillusionment to people resulting in their anti-consumption behavior.
Bekin, C., Carrigan, M., & Szmigin, I. (2005).	<i>Qualitative Market Research: An International Journal</i>	Through critical ethnography with a multi-locale approach the paper explore collective voluntarily simplified lifestyles in the UK. A need for quantitative research on the “values and attitudes buttressing voluntary simplicity specifically in the UK” is pointed out. The paper also calls for research on main consumers and the anti-consumers together, as anti-consumers are seen to have a crucial affect on the consumer behaviour in general.
Black, I. R., & Cherrier, H. (2010).	<i>Journal of Consumer Behaviour</i>	The paper discusses how individuals in order to acquire a sustainable life adopt practices of anti-consumption. It is highlighted that individuals adopt only those anti-consumption acts that fall in line with their values, thus sustainable marketers should position sustainable practices in a way that they match the target consumers’ lifestyle and values.
Chatzidakis, A., & Lee, M. S. (2013).	<i>Journal of Macromarketing</i>	The authors explain how anti-consumption research contributes to the understanding of marketing beyond other related phenomena (ethical consumption, environmental consumption, consumer resistance, and symbolic consumption). Using reasons theory, the article concludes that the reasons against consumption and reasons for consumption are not always opposite. They conclude that by looking at reasons against consumption, anti-consumption research brings understanding about consumer behaviour that could be used by scholars and practitioners.
Cherrier, H. (2009).	<i>Journal of Business Research,</i>	Through analysis of two anti-consumption discourses (voluntary simplicity and culture jammer) the paper talks about two consumer-resistant identities: a hero identity and a project identity. The two identities show resistance to exploitative consumption and resistance to positional consumption and in doing so bring change within them and in the society.

Cherrier, H., & Gurrieri, L. (2013).	<i>Journal of macromarketing,</i>	This article highlights three cultural barriers to rejecting alcohol consumption, namely: the collective requirement to join in established sharing practices, the expectation to respond in gift-giving of alcoholic products, and the understanding of abstinence as abnormal individuality, non-profits organizations are identified as change agents within society.
Cherrier, H., Black, I. R., & Lee, M. (2011).	<i>European Journal of Marketing,</i>	This paper looks at intentional non-consumption through anti-consumption and consumer resistance lenses. Through 16 in-depth interviews with women who intentionally practice non-consumption for sustainability, the author identifies two major themes: I versus them and the careless consumers. The objective/subjective clash in everyday practices. It is concluded that both anti-consumption and consumer resistance represent complementary frameworks in studying non-consumption.
Close, A. G., & Zinkhan, G. M. (2009).	<i>Journal of Business Research</i>	The paper analyses anti-consumption of valentine day consumption over a period of seven years. It is directed that the individuals who resist such consumption rituals are motivated by individualism and they create more unique consumption rituals to replace the ones already practiced.
Craig-Lees, M., & Hill, C. (2002).	<i>Psychology & Marketing,</i>	By studying voluntary simplifiers with relation to non-voluntary simplifiers the study sheds light on practices and lifestyle of VS. Through analysis of 53 one-hour interviews the study reveals that there are clear differences across groups, and these differences could be of specific interest to marketers and academics alike.
Elgin, D. (1993).	<i>Quill (William Morrow).</i>	Through administering to 135 undergraduates, a VS scale is validated. Additionally two factors have been identified through factor analysis for voluntary simplicity. These two factors are vigilant attitudes in shopping and acceptance of self-sufficiency.
Elliott, R. (1997).	<i>European Journal of Marketing,</i>	The paper talks about how consumers build and communicate self and social image through five consumption interactions: the material versus the symbolic, the social versus the self, desire versus satisfaction, rationality versus irrationality, and creativity versus constraint.
Etzioni, A. (2004).	<i>Review of Social Economy</i>	It is argued that overconsumption has resulted in dissatisfaction making way for a simple life as a resolution.
Fernandez, K. V., Brittain, A. J., & Bennett, S. D. (2011).	<i>European Journal of Marketing</i>	The article describes how backed by ideological, economic and psychological motivations the dumpster divers built their identity. They built a self-for-other narrative to follow their practice.
Galvagno, M. (2011).	<i>European Journal of Marketing</i>	The paper conducts a literature review through an author co-citation analysis. The paper provides the former and present structure of the consumer resistance and anti-consumption. In total two levels of analysis, five areas of interest, and nine theoretical approaches are identified.
Grigsby, M. (2004).	SUNY Press.	The paper looks into lives of voluntary simplicity. The book tells the tale of many voluntary simplifiers who have joined the VS movement. These individuals have chosen to live simple and be independent. By doing so they have bought themselves time to do things they like to do.
Hogg, M. K., Banister, E. N., & Stephenson, C. A. (2009).	<i>Journal of Business Research,</i>	The article draws on earlier frameworks to develop a new integrated and expanded conceptualization in order to achieve a more nuanced view of how rejection operates within symbolic consumption and also to initiate research directions for investigating and theorizing rejection in anti-consumption.
Hollenbeck, C. R., & Zinkhan, G. M. (2010).	<i>Markets and Culture,</i>	In this article while looking at the anti-Wal-Mart community, through new social movement theory, three learning processes are identified as vital to social movement establishment: (1) counterfactual thinking, (2) discursive storytelling, and (3) non-compulsory observation.
Huneke, M. E. (2005).	<i>Psychology & Marketing,</i>	The paper looks at the important practices of voluntary simplifiers along with the impediments they face. Three underlying dimensions of voluntary simplicity in US are identified. These are community, ecological and social responsibility and maintaining a spiritual life. People with moderate income practice voluntary simplicity more. Finally highly committed simplifiers are more consistent in their practice than the less committed ones, and the more committed simplifiers make more efforts in their daily lives.
Hutter, K., & Hoffmann, S. (2013).	<i>Journal of Macromarketing,</i>	The study identifies willingness to make sacrifices as the factor that determines if an individual will follow carromob or if he will chose anti-consumption. Through two studies it is proven that consumers who are unwilling to make sacrifices, unlike anti-consumers who sacrifice their consumption, while articulating their environmental concerns, adopt the carromob behaviour, an alternative consumption option.
Isenhour, C. (2010).	<i>Journal of Consumer Behaviour,</i>	This article discusses how some small acts of anti-consumption are easy to follow but it is difficult to adopt general anti-consumption even by the ones who are aware and concerned about the sustainable consumption. Additionally it is not the lack of information that results in not following anti-consumption rather it is conformity, equality and fairness that directs anti-consumption.
Iwata, O. (1997).	<i>Social Behavior and Personality: an international journal,</i>	In this study a voluntary simplicity lifestyle scale is developed and administered to 135 undergraduates. According to second-order factor analysis, voluntary simplicity lifestyles, cautious attitudes in shopping and acceptance of self-sufficiency are identified as three factors of VS lifestyle. Correlation of these dimensions with the sustainable attitudes and behavior supports the validity of the scale.

Iwata, O. (1999).	<i>Social Behavior and Personality: an international journal,</i>	The study investigates correlations between voluntary simplicity lifestyles (VSLs.) and pro-environmental behaviour and some perceptual and behavioural characteristics associated with VSL. Many correlations are shown to be significant and in expected directions.
Iyer and Muncy (2009)	Journal of Business Research	This research presents an initial attempt to develop scales that differentiate between people who engage in general anti-consumption for societal concerns and those who do so for more personal reasons. The results were promising, as a set of "We" anti-consumption statements and a set of "I" anti-consumption statements emerged from the factor analysis.
Johnston, T. C., & Burton, J. B. (2002).	<i>Academy of Marketing Studies</i>	The paper through analysis of publications on Voluntary Simplicity from 1977 to 2001 provides 15 major themes that draw the domain of the VS movement; Life Purpose, The Good Life, Personal Growth, Human Scale, Material Simplicity, Minimal Consumption Life, , Ecological Awareness, Lifestyle, Chosen Self Determination, Valued Relationships, Plain Living and Role of Work.
Kaynak, R., & Eksi, S. (2011).	<i>Eurasian Journal of Business and Economics</i>	The authors look at ethnocentrism, religiosity, environmental and health consciousness as motivators of anti-consumption. Through structural equation modeling the motivators of anti-consumption are identified
Kozinets, R. V., Handelman, J. M., & Lee, M. S. (2010).	<i>Consumption, Markets and Culture</i>	The paper looks at how anti-consumption has been always there but ignored. It has been highlighted that certain religions and leaders have communicated to people that living simple will make them happy.
Krishnamurthy, S., & Kucuk, S. U. (2009).	<i>Journal of Business Research</i>	The paper through two studies looks at anti-branding sites. It is noted that more popular the brand is, more anti-branding sites it would be on. In the study 2 the authors find that individuals in the anti-branding sites use three types of language, market speech being most popular among them.
Kucuk, S. U. (2008).	<i>Journal of Brand Management</i>	In this study Brand Rank' and 'Brand Consistency' are identified as the components that determines the level of anti-branding sites a brand is likely to have.
Lee, M. S., & Ahn, C. S. Y. (2016)	<i>The Journal of Consumers affairs</i>	Through qualitative analysis of blogs and online data, the paper explores the opposite nature of anti-consumption and materialism. Relation of both anti-consumption and materialism with consumer wellbeing is explored so as to show that while materialism has a positive relationship with wellbeing, anti-consumption has a negative relationship. The paper calls for quantitative research in this regards.
Lee, M. S., & Male, M. (2011).	<i>Journal of Consumer Marketing</i>	The paper explains why the anti-consuming of vaccine is a unique from of anti-consumption. It is highlighted that though much anti-consumption behaviour is motivated by the belief that it is beneficial to society, there are some forms of anti-consumption, which don't have much benefits for society, such as anti-consumption of vaccine.
Lee, M., Roux, D., Cherrier, H., & Cova, B. (2011).	<i>Journal of Marketing,</i>	The paper develops clear differences between anti-consumption practices and resistance practices and in doing so shows what areas of the two could overlap.
Lee, Motion, and Conroy (2009)	Journal of Business Research	This study reveals three types of brand avoidance: experiential, identity and moral brand avoidance. Experiential brand avoidance occurs because of negative first hand consumption experiences that lead to unfulfilled expectations. Identity avoidance develops when the brand image is symbolically incongruent with the individual's identity. Moral avoidance arises when the consumer's ideological beliefs clash with certain brand values or associations, particularly when the consumer is concerned about the negative impact of a brand on society.
Leonard-Barton, D. (1981).	<i>Journal of Consumer Research</i>	The paper works towards development of a new construct to measure VS lifestyle. The scale is used to then see relation with energy conservation behavior.
Maria G.P. and Banister E.N. (2009)	<i>Journal of Consumer Research</i>	The study looks at experiences of higher education students who have chosen to be anti-consumers of alcohol in excessive drinking culture. The paper looks at the tensions these individuals face and how they cope with them.
McDonald, S., Oates, C. J., Young, C. W., & Hwang, K. (2006).	<i>Psychology & Marketing,</i>	Viewing voluntary simplicity as a means to sustainability, the paper reviews the literature on VS. It is highlighted that a class called beginner voluntary simplifiers exist between the two extremes of voluntary simplifiers and the non-simplifiers. It is further pointed that an understanding of this class will bring important insight to the new consumer behaviour.
McGinnis and Gentry (2009)	Journal of Business Research	Findings suggest that underdog consumers support underdogs out of empathy, as a way to ensure the maintenance of equal opportunity in competition, and as a way to provide personal inspiration. Some motives for underdog support can be interpreted to be anti-consumption (or, at least, anti-corporate) in nature. On the other hand, many underdog consumers support and identify with underdogs not necessarily as a way to keep the top dog down, but as a means to keep the little guy competing.
Moraes, Szmigin, and Carrigan (2010)	Consumption Markets & Culture	Reported findings are part of a three-year ethnographic research project and suggest that such communities have been overly perceived as presenting radical resistance to prevailing ideologies of consumer society. Collectively, they are more interested in entrepreneurial positive discourses, practices and choices than in acting against consumer culture or markets. This view is buttressed by their varied production-engaged practices, which in turn are problematized in relation to (perhaps outdated) notions of consumers, producers and their interrelationships.
Oates, C., McDonald, S., Alevizou, P.,	<i>Journal of Marketing Communications</i>	In this paper the concept of voluntary simplicity (VS) is taken as a starting point to investigate consumers' use of information sources when making purchases of sustainable technological products and services. Differences in information seeking and sources

Hwang, K., Young, W., & McMorland, L. A. (2008).		consulted and trusted are investigated with a view to increasing the uptake of sustainable domestic technologies such as energy efficient fridges and washing machines over more grey alternatives. Clear patterns both in sources used and the information seeking process were found between different groups of consumers and priorities for purchase were also identified. The results suggest different strategies for marketing sustainable technologies to these different consumer groups.
Ozanne and Ballantine (2010)	Journal of Consumer Behaviour	The study reveals four groups – Socialites, Market Avoiders, Quiet Anti-Consumers and Passive Members. Socialites enjoy the social benefits of active participation in their library. Market Avoiders also perceive social and community benefits, are interested in sharing and are the least materialistic of the groups. Quiet Anti-Consumers feel a sense of belonging to their toy library and hold strong anti-consumption, frugality and sharing values. Passive Members are not socially involved, nor do they hold strong anti-consumption values. Thus, the authors found evidence that sharing may be one possible alternative market structure that may be adopted by anti-consumption consumers.
Peattie, K., & Peattie, S. (2009).	Journal of Business Research,	By reviewing the difficulties of applying conventional marketing theory and practice to achieve a sustainable consumption, the paper addresses the need for social marketing. Through discussing a case of health oriented social marketing the authors show how social marketing could help promote anti-consumption in an attempt to achieve a sustainable consumption behaviour.
Pentina, I., & Amos, C. (2011).	European Journal of Marketing	This paper looks at freegan phenomenon and it is analyzed that the individuals following freeganism collectively build their identity and support each other.
Portwood-Stacer (2012)	Journal of Consumer Culture	Analytically, they can identify at least five motivations for anti-consumption behaviour: individuals may be motivated by personal, moral, activist, identificatory, and/or social concerns. In any given instance, multiple concerns may be at play and at different degrees of consciousness or acknowledgement on the part of the anti-consumers themselves. It is useful to tease out the various types of motivations, not only because this gives a fuller picture of why people behave the way they do, but also because this can help us to assess the potential effects achieved by anti-consumption practices and lifestyles.
Roubanis, J. L. (2008).	Family and Consumer Sciences Research Journal,	The paper compared voluntary simplicity lifestyle and environmentally responsible behaviour of U.S students against Japanese students. It was found that though there was not much difference between the values of anti-consumption, there was, however, a huge difference on basis of environmental concerns. U.S students had higher environmental concern compared to Japanese students.
Sandlin, J. A., & Walther, C. S. (2009).	Adult Education Quarterly	The article examines learning and development of identity via “moral agency” in individuals observing voluntary simplicity. Four central findings are discussed. Firstly, the simplifiers through rejecting society’s normative subjectivities and re-building their own which are more ethical craft new identities. Secondly, simplifiers undertake practices of self and self-regulation so as to create their moral identities. Thirdly, simplifiers feel morally superior and at the same time battle with balancing an ethic of non-judgment. Lastly, managing collective group identity is a challenge faced by simplifiers because of the dispersed participant base with individualistic moral codes.
Andersson, S., Hamilton, K., & Tonner, A. (2014)	Advances in Consumer Research	This paper explores anti-consumption of Facebook. This study shows that restriction is an important form of anti-consumption. By exploring how restriction is important when complete rejection is impossible or undesired, the paper brings new understanding to anti-consumption with in the mundane consumption.
Shama, A. (1981).	The Journal of Marketing,	The author states that with stagflation becoming the most important socioeconomic force in 1970, there was a major change in consumer behavior resulting in creation of two groups. One was those who struggled so as to earn their daily bread, whereas the second group changed their values and lifestyle and became voluntary simplifiers so as to cope with the stagflation.
Shama, A. (1985).	Journal of Consumer Marketing,	The manuscript looks at voluntary simplicity consumer (VSC) as the fastest-growing market segment in the U.S. It is concluded that the VSC is the result of a lifestyle trend toward voluntary simplicity (VS). Further this market segment, unlike any other market segment, desires a lifestyle of self-sufficiency, low consumption and ecological responsibility, and for this reason marketers are often confused as to how to market to this new growing segment of VSC.
Shama, A., & Wisenblit, J. (1984).	Psychological Reports,	The study discusses voluntary simplicity through looking at it in united states. Personal preference and economic hardship are the two motives identified through the study. Finally it is observed that VS is different in different areas.
Sharp, Hoj, and Wheeler (2010)	Journal of Consumer Behaviour	In this study the shoppers are grouped according to their level of voluntary anti-consumption of plastic bags before the ban. The analysis finds that shoppers who voluntarily showed anti-consumption behaviour were the only group showing any voluntary shift in anti-consumption behaviours during the phasing-out period. These shoppers are supportive of forcing others to show anti-consumption, while the level of behavioural and attitudinal resistance from shoppers that showed little or no voluntary anti-consumption is low. These findings support the use of proscription to achieve anti-consumption behaviours; however, proscription does not necessarily engender full anti-consumption attitudes. It is concluded that anti-consumption can not be forced and only individuals who have anti-consumption attitudes would follow it in the long run.

Shaw, D., & Moraes, C. (2009).	<i>International Journal of Consumer Studies</i>	Voluntary simplicity, backed by environmental concerns, is shaped by both individuals as the society and by marketplace interactions. Through study of 28 rural voluntary simplifiers the paper shows a complex nature of voluntary simplicity, which is seen in relation to local economy, fair trade, supermarkets and consumer culture.
Shaw, D., & Newholm, T. (2002).	<i>Psychology & Marketing</i>	By looking at anti-consumption through ethical lens, the paper presents findings from two qualitative studies investigating known ethical consumers. The connection of customer attitudes to consumption levels, and how these attitudes influence approaches to consumer behaviour are examined.
Sussan, Hall, and Meamber (2012)	<i>Journal of Business Research</i>	In this paper brand divorce is viewed as a benefit transformational experience from the perspective of the introspecting author. This view stands in contrast to literature which considers brand divorce, from the perspective of the firm as negative.
Walther, C. S., & Sandlin, J. A. (2013).	<i>International Journal of Consumer Studies</i>	By looking at parents who practice voluntary simplicity in the US the paper determines that these parents, who are transferring VS consumption patterns to their children, grew up within families that practiced voluntary simplicity. It was also seen that the voluntary simplifiers usually struggle with friends, society and even family over issues that emerge as these simple lives bring simplicity in their lives and the lives of their children while living in a society that is filled with materialism. It creates tension as these individuals struggle to raise children who will be accepted by a mainstream consumption-focused society. These parents maintain their social class status through utilization of green capital.
Wu, D. E., Boyd Thomas, J., Moore, M., & Carroll, K. (2013).	<i>Journal of Fashion Marketing and Management</i>	Through exploring personal information shared in a blog on Great American Apparel Diet (GAAD) of 834 individuals, the paper recognizes six general categories of motivations to practice voluntary simplicity. Also highlighted is the role of virtual communities in influencing behavior in the current marketplace.
YÜKSEL, Ü., & Mirza, M. (2010).	<i>Journal of the Faculty of Economic & Administrative Sciences</i>	Through an analysis of consumerism, postmodernism, globalisation and anti-consumption in modernism and postmodernism the authors try to explain the complexities of consumer buying behaviour. anticonsumption is identified as a vital element of consumer behaviour in the post-modern era as it is argued that the traditional approach to consumer research is inadequate and insufficient in explaining post-modern consumer behavior.

2.4.1. Acts Of Anti-Consumption:

As the word anti-consumption reflects, at the heart of the phenomenon is the clear understanding that acts of reduction-of-consumption and non-consumption are central to anti-consumption (Chatzidakis & Lee, 2013; Shama, 1985). Lee and colleagues (2011) further, categorise anti-consumption acts into three types; restrict, reject and reclaim. These three acts can overlap within consumption practices, as they are non-exclusive (Andersson et al., 2014). Rejection as act of anti-consumption is when an individual intentionally exclude or avoid some product or overall consumption. Example of such behaviour are boycotting of brands (Lee et al., 2009; Friedman, 1999). Restriction is reducing consumption of some thing when complete avoidance

is not possible (Lee et al., 2011). An example of restricting consumption is restricted/limited use of Facebook (Andersson et al., 2014). The third type of anti-consumption act, as defined by Lee et al., (2011), is reclaiming consumption. Reclaiming consumption includes practices of altering the normal consumption cycle, for example by growing ones own vegetables. An individual can practice these acts of anti-consumption at both micro and macro level, with micro level representing anti-consumption of particular products, consumption activities or brands, while macro level anti-consumption representing acts of anti-consumption in general (Cherrier, Black, and Lee 2011; Craig-Lees 2006). Iyer and Muncy (2009) use the term “object of anti-consumption” to classify these behavioural perspective of anti-consumption. According to them, an individual can practice anti-consumption at two levels – specific or general (Iyer and Muncy 2009). An individual could reduce consumption or reject consumption of a particular product/service or brand, representing anti-consumption at a specific level as only a specific brand or product/service is not consumed (Iyer and Muncy, 2009). Or an individual may reduce, reject or reclaim overall consumption (rather than of a particular brand or product) resulting in anti-consumption at a general level as overall consumption is reduced.

Acts like sharing (Ozanne and Ballantine, 2010), boycotting (Kozinets and Handelman, 2004; Yuksel and Mryteza, 2009) recycling and reusing (Black and Cherrier, 2010), avoidance of certain brands (Lee et al., 2009a), energy conservation (Wilson and Dowlatabadi 2007), reduction of private transport (Gardner and Abraham 2008), restricted use of networking sites (Andrea et al., 2014) and consumer resistance to big brands (Thompson and

Arsel, 2004) are all seen as acts of anti-consumption. Also, changing one's lifestyle by choosing to join low consumption communities (Moraes et al., 2010) or by choosing to live simply (Oates et al., 2008; Etzioni 2004) could be seen as acts of anti-consumption. However, without knowing the underlining motive of these acts one cannot classify them as acts of anti-consumption (Chatzidakis and Lee, 2013). For example, an individual could be involved in sharing motivated by anti-consumption, or due to other motives such as economic motives (Ozanne and Ballantine, 2010). Similarly, a boycott could be motivated by ethical reasons, putting it in the domain of anti-consumption (Chatzidakis and Lee, 2013), or it could be motivated by personal affiliations (Hoffmann, 2011) thus excluding it from the anti-consumption domain. Therefore, an understanding of the motives that direct anti-consumption is vital.

2.4.2. Motives for anti-consumption

As represented in table 2-2, researchers examining anti-consumption have highlighted different motives that could result in anti-consumption. In this regard, the work of Iyer and Muncy (2009) is very useful and important for the present thesis. In their paper "Purpose and object of anti-consumption" Iyer and Muncy divide the motives/reasons for anti-consumption into two broad categories- societal motives and personal motives. Cherrier et al, (2011) also highlights self-interested and socio-environmental concerns as reasons for anti-consumption, which is used as means of self-expression. Next the thesis discusses these two motives in detail.

Table 2.2: motives behind anti-consumption behavior		
Motives for Anti-consumption		
Personal Motives	Societal Motives	Studies
Gain authenticity and meaning in life		Banister and Hogg, 2004
	Welfare of society	Portwood-Stacer 2012; Lee et al., 2009; Huneke, 2005; Shama, 1985
Time for oneself/ self-interest	Environmental/ Ecological concerns	Alexander & Ussher, 2012; Etzioni, 1998; Cherrier and Murray, 2007; Harrison et al., 2005 in Helledie, 2014; Grigsby, M. 2004; Hutter& Hoffmann, 2013; kaynak&Eksi, 2011; Shaw & Moraes, 2009; Cherrier et al., 2011; Portwood-Stacer, 2012
To become self-sufficient		Iwata, 1997; Shama, 1985
	Decrease economic injustice and environmental problems	Cromie and Ewing, 2009; Iwata, 1999; Kaynak&Eksi, 2011; Roubanis, 2008; Shaw & Moraes, 2009; Hutter& Hoffmann, 2013
Avoid objects/ consumption that is incongruent with ones existing self		Freitas, Kaiser, Chandler, Hall, Kim, and Hammidi, 1997; Graeff, 1997; Grubb and Grathwohl, 1967; Heath and Scott, 1998; Hogg, et al., 2000; Kleine et al., 1993; Levy, 1959; Patrick, et al., 2002; Sirgy, 1982; Lee et al., 2009a
Achieve material simplicity		Ballantine & Creery, 2010; Johnston & Burton, 2002; Ozanne and Ballantine, 2010; Walther & Sandlin, 2013; Alexander & Ussher, 2012; Etzioni, 1998; Zavestoski, 2002b; Craig-Lees & Hill, 2002
Value mismatch		Bhattacharya and Elsbach, 2002; Lee et al., 2009
Psychological ease	Resistance against consumerism/big brands	Fernandez et. al., 2011
Religious/spiritual reasons		Shaw and Newholm, 2002; Wilk, 2006; Huneke, 2005; kaynak&Eksi, 2011
Live a meaningful, happy and free life	Humanitarian, social and ecological grounds	Alexander, 2011; Basci, 2014

2.4.2.1. Societal motives

Societal motives represents an individual's concern for others or the external world (Iyer and Muncy, 2009), that is to say anti-consumption is motivated by societal motives; be it the negative effect of consumerism on the

society (Portwood-Stacer, 2012; Lee et al., 2009; Huneke, 2005; Shama, 1985), the nation or the whole world, or the belief that big businesses have harmful effects on poor nations (Fernandez et. al., 2011), or to reflect the dislike for the unfair practices of companies, or for the companies not fulfilling their social responsibilities. Additionally when anti-consumption is motivated by the desire to do well for the environment, it comes under social motives (Cromie and Ewing, 2009; Iwata, 1999; Kaynak & Eksi, 2011; Roubanis, 2008; Shaw & Moraes, 2009; Hutter & Hoffmann, 2013). Lee et al., (2009a) present a similar concept called moral avoidance. Moral avoidance is a result of ideological incompatibility, which means that individuals may avoid brands because of the belief that the brand does not follow certain ethical or moral obligations and therefore is harmful for society in some way. Their study showed that corporate irresponsibility, power imbalances between the rich and the poor nations, or financial patriotism could be a few of the reasons resulting in moral avoidance. This also is in line with past studies that suggest organizational dis-identification where people boycott and/or detach themselves from organizations that are perceived by them to not follow or not to match their own values (Bhattacharya and Elsbach, 2002). Fernandez et. al., (2011) while studying the ‘dumpster diver’ lifestyle, an anti-consumption lifestyle which will be discussed shortly, called the same motive an ideological motive where individuals become dumpster divers so as to show their resistance against consumerism or against big companies, as these companies in their opinion, are harming society.

2.4.2.2. Personal motives

When anti-consumption is adopted for reasons that provide personal gratification then it is said to be backed by personal motives. Examples of personal motives could include religious reasons or spiritual reasons (Shaw and Newholm, 2002; Wilk, 2006). Some individuals choose to live simply so as to get more free time for themselves and for their families (Etzioni, 1998; Cherrier and Murray, 2007) or to seek more time for themselves (Alexander and Ussher, 2012). Fernandez et. al., (2011) adds psychological motives to personal motives for anti-consumption. Individuals become dumpster divers because it results in generating personal fun or because such a lifestyle fulfils their socialization needs. Their study further explains that the individuals adopting the life of dumpster diving get surprised by the stuff they find in bins and this feeling of surprise acts as a motivational force to continue living the way they do.

Identity incongruence is another form of personal motive that could direct anti-consumption (Lee, et al. 2009). Brands are collection of values, and when these values do not match one's own values then anti-consumption may occur. This form of anti-consumption (identity avoidance) represents the behaviour of avoiding a brand because of a mismatch between an individual's personality or sense of self and the personality of the brand (Lee et al., 2009a). To elaborate on this Lee used the concept of the undesired self (Ogilvie, 1987), which among other works in the area of self-concept is considered to be the most relevant psychological construct of brand avoidance. It is said that when there is a symbolic incongruence and the use of the brand could result in an undesired self, the brand is avoided. This is in line with the past researches

in the area of image congruity and undesired self, which states that individuals not only consume in ways that improve or preserve their self-concepts but also avoid consumption behaviours that could add unwanted meanings to one's lives, or objects that are incongruent with one's existing self-concept (Banister and Hogg, 2004; Heath and Scott, 1998; Kleine et al., 1993; Levy, 1959; McCracken, 1989; Patrick, et al., 2002; Sirgy, 1982). Bad experience could also result in anti-consumption (Lee et al., 2009a). Individuals also practice anti-consumption to be self-sufficient (Iwata, 1997).

All the above mentioned motives are classified as personal motives as they result in one's personal gratification, with personal concerns being paramount and not the concern for society or others. In this way, the study by Iyer and Muncy (2009) divides all the motives in two broad categories. It was suggested that the underlying concept of non-consumption practice is that the consumer is concerned about the effects that a purchase choice may have on themselves and/or on the external world (Harrison et al., 2005 in Helledie, 2014), Iyer and Muncy (2009) call these as personal (themselves) and societal (external world) motives.

Building on the said literature, it is understood that the acts of anti-consumption should be backed by either societal motives - dropping the level of consumption because of economic injustice, environmental problems (Cromie and Ewing, 2009; Iwata, 1999; Kaynak & Eksi, 2011; Roubanis, 2008; Shaw & Moraes, 2009; Hutter & Hoffmann, 2013), unethical marketing, social discrimination or a hegemonic culture - or/and non-materialistic personal motives (Iyer and Muncy, 2009). If backed by personal

motives, it should not be mere materialistic self-interest. For example, not buying a product so as to save money to buy something more materialistic. Rather there should be a motivation to benefit at least close others if not the whole nation, for instance reducing consumption due to ethical reasons or for finding more time for family and one's own self (Cherrier, 2009), or to achieve material simplicity (Ballantine & Creery, 2010; Johnston & Burton, 2002).

Non-purchase due to the inability to buy (unaffordable price or unavailability of product) does not come under the umbrella of anti-consumption research. Though studies could be found that have included non-consumption behaviour backed by economic motive (for example Fernandez et al., 2011; Shama & Wisenblit, 1984) into anti-consumption domain, doing so does not bring useful knowledge into consumer behaviour. Philip Kotler (2010) elaborates that a consumer has a demand for a product only when they have the willingness as well as the *ability* to buy the product. An individual who has the willingness to buy a product but does not have the ability to do so is not part of the target market for companies. Following along similar lines, when understanding anti-consumption, individuals who live simply due to economic reasons without willingly and consciously making the decision to live simply, are not anti-consumers. If such consumers are to be added into the domain of anti-consumption then every individual belonging to lower social class of the under-developed or the developing nations would be an anti-consumer. This is because these individuals live simple as they have low resources and thus their lifestyle is not a choice they make willingly, rather their economic conditions does not let them live leisurely. Therefore, forced

simplicity or/and non-purchase due to inability to buy should not be confused with anti-consumption. It is vital that an individual choosing anti-consumption should make a decision willingly to reduce or reject consumption rather than being forced to reject or reduce consumption.

Thus, an individual holding an anti-consumption attitude would consciously decrease or reject consumption of particular products/service/brands or would consciously decrease or reject overall consumption (Lee et al. 2009a, b; Iyer and Muncy 2009). Furthermore, this act would be based on societal and/or non-materialistic personal motives with the aim of doing good for the society or for one's self or for significant others in one's life.

Additionally, anti-consumption is practiced only if one holds an anti-consumption attitude (Sharp et al., 2010). Iyera and Muncy (2009) use the concept of “purpose of anti-consumption” and “object of anti-consumption” to identify four possible anti-consumption attitudes: Global Impact, Voluntary Simplicity, Anti-loyal and Market Activist. The next section looks at these attitudes so as to highlight the significance of Global Impact and Voluntary simplicity attitude for this thesis.

2.4.3. Four types of anti-consumption attitudes

Iyer and Muncy (2009) use the concept of “purpose of anti-consumption” to indicate the motives for anti-consumption. As discussed in detail in previous section (2.4.2), they grouped all the possible motives for anti-consumption into two broad categories, namely

1. Societal motives
2. Personal motives

They use the term “object of anti-consumption” to classify behavioural perspective of anti-consumption. As discussed in section 2.4.1, anti-consumption could be practiced at two levels

1. Specific/brand level
2. General/overall level

On the basis of these two bipolar dimensions – motive for anti-consumption (societal or personal) and level of anti-consumption (specific or general) - Iyer and Muncy (2009) identify four types of anti-consumers with different attitudes that lead to their anti-consumption.

		Purpose of anti-consumption	
		Societal	Personal
Object of anti-consumption	Specific	Market Activists (MA)	Anti-Loyal (AL)
	General	Global Impact (GI)	Voluntary Simplifiers (VS)

Figure 2.1: Types of anti-consumption
Adapted from Iyer and Muncy (2009)

Figure 2.1 represents these four types of anti-consumers. It is however emphasized that these types are not mutually exclusive and an individual can adopt more than one form of anti-consumption at any given time (Iyer and Muncy 2009). The next section first discusses the general anti-consumers – Global Impact and Voluntary Simplifiers - which is followed by the discussion of specific anti-consumers –Market Activists and Anti-loyal (Iyer and Muncy, 2009).

2.4.3.1. General anti-consumers

Global impact [GI] (individuals reducing overall consumption with societal motives) and Voluntary simplifiers [VS] (individuals who reduce overall consumption due to personal reasons) are the anti-consumption attitudes which foster anti-consumption at a general level (Iyer and Muncy, 2009).

2.4.3.1.1. Global Impact (GI)

Global impact is when consumers reduce their overall consumption and the motivation behind such reduction is to do good for the society or the planet (Iyer and Muncy, 2009). Iyer and Muncy (2009) discuss these consumers as the ones who follow anti-consumption practices in their daily life and decrease their overall consumption because of societal or environmental reasons. This class of anti-consumers is high in self-consciousness, low in assertiveness and has a high level of environmental consciousness. These individuals care about the environment along with issues of sustainability (Black and Cherrier, 2010; Cherrier et al., 2011). Dobscha (1998) talks about such individuals as the ones who disagree with the dominant opinion that consumption signifies national success (Borgmann, 2000), thus opposing capitalism along with the global philosophy of consumerism. Consumers falling within the category of GI tend to establish movements so as to not only amend the social order (Buechler, 2000), but also to change basic beliefs and the consumer culture itself (Gabriel and Lang 1995; Kozinets and Handelman, 2004; Rumbo 2002; Sklair 1995; Iyer and Muncy 2009).

The literature on the subject shows that for the last 20 years or so ethical and environmental consumers have started questioning the concept of “shop till you drop” (Gabriel and Lang, 1995), and this concern gradually evolved into anti-consumption. Ultimately many individuals understood that the earth’s resources are finite and more sustainable consumption is needed to better manage these resources. Holt (2002) explains how some individuals counterattack consumer culture, with an understanding of how marketing works, by reflexively defying it through their consumption practices (Murray and Ozanne, 1991). These activists not only consider large capitalists as their rivals, but also look at consumers as opponents (Kozinets and Handelman, 2004). Cherrier (2009) demonstrates that anti-consumers with a ‘hero’ identity display resistance to exploitative consumption so as to display social and environmental concerns, whereas Iyer and Muncy (2009) call such individuals global impact consumers.

2.4.3.1.2. Voluntary Simplicity (VS)

The second form of general anti-consumers is represented by the voluntary simplifiers (VS). VS reduce overall consumption from their lives due to personal reasons. These individuals decrease consumption from their lives as they believe that over consumption brings with itself stress and decreases life’s satisfaction (Etzioni, 1998; Fischer, 2001a; Schor, 1998; Shaw and Newholm, 2002; Zavestoski, 2002a). The anti-consumption practices of these consumers are focused on attaining a happier life. They buy only what they see necessary for their lives (Iyer and Muncy 2009). Individuals practicing anti-consumption because of ethical or spiritual reasons (Craig-

Lees and Hill, 2002; Shaw and Newholm, 2002; Wilk, 2006) also fall in this category.

Self-consciousness is low in these individuals and they are high in assertiveness. These individuals are focused on satisfying their material needs as directly and simply as possible. This involves minimizing expenditure on consumer goods and seeking, by and large, meaning and satisfaction through non-materialistic sources. It could also be seen as an endeavour to avoid unessential income and consumption, in exchange for more time for one's life goals. By definition Voluntary Simplicity is an anti-materialistic lifestyle (Nepomuceno, 2012; Etzioni 1998; Gregg 1936; Shama 1981) and represents minimal consumption of material goods, implementing self-reliance, and practicing similar non-materialistic practices (Zavestoski, 2002a). Voluntary Simplifiers willingly adopt and avoid consumption through either consuming less and/or simply using resources more efficiently (Lee et al., 2009b).

However, it should be clear that these individuals are not frugal materialists (Lastovica, 2006), i.e. whose decrease in consumption is motivated by monetary reasons. Rather Voluntary Simplifiers use less resources because they feel separated from materialistic goods. Moreover, it is shown through research that a sizeable population considers stress, disillusionment and fatigue a result of overconsumption (Zavestoski, 2002b), and people are shown to feel happier with reduced consumption (Jenkins, 2006). Thus members of this group choose to live simpler and, in their opinion, happier lives.

Uptill this point the section discussed literature dealing with anti-consumption at a general level. Next section looks at an alternative consumption description, where consumers target certain brands/ products or huge businesses because of societal concerns or due to a non-materialistic personal motive, thus representing specific anti-consumers: anti-consumers who reduce or reject consumption of specific products and/or brands only (Craig-Lees and Hill, 2006; Thompson and Arsel, 2004).

2.4.3.2. Specific anti-consumers

Iyer and Muncy (2009) differentiate anti-consumers who reduce or reject consumption of specific products/brands into market activists [MA] and anti-loyal [AL].

2.4.3.2.1. Market activists (MA)

Holt (2002) states, “The most puzzling aspect of the anti-branding movement is that it takes aim at the most successful and lauded companies, those that have taken the marketing concept to heart and industriously applied it. Nike and Coke and McDonald’s and Microsoft and Starbucks—the success stories lauded in marketing courses worldwide—are the same brands that are relentlessly attacked by this new movement.”(p.70). Nevertheless, even common rituals like attending the high school prom (Nuttall and Tinson, 2011) or celebrating Valentine’s Day (Close and Zinkhan, 2009) get targeted by these anti-consumers. Such anti-consumers are called market activists (Iyer and Muncy 2009). The reason for anti-consumption followed by individuals in this profile is the same as the global impact consumers’, however these individuals avoid only specific brands unlike the global impact consumers

who decrease overall consumption from their lives. It is argued that these anti-consumers try to have impact on social issues, as these anti-consumers see certain brands initiating social problems and therefore they use their consumer power to impact society (Smith, 1990; Mintel Special Report, 1994; Friedman, 1985; Strong, 1997) by rejecting such brands.

These anti-consumers tend to use different aids to keep them informed about the brands to avoid. Examples of actions taken by market activists are campaigns stimulated by Adbusters or campaigns against the supermarket chain Walmart. These anti-consumers go against big brands like Starbucks, as they believe these big businesses to be taking over the share of small local businesses (Thompson and Arsel, 2004).

Carty (2002) further develops the importance of the Internet and alternate forms of media, as market activist use these means to develop resistance against brands at global level. Discussing the case of Nike, she argues that though big organizations have gained great power through globalization, the resistance they face keeps on accelerating. She explained how minor groups, through the use of Internet, challenge the corporate domination in the arenas of consumption (Culture Jammers) and production (anti-sweatshop movement).

Sandikci and Ekici (2009), through examining ideologies in anti-consumption motivations, highlight three forms of political ideologies that can result in the rejection of certain brands. These three ideologies are: 1) Predacious globalization (Falk, 1999); viewing a particular brand as being exploitative and capitalist. Brands like Disney, Coca-Cola and McDonalds, to

name a few, have seen such resistance with cultural domination (generally in the United States) by products and services. 2) Dogmatic nationalism, with attitudes and beliefs about national supremacy backed by the idea that “one's own nation is the only entity of self-determination and respect” (Wittrock, 2004, p.13). Users avoid brands, which they feel misuse nationalistic feelings for the sake of making money. 3) Religious fundamentalism, associating brands with religious fundamentalism resulting in rejection of such brands.

Varman and Belk (2009) explore the role that nationalism ideology plays in anti-consumption of Coca-Cola in India. They found that the experiences of colonialism, modernity and globalization are linked to the nationalist philosophy of Swadeshi. Russell et al., (2011) also focus on enmity towards a specific country. Hoffman (2011) instead, brings into light several individual motives behind such boycotts. He opines, “Some consumers join boycotts because they feel solidarity with those affected by the actions of a company, whereas others generally criticize the free-market economy and are generally prone to boycott any company. Companies (thus) need to ensure that both types of boycotters consider them socially responsible” (p. 1702).

2.4.3.2.2. Anti-Loyal (AL)

Anti-consumers who practice anti-consumption towards a specific brand or product on the basis of their personal experience with this brand are called anti-loyal consumers or anti-loyalty (Iyer & Muncy, 2009). “Anti-loyalty reflects a personal commitment to avoid purchasing a product because of perceived inferiority or because of a negative experience associated with it” (Iyer and Muncy, 2009, p. 162). Choi (2011) calls such anti-consumption as

trauma anti-consumption and elaborated that these individuals' anti-consumption stems from a bad, first-hand experience with a product. Due to the bad experience with the specific product/brand, these anti-consumers restrain from buying these products/brands again. Iyer and Muncy while discussing these as anti-consumers, make clear that these anti-consumers avoid buying brands or products because of past negative experience or because of the belief that the brand is inferior i.e. bad experience or image clash (Lee, Motion and Conroy, 2009).

Cromie and Ewing (2009) examine the rejection Microsoft brand faces by the open source software community. In doing so the authors highlight the negative motivations that lead to rejection of the brand. They elaborate that "Consumers can feel disempowered, even trapped, by the lack of real freedom, whether in choice of product, support/service or mode of operation, or a variety of other parameters such as incompatibility with other products, lack of information on product design and operation and so on"(p. 3) leading to the rejection of a brand.

Duke (2002), while conceptualizing consumption, not just as simple purchase but also as the approval of standards created by an industry, examines how African-Americans (a minority in the US) disapprove and distance themselves from beauty ideals created by the media. It was shown that African-American girls are less influenced by the marketing efforts of the beauty industry compared to the affect it has on Caucasian girls. Thus, Anti-loyal could be motivated by one of the personal motives leading to rejection of a particular brand/product.

AL and MA represent brand-level anti-consumption that has the ability to influence negatively on businesses, as a result several research endeavours can be found that looked at brand/product-level anti-consumption (for e.g. Carty, 2002; Ethical Consumer, 2005; Lee et al., 2009a; Klein et al., 2004; Sen et al., 2001; Penaloza and Price, 1993). However, the study of individuals reducing consumption on a general level is inadequate (Iyer and Muncy, 2009) and represents a gap that needs to be filled.

Additionally, GI and VS represent anti-consumers who, though based on different preferences, target their anti-consumption at all sort of consumption. That is to say, these anti-consumers practice general anti-consumption and reduce overall consumption from their lives. The other two groups of anti-consumers – AL and MA - represent individuals who deliberately refuse to buy/consume specific brands/products for different, individual reasons (Iyer and Muncy, 2009). Therefore, the behaviour of these later forms of anti-consumers could not elaborate general trends, as the motives for anti-consumption in these categories vary from person to person. As would be discussed in detail in chapter 3 this thesis aims to classify consumers in terms of the balance between their anti-consumption attitude and materialistic attitudes. In order to achieve this, an understanding of the general (anti-consumption) tendencies of consumers is what this study is focused at. Therefore the concept of general anti-consumption (with GI and VS) is of interest to this study.

2.4.4. Similar behaviours

While the classification developed by Iyer and Muncy (2009) is comprehensive, there are other lifestyles studied under anti-consumption that are not included in the classification. This section first discusses the two lifestyles - frugality and freeganism/dumpster diver - that have been included in anti-consumption research by some (Lastovicka et al., 1999; Fernandez et al., 2011; Nepomuceno and Laroche, 2015). The reasons for not considering them in the present study are also discussed. Next, the section also identifies the main differences between anti-consumption and similar behaviours that are confused with anti-consumption, so as to identify anti-consumption as a distinct area of research (Chatzidakis and Lee, 2013).

2.4.4.1. *Frugality*

One of the lifestyles that represent decrease in consumption is frugality. It is defined as “a uni-dimensional consumer lifestyle trait characterized by the degree to which consumers are both restrained in acquiring and in resourcefully using economic goods and services to achieve longer-term goals” (Lastovicka et al., 1999, p. 88). Frugality does not mean that the individuals are less materialistic or that they live a simple lifestyle compared to other consumers (Kasser, 2005; Tatzel, 2002), rather, it is argued that materialistic individuals might use a frugal lifestyle in order to achieve their long-term goals (Lastovicka, 2006; Nepomuceno, 2012). Additionally, the motives for frugality are usually utilitarian and economical (Goldsmith et al., 2014), given that anti-consumption is seen as a phenomenon backed by reasons like societal concerns or care for others and not materialistic concerns,

frugality does not fall in the domain of anti-consumption research as proposed and set up in this thesis.

2.4.4.2. Freegans /Dumpster divers

Another lifestyle more recently studied under the umbrella of anti-consumption is that of Freegans (also called dumpster divers). A study by Fernandez et al., (2011) explores this lifestyle. Freegans also known as Dumpster divers are the class of anti-consumers who focus on acquisition of discarded goods. They rely on thrown away food for their nutritional needs. These anti-consumers dig out packed food from trash bins of big stores and then use it. Not only this, many of them also rely on bins for almost all of their needs ranging from clothes to furniture. One reason highlighted for adopting this behaviour is economic. Through this lifestyle the dumpster divers avoid consumption from the main market. Anti-consumption is seen as a source of well-being, but being too tight with money might also lead to negative emotions (Tatzel, 2003), thus the balance lies in the middle, with one being neither too tight nor too loose with money so as to acquire peace of mind (Nepomuceno, 2012). This lifestyle seems less practical and as already mentioned the behaviour is backed by economic motives, thus excluding it from the domain of anti-consumption as set up in this thesis.

Apart from these two lifestyles, Chatzidakis and Lee (2013) indicate three areas that are usually confused with anti-consumption; these three areas are environmental consumption, ethical consumption and resistance.

2.4.4.3. Environmental and ethical consumption

McDonald et al., (2012) indicate that under the umbrella of sustainability literature ethical consumers are referred to as the consumers who select products or services with the least damaging effect on the environment, as well as those products which upkeep arrangements of social justice (Harrison et al., 2005 in McDonald et al., 2012). However, when seen through the lens of marketing the same consumers are called green consumers with the understanding that they care about ethical issues like fair-trade (Solomon et al., 1999 in McDonald et al., 2012). Accordingly the main difference between green/ethical consumption and anti-consumers is that the former involves some sort of consumption, whereas the later points to reasons to not attain, consume and dispose of goods and/or services (Chatzidakis and Lee, 2013; Lee et al., 2011; Penaloza and Price, 1993). Though environmental consciousness and anti-consumption has been shown to have a positive relation (Kaynak & Ekşi 2011; Iyer and Muncy 2009; Black and Cherrier, 2010), they are not synonymous to each other. Chatzidakis and Lee (2013) discuss in detail how both consumption and anti-consumption could be backed by ethical and environmental motives, thus, an understanding of both the reasons for and the reasons against consumption are important for a complete understanding of consumer behaviour.

2.4.4.4. Resistance behaviour

Lee et al (2011) express that though there may be certain overlaps in anti-consumption and consumer resistance, these two areas are very different. As already mentioned anti-consumption points to reasons to not attain,

consume and dispose of goods/services, whereas resistance narrates consumers' application of power against or in favour of companies (Lee et al., 2011; Penaloza and Price, 1993). In simpler words, anti-consumption is concerned with consumption issues, while resistance has a focus on power issues (Lee et al., 2011). There are situations when resistance is the motivational force for an act of anti-consumption, such as in the case of consumers boycotting a given company. Similarly, when consumers endorse products or acquire goods and services of a given company resistance is at play (Nepomuceno and Laroche, 2015). Chatzidakis and Lee (2013) clarify the situation by expressing that resistance could be expressed by both acts of anti-consumption and by acts of consumption. They use the example of open-source software communities and consumer cooperatives which display their resistance via consumption, rather than anti-consumption (Chatzidakis and Lee, 2013; Cromie and Ewing, 2009; Herrmann, 1993). While, resistance to multinational corporations such as Starbucks due to societal reasons (Thompson and Arsel 2004) represents acts of anti-consumption. Simply put, anti-consumption looks at the opposition or non-consumption rather than the consumption aspect of resistance.

Lastly, anti-consumption can have a community dimension, often expressed through membership of an anti-consumption community, but given that this thesis aims to understand what balance consumers of the current era find between their anti-consumption and materialistic attitudes, the target population of this thesis is the general public and not specific anti-consumption communities (Moraes et al., 2010). Although, an examination of new anti-consumption communities could bring important understanding and

knowledge, however this examination is beyond the scope of this thesis, thus this thesis looks at anti-consumption on an individualistic basis (along with most consumer research in general) and an examination of alternative/new (anti)consumption communities are not further considered.

2.5. Summary

In summary, this chapter sheds light on the literature available on materialism and anti-consumption. Through analysis of the existing literature on materialism the chapter clarifies what materialism is and how anti-consumption is opposite to materialism. Next the chapter examines literature on anti-consumption, the chapter clarifies that acts related to reduction of consumption and/or rejection of consumption come under the umbrella of anti-consumption, however, these acts could not be simply considered anti-consumption unless they are backed by either societal and/or non-materialistic personal motives. A distinction between anti-consumption and similar behaviours is also made. This is done to obtain a clear understanding of both anti-consumption and materialism.

As discussed in chapter 1, section 1.2.3, and chapter 2, section 2.3, anti-consumption and materialism are opposite to each other, yet, they both are vital element of current culture in the developed world.

The next chapter attempts to answer the questions:

In what ways are anti-consumption and materialism opposite to each other?

And...

Whether every consumer, when analysed in terms of his/her anti-consumption attitude and materialistic attitude, could be classified as either falling into the category of anti-consumer or materialistic consumer?

Or could there be other types of consumer who, instead of taking either of the extreme approaches, take a more integrated approach, thus forming new segments of consumers in terms of the balance between their anti-consumption attitude and materialistic attitudes?

Drawing upon the literature on attitude, values, wellbeing, authenticity and environmental consciousness, the next chapter first proposes a classification/typology of consumers in terms of the balance between their anti-consumption attitude and materialistic attitudes and then indicates how the segments in the proposed typology would differ in terms of motivational values, wellbeing, authenticity and environmental consciousness. Along with this, the chapter also suggests means to empirically examine if anti-consumption attitude and materialistic attitude are opposite to each other. This is done by (1) proposing an inverse relation of anti-consumption attitude and materialistic attitude with values, wellbeing, environmental consciousness and authenticity and (2) by suggesting opposite values along with an inverse relation of environmental consciousness acting as antecedents of the opposing attitudes – anti-consumption attitude and materialistic attitude. From here 12 hypotheses are drawn.

Chapter 3

TYPOLGY OF CONSUMERS BASED ON CONTRADICTORY ATTITUDES

3.1. Introduction

Anti-consumption is identified as a vital element of consumer behaviour (Yüksel & Mirza, 2010; Shaw & Newholm, 2002). Though, seen as mainstream (Choi, 2011), individuals practicing anti-consumption face a struggle with people around them as they live simple in a society filled with materialism (Walther & Sandlin, 2013). As discussed in chapter 1, both anti-consumption and materialism, though opposite, are prevalent and visible in economically developed countries (like UK). Thus, it is argued that consumers of such economies would hold both anti-consumption and materialistic attitudes. This brings us to the two main questions; can empirical validation of anti-consumption and materialism being opposite be obtained? And if they are opposite and mainstream in developed economies then how do these contradictory attitudes shape the behaviour of consumers in such economies?

This chapter begins with a discussion on the literature in relation to consumers' attitudes. Specifically anti-consumption attitude and materialistic attitude are discussed. These opposite attitudes are then used to propose a typology of consumers. The chapter then discusses literature on several

aspects of consumer behaviour that are highlighted in both anti-consumption and materialism literature. Specifically literature on value orientations, environmental consciousness, authenticity and wellbeing is discussed with an aim of (1) using these concepts as a means to validate the idea that anti-consumption attitude and materialistic attitude are opposite to each other and (2) to assess if the proposed segments/clusters in the typology vary in terms of their psychographic profile (value orientations, wellbeing, environmental consciousness, and authenticity) according to the specific combination of anti-consumption attitude and materialistic attitudes that they may exhibit. In this way this chapter attempts to find means to answers the above two questions. From there 12 hypotheses are drawn.

3.2. Attitudes

The study of attitudes in social psychology has a long and complex history (Oppenheim, 1992, p174). One of the earliest and widely quoted definition of attitude is by Allport (1935) and stated as follows:

“An attitude is a mental or neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related”.

Allport (1967) later pointed out that constructing a comprehensive definition of attitude is a challenging task. Though different authors attempted to define attitude differently (for e.g. Krech and Crutchfield 1948; Doob, 1947; Katz and Sarnof, 1954 and Osgood et al., 1957), the key development in

area of attitudes was the agreement that attitude usually involves three elements. These three elements are:

1) Knowledge: The individual holding an attitude about a person, a thing or phenomenon needs to have some knowledge about that person, thing or phenomenon,

2) Feelings: The attitude may involve feelings. That is to say, the person may develop feelings such as hate, love, enjoyment or resentment related to the person, thing or phenomenon about which an attitude is held.

3). Experience: This could be first-hand experience or second hand experience. That is to say the individual may have seen or done something or had something done to them resulting in the development of the attitude.

The key point is that the individual develops an attitude when he/she has evaluated a thing, an event or a person. This evaluation, that develops the attitude, affects the succeeding behaviour.

Despite this clarity, Mostyn (1978, p13) indicated that the term attitude and behaviour have been confused for each other, with some even suggesting that “attitudes can’t really be measured but only inferred from behaviour”. Nonetheless, Ajzen and Fishbein’s (1989) and Ajzen’s (1991) work clarified that attitudes and behaviours are distinct from each other, although one may influence the other. Understanding that attitudes can affect behaviours has made the concept important. Attitude toward behaviour is seen as an individual's negative or positive evaluation of self-performance of the specific behaviour (Ajzen, 1991).

3.2.1. Importance of attitudes for this thesis

Evidence suggests that attitudes towards a behaviour can predict the intention to perform that behaviour very accurately (see Ajzen, 1988; Campbell, 1963; Sherman & Fazio, 1983). This thesis examines anti-consumption attitude and materialistic attitude instead of behaviours. That is to say, this thesis measures attitudes and not the behaviour related to anti-consumption and materialism. This is because the study of behaviour could be confusing and misleading in the combined domain of anti-consumption and materialism, especially when the aim is to classify consumers. For instance, if this thesis had observed anti-consumption behaviour and materialistic behaviour to classify consumers then reduction in consumption by an individual could have been considered as an act of anti-consumption thus making that consumer an anti-consumer. Whereas this specific reduction might have been done for non-anti-consumption motives (saving now to spend later on some luxury product), thus, excluding the individual from anti-consumption.

As aforementioned, the aims of this thesis are to gain empirical support for the understanding that anti-consumption is opposite to materialism and to explore if the consumers of industrialised economies (such as the UK) can be classified according to the specific combinations of anti-consumption and materialistic attitudes that they may exhibit. However, the behaviour associated with each combination of attitudes is another avenue of research and is beyond the scope of this thesis.

3.2.1.1. Materialistic attitude

As discussed earlier in detailed in chapter 2; section 2.4, different understandings of materialism could be obtained. However, from amongst other studies, the work of Moschis and Churchill (1978) is of particular interest to this thesis. Scholars like Richins and Dawson (1992) emphasized that Moschis and Churchill's materialism scale measures one's attitude towards materialism rather than one's materialism. That is to say, while other studies examine how materialist the individual is, Moschis and Churchill's concept helps examine the attitude of an individual towards materialism. As this thesis is focused on examining materialistic attitude, thus this conceptualization of materialistic attitude given by Moschis and Churchill's (1978) is taken further. Several studies have used this concept of materialism (for example Lui et al., 2012; Parker et al., 2004). Moschis and Churchill (1978) defined materialistic attitudes as “orientations emphasizing possessions and money for personal happiness and social progress”.

Opposite to materialistic attitude is anti-consumption attitude (Lee and Ahn, 2016).

3.2.1.2. Anti-consumption attitude

Anti-consumption represents the attitude that declines to give resignation to the ideology of progress and material growth. (Cherrier, 2008; Kozinets and Handelman, 2004; Schor, 2000). These attitudes cannot be forced by proscription or any other means and only individuals who have the requisite attitudes to lead them to anti-consumption behaviour will end up being an anti-consumer (Sharp et al., 2010).

As discussed in chapter 2, section 2.4, Iyer and Muncy (2009) classified anti-consumption attitude into general and specific. General anti-consumption attitude - represented by Global Impact attitude and Voluntary Simplicity attitude - characterizes individuals who have the attitude to decrease consumption on a general level, thus targeting all sorts of consumption. That is to say, individuals holding these anti-consumption attitudes try to reduce overall consumption from their lives.

Specific anti-consumption attitude - represented by Anti-Loyal attitude and Market Activist attitude - Characterizes individuals who have the attitude to decrease consumption or reject consumption on a specific level, thus targeting only a specific brand or product. That is to say, these individuals deliberately reduce consumption of, or refuse to buy/consume specific brands/products for different, individual reasons (Iyer and Muncy, 2009).

Therefore, the behaviour of these later forms of anti-consumers could not elaborate general tendencies, as the motives for anti-consumption in these categories vary from person to person. For this reason, this thesis looks at general anti-consumption attitude (referred to as anti-consumption attitude from this point onward).

In order to build a grand theory of anti-consumption, which is much needed, (Lee et al., 2009b) researchers need to move to a more macro level of theorization (Agarwal, 2013). Recognizing this need, this thesis examines consumers in terms of their anti-consumption and materialistic attitudes. As discussed in detail in chapter 1, section 1.2, anti-consumption and materialism, though opposite, are prevalent in current consumer culture.

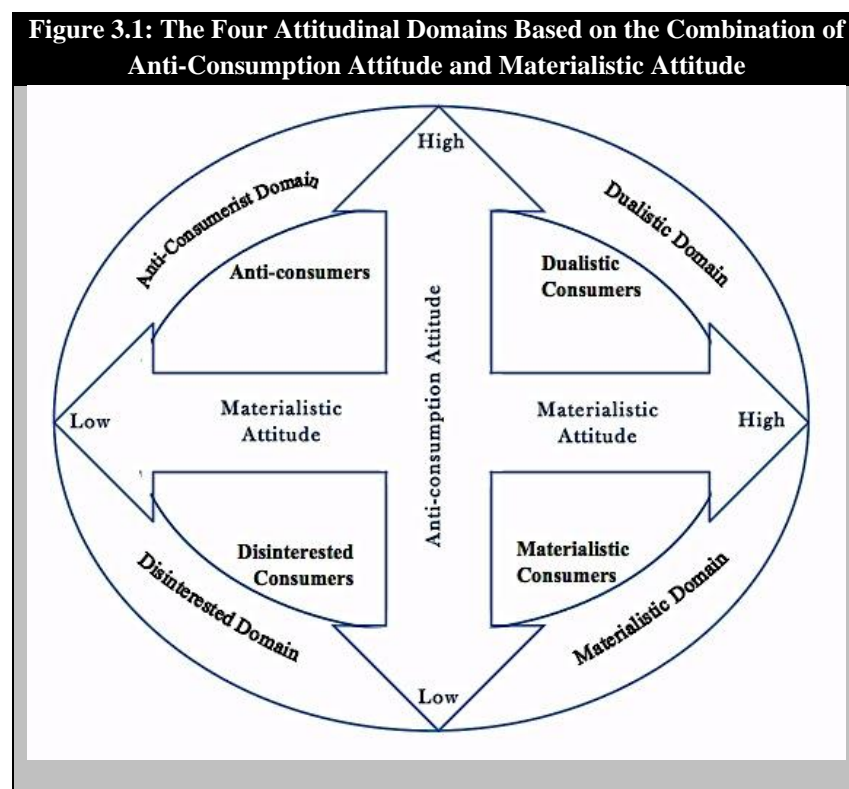
Lee and Ahn (2016) explore opposite nature of anti-consumption and materialism through qualitative analysis, however, there is need for empirical validation of the same (Lee and Ahn, 2016). Additionally, with both anti-consumption and materialism being vital element of current society in the developed world, this thesis proposes that a consumer of current era would hold both anti-consumption and materialism attitudes. In this way, these consumers are faced with a situation where they have to find balance between their anti-consumption and materialistic attitudes.

Although, the first aim of the thesis is to provide empirical validation for the opposing nature of anti-consumption attitude and materialistic attitude, however, for ease of understanding and clarity, the next section discusses the proposed typology of consumers based on the possible combinations of anti-consumption attitude and materialistic attitudes that a consumer may hold. Later, section 3.4 provides means to not only empirically validate the opposite nature of anti-consumption and materialistic attitude but also to explore possible differences between different segments in the proposed typology. Relationship of anti-consumption attitude and materialistic attitude with four psychographic variables namely; values, environmental consciousness, wellbeing and authenticity; are discussed with the aim of 1) providing means to empirically explore the opposite nature of anti-consumption attitude and materialistic attitude and 2) to further indicate possible differences among the segments of the proposed classification system/typology of consumers based on the possible combinations of their anti-consumption and materialistic attitudes.

3.3. Typology of consumers based on their anti-consumption and materialistic attitudes

Though anti-consumption and materialism are opposite to each other, with both attitudes becoming mainstream in the developed nations, this thesis argues that consumers of current era in such economies hold different levels of both the attitudes simultaneously. Literature from self-concept research also supports this understanding. Though in earlier studies self-concept was seen as a one-dimensional construct (for example Birdwell, 1968; Grubb and Hupp 1968), this traditional approach was soon challenged (Markus and Nurius, 1986; Onkvisit and Shaw, 1987) and the idea of one having multiple selves was generated (Sirgy et al., 2000; Todd, 2001). Presently, there are four dimensions of self concepts identified in marketing literature: 1) actual self-concept (how a person sees oneself), 2) ideal self-concept (how one desires to see oneself), 3) social self-concept (how one thinks other sees him) and 4) ideal social self-concept (how one wants to be seen by other) (Hosany and Martin, 2012; Belch and Landon, 1977; Dolich, 1969; Hughes and Guerrero, 1971; Sirgy, 1982). Furthermore, these self-concepts affect an individual's attitude (Ibrahim and Najjar, 2008). Following this understanding, it could be argued that with both anti-consumption and materialism being prevalent in the present time in developed economies, consumers of such economies could have one dimension of self-concept inclined towards anti-consumption with another towards materialism. For example, an individual might have a materialistic actual self, while he/she would want to be seen as a sustainable consumer (ideal social self-concept). In this way they would have different self-concept dimensions inclined differently towards the two attitudes. Also as

discussed in chapter 1, section 1.2.3, theories like cognitive dissonance (festinger, 1957) and gradual threshold model (GTM) of ambivalence (Breckler 1994; Thompson et al., 1995; priester and petty, 1996) support the idea of an individual holding contradictory attitudes. Developing on the above discussion with the understanding that individuals generally have thousands of attitudes and their behavior is influenced by a cluster of attitudes rather than just one attitude (McCroskey, 2015) this thesis proposes that individuals of developed economies would hold different combination of anti-consumption attitude and materialistic attitude. Figure 3.1 presents the possible combinations of anti-consumption attitude and materialistic attitude an individual can acquire. The four possible attitudinal domains with respect to anti-consumption attitude (AC) and materialistic attitude (MAT), as presented in figure 3.1, are discussed next.



1. Anti-consumerist Domain (High AC & Low MAT):

The combination of attitudes in this domain represents high anti-consumption attitude and low materialistic attitude. Given that anti-consumption and materialism are said to be opposite to each other, it is reasonable to argue that a segment of consumers will acquire this balance of attitudes. Consumers making up the segment falling in this domain will be called anti-consumers.

2. Materialistic Domain (High MAT & Low AC):

This domain, with high materialistic attitude and low anti-consumption attitude, is the opposite of anti-consumerist domain. It is expected that a segment of consumers will acquire this balance of attitudes with high materialistic and low anti-consumption attitudes. Consumers making up the segment falling in this domain would be more materialist and less anti-consumeris and thus, will be called materialistic consumers

3. Dualistic Domain (High AC & High MAT):

This domain exhibits high level of both the attitudes – anti-consumption and materialistic. It is expected that some consumers are yet unable to find the right balance between their anti-consumption and materialistic

attitudes and thus fall in this domain. This group of individuals, if existing, will make up a segment that would represent consumers who are on one hand influenced by current consumer culture and thus have high materialistic attitudes, while on the other hand these consumers are also influenced by sustainability debates and are aware of the consequences their consumption has on earth and thus hold high anti-consumption attitude. If such a segment appears, it will be called dualistic consumers.

4. Disinterested Domain (Low AC & Low MAT):

This is the last combination/balance of anti-consumption attitude and materialistic attitude that can exist. This domain is named Disinterested Domain because it represents a combination of attitude that is detached to or is neutral towards both anti-consumption and materialism. If such a segment appears it will be called disinterested consumers.

It is important to note here that these four domains are proposed on the basis of possible combinations of the two attitudes being studied in this thesis. The existence of segments in these four domains is what the thesis plans to explore. Research shows existence of individuals that are not completely anti-consumers but are inclined towards the trend (for example beginning voluntary simplifiers in McDonald et al., 2012). Evidence also shows

materialistic consumers who resist consumption (Lastovicka, 2006; Tatzel, 2002, 2003). Dermody et al., (2015) argued that though most consumers are aware and concerned about environmental problems and wish to attain sustainability, they are not willing to dramatically change their consumption behaviour (Kilbourne & Pickett, 2008; Prothero et al., 2011; Rettie et al., 2012). It is therefore argued that along with the two opposite categories (anti-consumers and materialistic consumers) there would exist clusters that have a different balance of anti-consumption attitude and materialistic attitudes compared to the attitudinal balance of anti-consumers and materialistic consumers. These individuals could acquire a position in dualistic domain and/or disinterested domain. Thus, this thesis proposes that consumers can be classified in terms of the balance they find between their anti-consumption attitude and materialistic attitude into four possible clusters - anti-consumers, materialistic consumers, dualistic consumers and disinterested consumers.

Also as anti-consumption and materialism is said to be opposite to each other, it is expected that anti-consumers and materialistic consumers would represent two distinct, and opposite clusters.

Moreover, this thesis aims to identify differences between these clusters in terms of the four psychographic variables (which will be discussed in detail in the next section) that have been linked with both anti-consumption and materialism. The purpose is to validate the typology. Michaelidou (2012) and Ketchen and Shook (1996) highlighted that segmentation studies, to validate the findings, normally use variables not used to create clusters to check if the cluster obtained differ in terms of these variables. This thesis,

following other segmentation studies, will use non-clustering variables (variables other than the ones used to create the clusters in this study) to validate the proposed typology. Variables that have been theoretically linked to both anti-consumption and materialism and are included in this thesis are value orientations, wellbeing, environmental concerns and authenticity (Burroughs and Rindfleisch, 2002; Kaynak & Ekşi 2011; lee et al., 2009; Zavestoski 2002b; Black and Cherrier, 2010; Richins and Dawson, 1992; Cherrier and Murray, 2007; Iyer and Muncy, 2009a). The remainder of this chapter discusses these four psychographic variables in detail. While doing so, expected inverse relationship, of each of these four variables with anti-consumption attitude and materialistic attitude is discussed. The same is then used to determine the relationship of each of these variables with the segments/clusters of the proposed typology according to the specific combination of anti-consumption attitude and materialistic attitude that the segment may exhibit. Therefore based on this reasoning, twelve hypotheses are proposed.

3.4. Means to explore opposite nature of anti-consumption and materialistic attitudes and to validate the typology:

In order to empirically explore the opposite nature of anti-consumption attitude and materialistic attitude this thesis uses four psychographic variables

- 1) Values
- 2) Environmental consciousness,
- 3) Wellbeing
- 4) Authenticity

These four variables are then used to indicate the possible differences among the segments in the proposed typology.

The first differentiating variable this thesis uses is values. Values drive attitudes (Homer and Kahle, 1988), therefore, if anti-consumption attitude is opposite to materialistic attitude then the values driving one attitude should be opposite to the values driving the opposite attitude. Additionally, the segments in the proposed typology should hold different combinations of values depending on the specific combination of anti-consumption attitude and materialistic attitude that the segment may exhibit. Next section discusses literature on value theories, so as to justify the use of Schwartz value system (1992;94) for this thesis. Relationship of opposite values with opposite attitudes, along with the value priority for each segment in the proposed typology is also proposed.

3.4.1. Values

Rohan, (2000, p.255) highlighted that “the importance of people’s value priorities in understanding and predicting” attitudes and behaviours is acknowledged in a variety of fields, including consumer research (Munson, 1984). Under sustainability literature studies can be found that have used values to understand consumer decision-making in a range of organic and ethical contexts (Grunert and Juhl, 1995; Dibley and Baker, 2001; Makatouni, 2002; Baker et al., 2004; Shaw et al., 2005; De Ferran and Grunert, 2007) and as determinants of socially conscious consumer behaviour (Pepper et al.2009). However, before discussing the relation of values with anti-consumption and materialism, and consequently with the segments of proposed typology, it is important to understand what values are and what are the main theories in this domain.

3.4.1.1. Definition

Though widely used, the term value has been used loosely in past research as it was used for different concepts (Rohan, 2000; Dibley and Baker, 2001). One main difference that needs to be made is the distinction between values (plural) and value (singular) as they both exist in marketing literature. Whereas value refers to an individual’s assessment of a product/service, values are abstract beliefs and higher order goals of individual (Rohan, 2000). Thus value includes interaction with a particular product or service, but values are seen to guide behaviour independently of the product/service use situation (Flint et al. 1997). Value refers to a preferential judgment while values, as a term, refers to the criteria by which

such judgments are constructed (Holbrook 1994; 1999). In this thesis the term values/value is used as beliefs, and not as an individual's assessment of a product.

3.4.1.2. Overview of main theories

It was Rokeach who reemphasized the importance of values in modern psychology research and developed an instrument to measure values. Rokeach defined values as “an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence” (Rokeach, 1973:5). He also developed Rokeach Value Survey (RVS) (Rokeach, 1973), which is one of the prominent measures of values. RVS asks individuals to order every value in relative importance in relation to its impact as guiding principles in their lives. In this list of values, as Rokeach differentiated, there are values which represent preferable modes of behaviour, and there are values which represent end-states of existence. In other words there are means values and ends values, termed instrumental and terminal values respectively (Munson, 1984). Terminal values can be described as the desirable end-state. Whilst instrumental values are appreciated as helpful in attaining terminal values i.e. means to an end. Further, terminal values are acquired early in life and are considered more stable, whereas instrumental values are vulnerable to change as a result of life's experiences (Prakash, 1984). RVS distinguishes between 18 instrumental values and 18 terminal values (see below, Table 3.1).

Table 3.1: Rokeach's list of values	
Instrumental values	Terminal values
Ambitious (hard working, aspiring)	A conformable life (a prosperous life)
Broadminded (open-minded)	An exciting life (a stimulating, active life)
Capable (competent, effective)	A sense of accomplishment (lasting contribution)
Cheerful (light-hearted, joyful)	A world at peace (free of war and conflict)
Clean (neat, tidy)	A world of beauty (beauty of nature and art)
Courageous (standing up for your beliefs)	Equality (brotherhood, equal opportunity for all)
Forgiving (willing to pardon others)	Family security (taking care of loved ones)
Helpful (working for the welfare of others)	Freedom (independence, free choice)
Honest (sincere, truthful)	Happiness (contentedness)
Imaginative (daring, creative)	Inner harmony (freedom from inner conflict)
Independent (self-reliant, self-sufficient)	Mature love (sexual and spiritual intimacy)
Intellectual (intelligent, reflective)	National security (protection from attack)
Logical (consistent, rational)	Pleasure (an enjoyable, leisurely life)
Loving (affectionate, tender)	Salvation (saved, eternal life)
Obedient (dutiful, respectful)	Self-respect (self-esteem)
Polite (courteous, well-mannered)	Self-recognition (respect, admiration)
Responsible (dependable, reliable)	True friendship (close companionship)
Self-controlled (restrained, self-disciplined)	Wisdom (a mature understanding of life)
Source: Rokeach (1973. Pp. 359-340)	

It is stated that terminal values contain both personal as well as social elements, with individuals possibly displaying diverse priorities. That is to say some individuals will favour social values over personal values and vice versa, which may in turn influence their attitudes as well as their decision-making. Five out of the eighteen terminal values were acknowledged as social values: a world at peace, equality, freedom, national security and a world of beauty. It was suggested that personal values and social values are in direct competition with each other and individuals will differ in the importance they give to each. Hence, some individuals would constantly favour social values, even at the expense of their personal values and vice versa (Braithwaite, 1994).

Although both sets (terminal/instrumental) have been acknowledged in many diverse research studies, nevertheless, there does exist some confusion over their precise difference. Such as, certain terminal values can act as instrumental for other terminal values and similarly, certain instrumental values can fit into ends to other instrumental values (Schwartz and Bilsky, 1990). Schwartz and Bilsky (1990) even reported that in certain cases individuals are unable to distinguish clearly between the two categories.

The criticism of Rokeach work is not limited to the debate on instrumental and terminal values (Roshan, 2000), the Rokeach Value Survey (RVS) list has also been the subject of criticism. One reason is the difficulty respondents face in ranking large numbers of values along with the time taken to complete such activity (Madrigal and Kahle, 1994). Discussion could also be found concerning the relevance of the values in the Rokeach Value Survey to a consumer's behaviour setting (see Beatty et al., 1985 in Madrigal and Kahle, 1994, pp.23). Some researchers even question the appropriateness of RVS (Homer and Kahle, 1988). Though, his work is most cited (Rohan, 2000), Milton Rokeach (1973) also failed to propose any theory about the underlining structure of value system. For this reason Rokeach Value Survey is argued to be a list of unconnected words (Rohan 2000).

To deal with the abovementioned criticisms, certain studies have used the List of Values (LOV) instead. LOV consists of a smaller list of 9 values: being well-respected, a sense of belonging, fun and enjoyment in life, excitement, accomplishment, warm relationships with others, self-fulfilment, self-respect and security (Madrigal and Kahle, 1994). LOV was originally

developed by The University of Michigan Survey Research Centre. In order to do so values were chosen from Maslow's (1970) hierarchy of values, Rokeach's eighteen terminal values and a blend of other value scales (Kahle and Kennedy, 1989). The reason behind choosing the terminal values was the idea of them being more relevant to consumer behaviour. Furthermore, another reason for developing LOV compared to RVS was it being shorter and thus easier to fill and more useful in a research setting along with being more relevant to daily life and behaviour (Homer and Kahle, 1988).

Another model used in value research is VALS. Mitchell (1983 as cited in Kahle et al., 1986), at SRI International, came up with an additional list: the Values and Lifestyle Segmentation (VALS) Model. This methodology categorized consumers into nine lifestyle sets. This was done on the basis of consumers' answers to 30 (sometimes 36, sometimes 33) attitudinal and demographic questions (Kahle and Kennedy, 1989). Although, Kahle et al. (1986) recognized the wide adoption of the VALS by commercial companies, they nevertheless highlighted the deficiency of empirical research into the applicability and robustness of this scale.

Building on the abovementioned studies, Schwartz and Bilsky (1987) developed their own typology of values and were successful in proposing a sound theory of values. They used the content domains of values instead of single values, recommending that the key content of a value will be grounded on the motivational concern that it articulates (Schwartz, 1992). The base for this typology was the belief that values signify three basic and universal requirements that all societies and individuals observe. These requirements

reinforce their value systems, thus motivating individuals to attain them. These universal requirements are 1) the biological needs of people, 2) the social needs generated from interpersonal dealings and 3) social needs essential for group endurance. Their work proposes that the cognitive depictions of these universal necessities are values that people acquire through the course of socialization and cognitive development. Further these values are articulated in culturally shared terms. The values have both a collective and an individualistic side (Schwartz and Bilsky, 1990). The theory by Shalom Schwartz (1992, 1994) represents a significant advance on previous value theories (Pepper et al., 2009).

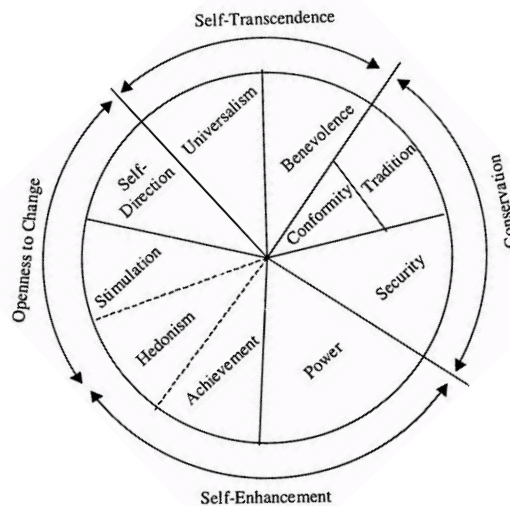
3.4.1.3. Schwartz value theory

Schwartz (1992) defined values as “Beliefs or concepts, (which) relate to desired behaviours/end-states, transcend particular situations, direct evaluation/selection of events and/or behaviour and are ordered by comparative significance” (Schwartz, 1992, p.4). Schwartz’ value theory provides an understanding of not only the components of the human value system but also how individuals vary in terms of value priorities on the 10 value types in the value system (Rohan, 2000). This theory of universal aspects of the content and structure of human values enables the organized study of associations between the full spectrum of human values and other concepts such as self-reported behaviour. This theory has been empirically confirmed in at least 65 countries (Schwartz, 2003, p. 266 in Pepper et al., 2009).

Initially eight distinct motivational value types were developed from the three basic human requirements discussed above, namely power, achievement, hedonism, stimulation, self-direction, conformity, tradition and security. However, later they were amended and three new values were added namely: universalism, spirituality and benevolence, thus making a total of 11 values. Schwartz (1992) later removed spirituality value from the list, as it was believed that this value could be satisfied through a range of activities. The final list was 10 motivational value types. Schwartz was able to identify different sets of values at both the country as well as at the individual level. Through his study, Schwartz (1992) identified 10 values at individual level. Multidimensional scaling of participants' ratings of the significance of these 10 values produces a circular structure known as a Circumplex (figure 3.2). A Circumplex represents relationships amongst motivational types of values, higher order values and bipolar value dimensions. In this circumplex, values which are similar or comparable to each other are adjacent to each other and the values which are contradictory to each other appear opposite to one another. This theory, thus, not only specified the content structure of values it also acknowledged a set of vigorous associations among and between the values. The 10 values are further grouped in four higher order values which are 1) self-transcendence, 2) self-enhancement, 3) conservation and 4) openness to change.

Figure 3.2: Circumplex

Source: Schwartz (1992:45)



As represented in the circumplex in figure 3.2, **on one axis** higher order value of *self-transcendence*, with universalism and benevolence as motivational value type, is opposite to higher order value of *self-enhancement* that has power, achievement and hedonism as underlining motivational values. **On the other axis** higher order value of *conservation* with motivational value types of conformity, tradition and security is opposite to higher order value of *openness to change* which has self-direction and stimulation as motivational value type.

Similar values are adjacent to each other, for example universalism is adjacent to benevolence, but is opposite to power as power is contradictory to universalism. The four higher order values, the 10 motivational value types belonging to these higher order values along with description of each of these 10 values is given in the table 3.2 below.

Table 3.2: Description of Individual Values			
Higher order value	Value type	Description	Example values
Self-transcendence	Universalism	Understanding, appreciation, tolerance and protection for the welfare of all people and for Nature	Social justice, Protecting the environment
	Benevolence	Preservation and enhancement of the welfare of people with whom one is in frequent personal contact	Helpful, Forgiving
Conservation	Tradition	Respect, commitment and acceptance of the customs and ideas that traditional culture or religion provide	Humble, Devout
	Conformity	Restraint of actions, inclinations and impulses likely to upset or harm others and violate social expectations or norms	Politeness, Obedient
	Security	Safety, harmony and stability of society, of relationships and of self	National security, Social order
Self-enhancement	Power	Social status and prestige, control or dominance over people and resources	Social power, Authority
	Achievement	Personal success through demonstrating competence according to social standards	Successful, Capable
	Hedonism	Pleasure and sensuous gratification for oneself	Pleasure, Enjoying life
Openness to change	Stimulation	Excitement, novelty and challenge in life	Daring, Exciting life
	Self-direction	Independent thought and action – choosing, creating, exploring	Creativity, Freedom
Source: Schwartz (1994; pp. 22)			

Schwartz values have been utilized to understand consumer-related attitudes (Gatersleben et al., 2010). They have also been used in sustainability domain, such as research on environmental attitudes, beliefs and behaviours (Schultz et al., 2005; Grunert & Juhl, 1995; Nordlund & Garvill, 2002; Schultz & Zelezny, 2003; Stern et al., 1993; Schultz et al., 2005).

3.4.1.4. Utilization of Schwartz theory in sustainability research

Studies using Schwartz's values items to examine environmental attitudes and behaviours have focused primarily on self-transcendence and in self-transcendence to values of universalism, while self-enhancement values have been negatively correlated with both environmental attitudes and behaviour (Nordlund & Garvill, 2002; Schultz & Zelezny, 1999; Steg et al., 2005; Stern et al., 1999; Stern et al., 1995). The findings for socially conscious consumer behaviour have been somewhat similar (Pepper et al., 2009).

Study by Follows and Jobber (2000) encompassed values and environmental behaviour and investigated the part of values in the value-attitude-intention-behaviour hierarchy (Homer and Kahle, 1988). The study found that those with higher universalism and benevolence values had greater environmental attitudes. Therefore, a concern for the benefit of others may perhaps ultimately result in an intention to buy environmentally responsible goods. These findings are in line with other studies using Schwartz' values to examine environmental attitudes and behaviours with the primary focus on self-transcendence values (Nordlund & Garvill, 2002; Schultz, 2001; Schultz & Zelezny, 1999). Self-enhancement values have been negatively correlated with both environmental attitudes and behaviour (Poortinga et al., 2004; Schultz et al., 2005; Stern et al., 1995) as predicted by the circumplex.

Pepper and her colleagues (2009) examined the relation between values and socially conscious consumer behaviour - an important aspect of sustainable consumption – in their study. Therein it was maintained that

socially conscious consumer behaviour - behaviour focused towards protection and welfare of others - would relate with the value circumplex in an analogous fashion to ecologically conscious consumer behaviour. They showed that socially conscious consumer behaviour has positive relation with self-transcendence values and negative relation with self-enhancement values, while, this behaviour related weakly along the other dimension of Schwartz values i.e. openness to change vs. conservation. The most positive correlation was with universalism value.

In conclusion, Schwartz value system has been used to understand different aspects of sustainability like environmental behaviour and socially conscious behaviour. Self-enhancement and self-transcendence seems to have strongest relation with such behaviour.

3.4.1.5. Research application of Schwartz values in this study

As being examined in other areas of sustainability research, value concept could also be found in the literature relating to anti-consumption and materialism. Anti-consumption is proposed to be a means of reflecting one's personal values (Kozinets and Handelman, 2001). However, it is argued that there has been more focus on understanding what anti-consumption is and not on the values that drive the phenomenon (Johnston and Burton, 2003; Ozanne and Ballantine, 2010). It is proposed that anti-consumption branches from the subjectivity of the individual, which embraces socio-environmental and self-interested motivations (Black and Cherrier, 2010; Iyer and Muncy, 2009; Lee et al., 2009a; Sandıkcı and Ekici, 2009). Like consumption, anti-consumption

practices enable customers to “express their ideas, values, beliefs and overall identities” (Cherrier and Murray, 2007; Black and Cherrier, 2010).

Schwartz Values have also been used to shed light on materialism, which has been negatively associated with universalism (Burroughs & Rindfleisch, 2002; Pepper et al, 2009) and positively associated with self-enhancement values (Kilbourne et al. 2005; Karabati & Cemalcilar, 2010), specifically with power (Pepper et. al, 2009).

This thesis is thus interested in understanding if opposite values act as antecedents of the opposite attitudes being studied in this thesis, and to explore if the segments in the typology proposed in the beginning of this chapter vary in terms of value orientations. Theoretically, values relating to materialistic attitudes should be opposite to the values relating to anti-consumption attitudes. This is proposed on the grounds that anti-consumption and materialism are opposite to each other (Sandıkcı and Ekici, 2009; Lee and Ahn, 2016). If the above holds true, the corresponding segments - with different balance of anti-consumption and materialistic attitudes - should differ with respect to their value orientations. Thus, difference in value orientation can be useful to not only explore empirically if anti-consumption and materialism are opposite to each other, but also to validate the segmentation/clusters in the typology proposed in this thesis.

Next section discusses the possible relationship of the four higher order values – encompassing the 10 individual values - (presented in figure 3.2) with the two attitudes being studied in this thesis, along with the four segments in the typology (presented in figure 3.1). For ease of understanding

and clarity in discussion, first the relationship of anti-consumption attitude and materialistic attitude with the values making up the vertical axis (self-transcendence/self-enhancement) is discussed, along with a discussion on how these two values would vary among the four clusters. This is then followed by the discussion of the relationship of anti-consumption attitude and materialistic attitude with the values making up the horizontal axis (openness to change/conservation) of Schwartz value theory, along with the understanding of how these two higher order values would vary among the four proposed clusters.

3.4.1.5.1. Vertical axis (self-transcendence and self-enhancement), the two attitudes and the proposed typology

Mayton and Furnham, (1994) advocated that anyone interested in social issues, be it social justice, political activism or human rights would place high importance on the universalism value. Anti-consumption literature shows that individuals avoid using a product/brand that causes a particular societal problem (e.g., brand/products that reassures negative social behaviour or result in environmental degradation) (Lee et al., 2009a; Iyer and Muncy 2009). Individuals holding anti-consumption attitude have concerns for the society, others and nature as one of the reasons for such attitude (Iyer and Muncy 2009). Thus, theoretically, anti-consumption attitude should relate positively to self-transcendence values.

Conversely, materialism is shown to have a positive relationship with self-enhancement (Kilbourne et al. 2005; Richins and Dawson, 1992). While Richins and Dawson (1992) found positive relation between materialism and self-enhancement and negative relation between materialism

and self-transcendence, Karabati and Cemalcilar (2010) only found the relation between self-enhancement and materialism and not between self-transcendence and materialism. Kilbourne, Grünhagen, and Foley (2005) found that self-enhancement values are the best predictor of materialism. Therefore, theoretically, materialistic attitude should relate positively to self-enhancement values and negatively with self-transcendence values.

Based on the above discussion it is proposed that self-transcendence values will have a positive relationship with anti-consumption attitude, while, self-enhancement will have a positive relationship with materialistic attitude. In addition, as values predict attitudes (Follow and Jobber 2000) it is proposed that self-transcendence will be a positive predictor of anti-consumption attitude, while self-enhancement will be a positive predictor of materialistic attitude.

Given that in total five values (universalism, benevolence, power, achievement and hedonism) make up the two higher order values (self-transcendence/self-enhancement) discussed above, following hypotheses are developed:

- H1:** This study expects a significant positive relationship between self-transcendence and anti-consumption attitude and a significant negative relationship between self-transcendence and materialistic attitude such that:
- H1a: A significant positive relationship exists between universalism and anti-consumption attitude.
 - H1b: A significant positive relationship exists between benevolence and anti-consumption attitude
 - H1c: A significant negative relationship exists between universalism and materialistic attitude.

H1d: A significant negative relationship exists between benevolence and materialistic attitude.

H2: This study expects a significant negative relationship between self-enhancement and anti-consumption attitude and a significant positive relationship between self-enhancement and materialistic attitude such that:

H2a: A significant negative relationship exists between power and anti-consumption attitude

H2b: A significant negative relationship exists between achievement and anti-consumption attitude

H2c: A significant negative relationship exists between hedonism and anti-consumption attitude

H2d: A significant positive relationship exists between power and materialistic attitude

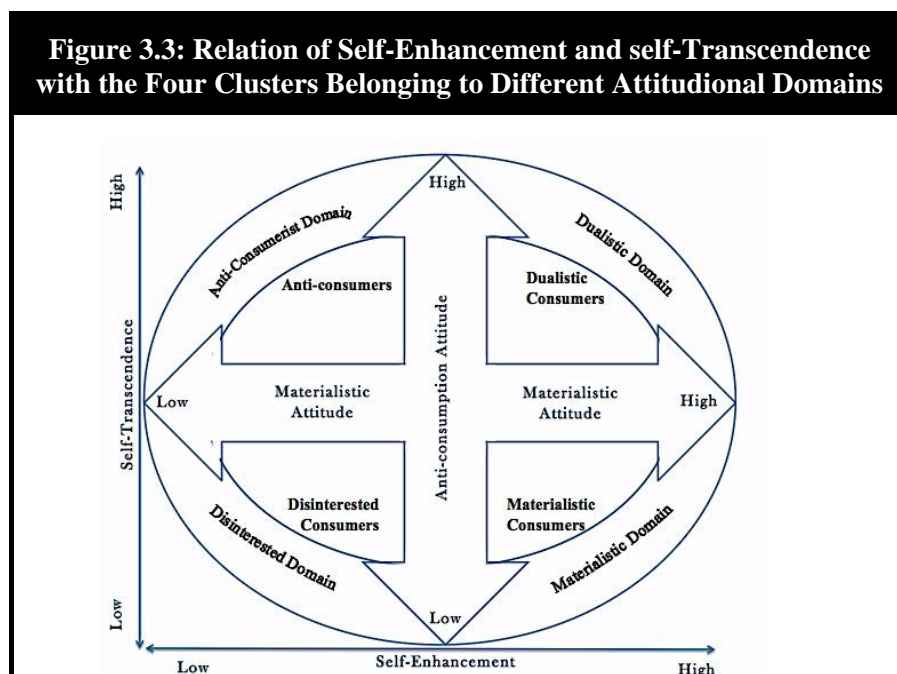
H2e: A significant positive relationship exists between achievement and materialistic attitude

H2f: A significant positive relationship exists between hedonism and materialistic attitude

Taking the above discussion further it is proposed that self-transcendence, with motivational values of benevolence and universalism, will be important for consumers who hold high anti-consumption attitude. While, self-enhancement, with motivational values of power, achievement and hedonism, will be important for consumers who hold high materialistic attitude. As aforementioned, (presented in figure 3.1, and discussed in section 3.3) there are four possible clusters/segments that a consumer can belong to depending on the attitudinal combinations that they may exhibit. Thus, it is hypothesized that

H3: The four segments in the proposed typology vary in terms of self-transcendence/self-enhancement values.

It is also proposed that anti-consumers (segment of consumers falling in anti-consumerist domain with high anti-consumption attitude and low materialistic attitude) will place more importance on self-transcendence and less on self-enhancement, as compared to materialistic consumers (segment falling in materialistic domain with high materialistic attitude and low anti-consumption attitude) who will place more importance on self-enhancement and less on self-transcendence. Dualistic consumers (segment of consumers falling in dualistic domain with high anti-consumption attitude and high materialistic attitude) will value both self-transcendence and self-enhancement. For disinterested consumers (segment of consumers falling in disinterested domain with low anti-consumption attitude and low materialistic attitude) both values – self-enhancement and self-transcendence - will be of low importance. Figure 3.3 presents the above said.



Thus, the segments with different combinations of anti-consumption attitude and materialistic attitude would vary in terms of the importance they place on self-transcendence and self-enhancement.

3.4.1.5.2. Horizontal axis (openness to change and conservation), the opposite attitudes and the proposed typology

The horizontal dimension of Schwartz values is represented by openness to change (with motivational values of self-direction and stimulation) vs conservation (with motivational values of conformity, tradition and security). Conservation values represent collectivist orientations while openness to change represent more individualistic orientations (Schwartz, 1992)

Conservation encompasses compliance to social norms, a sense of security and respect and acceptance for tradition. When looking at anti-consumption and conservation values a negative relationship can be predicted as anti-consumption is a way of life chosen voluntarily and it involves acts that are usually against the mainstream culture. Anti-consumers are shown to care less about society's opinions (Iyer and Muncy 2009) as they are less self-conscious and are self-driven (Craig and Hill 2002; Ballantine and Creery, 2010).

Opposite to Conservation values is openness to change, with self-direction and stimulation as underlying values. Openness to change encompasses novelty and independent thoughts and actions (Schwartz, 1992). Cherrier (2009) identified independence and creativity as motivators of anti-consumption. Values like self-direction in the openness to change

values are shown to have a positive relationship with anti-consumption (Seegebarth et al., 2015). Thus, suggesting a positive relationship between anti-consumption and openness to change.

Additionally, literature indicates that materialistic individuals score high on sensation seeking but not high on openness to experience (Troisi, Christopher, & Marek, 2006). Evidence also suggests that a collectivistic society exhibits higher levels of materialism (Ger & Belk, 1990; Turan, 2007). Cleveland & Chang (2009) showed a positive relationship between conservation and materialism. Additionally, Turna (2007) showed a negative relationship between materialism and individuation (values similar to self-direction in Schwartz's openness values). Thus, suggesting that materialism is positively related to conservation and negatively to openness to change.

Though, some studies suggest otherwise - for example Burroughs and Rindfleish (2002) showed a negative relationship between materialism and collective-oriented values, while Eckersley (2006) suggested materialism as central to the Western culture, with its individualistic orientation - the majority of studies have lead this thesis to expect materialism to have a positive relationship with conservation and a negative relationship with openness to change. This argument is based on the understanding that materialism is opposite to anti-consumption, and, as discussed earlier, anti-consumption has been linked positively with openness to change and negatively with conservation (Seegebarth et al., 2015). Thus materialism, being opposite to anti-consumption, would relate to these values in an opposite manner.

Based on the above discussion it is argued that anti-consumption attitude will have a positive relationship with openness to change and negative relationship with conservation, whereas materialistic attitude will have a positive relationship with conservation and negative relationship with openness to change. Additionally, openness to change will be a positive predictor of anti-consumption attitude. This relationship would be reversed for materialistic attitude. That is to say, openness to change will be a negative and conservation will be a positive predictor of materialistic attitude.

From the above discussion following hypotheses are developed:

H4: This study expects a significant positive relationship between openness to change and anti-consumption attitude and a significant negative relationship between openness to change and materialistic attitude such that:

H4a: A significant positive relationship exists between self-direction and anti-consumption attitude.

H4b: A significant positive relationship exists between stimulation and anti-consumption attitude.

H4c: A significant negative relationship exists between self-direction and materialistic attitude.

H4d: A significant negative relationship exists between stimulation and materialistic attitude

H5: This study expects a significant negative relationship between conservation and anti-consumption attitude and a significant positive relationship between conservation and materialistic attitude such that:

H5a: A significant negative relationship exists between conformity and anti-consumption attitude

H5b: A significant negative relationship exists between tradition and anti-consumption attitude

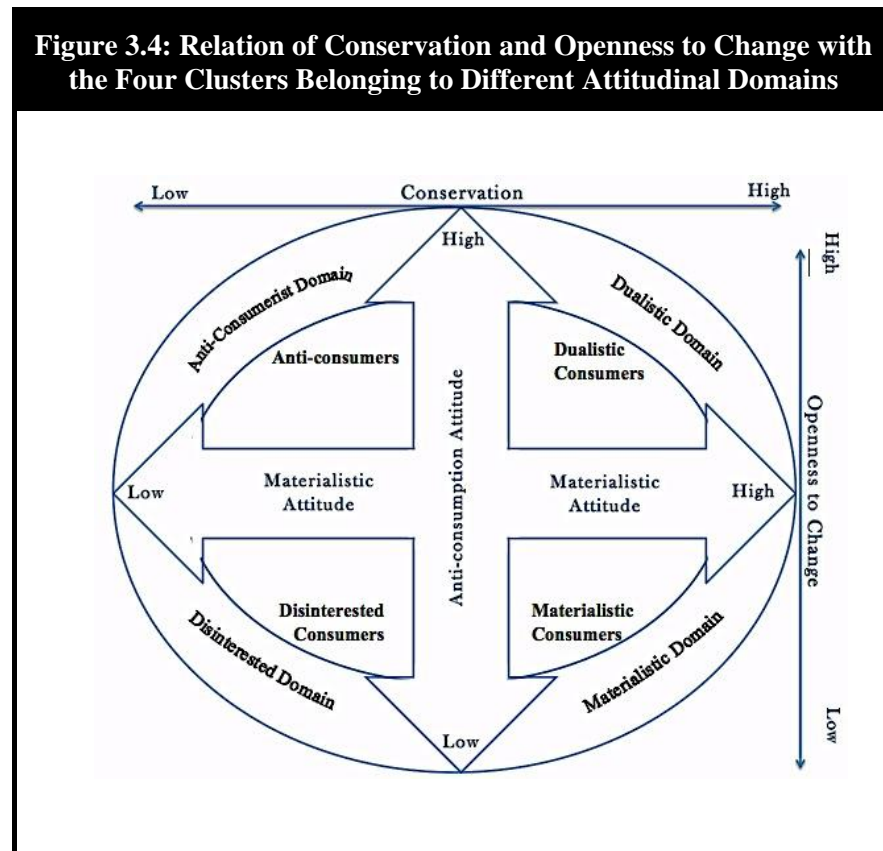
- H5c: A significant negative relationship exists between security and anti-consumption attitude
- H5d: A significant positive relationship exists between conformity and materialistic attitude
- H5e: A significant positive relationship exists between tradition and materialistic attitude
- H5f: A significant positive relationship exists between security and materialistic attitude

Correspondingly, openness to change will be more important for the consumers who hold higher anti-consumption attitude, while conservation will be more important for consumers who hold high materialistic attitude. Thus, the next hypothesis (H6) in terms of the clusters belonging to the four-attitudinal domains and the two higher order values is:

H6: The four segments in the typology vary in terms of openness to change/conservation values.

It is further proposed that anti-consumers (segment of consumers falling in anti-consumerist domain with high anti-consumption attitude and low materialistic attitude) will place more importance on openness to change and less on conservation value; while materialistic consumers (segment of consumers falling in materialistic domain with high materialistic attitude and low anti-consumption attitude) will place more importance on conservation and less on openness to change values. Dualistic consumers (consumers falling in the dualistic domain with high anti-consumption and high materialistic attitude) will value both openness to change and conservation, whereas, for disinterested consumers (consumers falling in the disinterested domain with low anti-consumption and low materialistic attitude) both values

– openness to change and conservation - will be of low importance. Figure 3.4 represents the above said.



Thus, segments with different combinations of anti-consumption attitude and materialistic attitude will vary in terms of the importance they place on openness to change and conservation values.

Another value that has been linked with both anti-consumption and materialism is environmental consciousness. The next section, thus, discusses environmental consciousness and proposes the relation of this variable with the segments in the proposed typology.

3.4.2. Environmental consciousness

3.4.2.1. *What is environmental consciousness?*

A consumer is considered environmentally conscious if he/she holds some concern about the ecological impacts of his/her consumption and has a longing to lessen such impacts through his/her buying decisions (Schwepker and Cornwell, 1991; Kaynak and Eksi, 2011). Dietz et al., (2005) while describing the word ‘concern’, elaborated that concern represents the belief of something that one considers important, being at risk. Dunlap and Jones (2002) defined environmental consciousness as ‘the extent to which individuals are “aware of problems regarding the environment” and support efforts to solve them and/or indicate the willingness to contribute personally to their solution’. Thus, environmental consciousness could be seen as a two-dimensional construct, the first dimension represents a “concern” about the adverse consequences of human activities on the earth and/or living beings in it, while the second dimension indicates how “aware” one is about these consequences (Hansla et al., 2008; Hansla, 2011). Following, Hansla et al., (2008) and Hansla (2011), in this particular thesis environmental consciousness will be represented by belief and evaluation of consequences referred to as awareness to consequences and environmental concern respectively.

3.4.2.2. *Relation of environmental consciousness with anti-consumption attitude, materialistic attitude and the proposed typology*

Environmental consciousness has been shown to have a negative relationship with materialism (Kilbourne and Pickett, 2008) and a positive

relationship with anti-consumption (Iyer and muncy, 2009; Chen and Chai, 2010; Kaynak and Eksi, 2011). Chen and Chai, (2010) highlighted that environmental consciousness is an important driver of anti-consumption attitude. Other studies also suggest a positive relationship between anti-consumption attitude and environmental consciousness (Kaynak & Eksi 2011; Black and Cherrer 2010; Iyer and Muncy, 2009).

Materialism, on the other hand, has been linked negatively with environmental concerns (Maio et al., 2009). Kilbourne and Pickett (2008) established an inverse relationship between materialistic values and environmental concern in the United States. In their study, they elaborated that as an individual inclines more towards materialistic values, the level of environmental consciousness he holds decrease. They argued that materialistic values being prevalent in the US are used as a lens through which individuals filter their behaviours. Therefore, an individual who is highly materialistic believes that his actions are not the cause of environmental problems. This belief helps him remove the dissonance that is created by knowing that consumption behaviour leads to negative environmental consequences. Hurst et al., (2013), through meta-analysis, showed a clear negative relationship between materialism and pro-environmental attitude and behaviour.

Based on the argument that environmental concern plays a major role in determining why individuals do or do not engage in sustainable (anti)consumption (Dermody et al., 2015; Hartmann and Apaolaza-Ibáñez, 2012; Kilbourne and Pickett, 2008), it is proposed that environmental consciousness will have a positive relationship with anti-consumption

attitude (Kaynak & Eksi 2011; Iyer and Muncy, 2009), while, environmental consciousness will have a negative relationship with materialistic attitude. Additionally, environmental consciousness will be a positive predictor of anti-consumption attitude. The relationship would be reverse for materialistic attitude. That is to say, environmental consciousness will be a negative predictor of materialistic attitude. Given that this thesis considers environmental consciousness comprising of awareness of consequences and environmental concerns, following hypothesis along with sub-hypotheses, are developed :

H7: This study expects a significant positive relationship between environmental consciousness and anti-consumption attitude and a significant negative relationship between environmental consciousness and materialistic attitude such that:

H7a: A significant positive relationship exists between awareness of consequences and anti-consumption attitude.

H7b: A significant positive relationship exists between environmental concerns and anti-consumption attitude.

H7c: A significant negative relationship exists between awareness of consequences and materialist attitude.

H7d: A significant negative relationship exists between environmental concerns and materialist attitude.

Correspondingly, the importance of environmental consciousness among the four segments in the typology varies according to the importance each segment places on materialistic and anti-consumption attitudes. Therefore, hypothesis 8 is as follows:

H8: The four segments in the typology vary in terms of environmental consciousness.

It is further proposed that anti-consumers (segment of consumers falling in anti-consumerist domain with high anti-consumption attitude and low materialistic attitude) will be highly environmentally consciousness, while materialistic consumers (segment falling in materialistic domain with high materialistic attitude and low anti-consumption attitude) will have low environmental consciousness.

For dualistic consumers (segment of consumers falling in dualistic domain with high anti-consumption and high materialistic attitudes) and disinterested consumers (segment of consumers falling in disinterested domain with low anti-consumption and low materialistic attitudes) their relationship with environmental consciousness is more exploratory in nature, as the existing literature lacks insight on environmental consciousness for this combination of attitudes. Thus, no proposition is made in this regard. Drawing from the above discussion it is expected that the segments with different combination of anti-consumption attitude and materialistic attitude would vary in terms of their environmental consciousness, with anti-consumers being more environmentally conscious than materialistic consumers.

Now that the section has discussed value orientations and environmental consciousness as means of exploring opposite nature of anti-consumption attitude and materialistic attitude, and as the differentiating variables among the segments of the proposed typology, the next section

examines well-being as the differentiating variable among the opposite attitudes and accordingly among the segments so as to develop the next set of relationships to be tested.

3.4.3. Well-being

Well-being has been related to both anti-consumption and materialism. However, before discussing the relationship of wellbeing with anti-consumption and materialism, it is important to understand what wellbeing is and how it will be measured in this particular study.

3.4.3.1. Subjective well-being

Subjective well-being is defined as an individual's affective and cognitive evaluation of one's self (Deiner, 2000). Deiner et al., (1999) elaborated that subjective wellbeing is a broad concept that embodies one's emotional responses and judgments of satisfaction with various domains of life and life overall (Diener et al., 1999). Being subjective means subjective wellbeing looks at one's personal and direct understanding of one's life. For ease and clarity, in this section and the thesis as a whole, the term wellbeing will be used to refer to subjective wellbeing.

Research in the area of wellbeing has been evolving for over 35 years. Initially wellbeing was referred to as life satisfaction and usually was measured by a single, self-reported item such as "how satisfied are you with your life as a whole" (Andrews & Withey 1976; Campbell et al., 1976). Work of Andrews and Withey (1976) on quality of life and wellbeing contributed enormously to understanding people's feelings and evaluations

about their life. Their study found that out of 68 variations of the theme capturing one's satisfaction with life "how do you feel about your life as a whole?" was the most reliable (Andrews & Withey, 1976). The same year Campbell and colleagues offered an alternative measure asking people to indicate how satisfied they were with their life as a whole (Campbell et al., 1976). Though these two studies contributed to the knowledge of wellbeing enormously, both the authors maintained that the terms happiness or feeling (terms often used in wellbeing research) have interpretations like fun, gaiety and delight which only represents short-term temporary states.

However, later there was an agreement on the fact that wellbeing is a complex phenomenon and instead of a single determinant wellbeing is based on complex relationships between different factors (Diener et al., 1999). As a result, more reliable measures, with multiple item scales, such as the Satisfaction with Life Scale (SWLS) (Diener et al., 1985; Pavot & Diener, 1993), were developed.

3.4.3.1.1. Satisfaction with life

Satisfaction with life scale is seen as a comprehensive and appropriate measure and has been shown to be reliable and consistent across a number of countries (Cummins, 1995; International Wellbeing Group, 2006). The Satisfaction With Life Scale (SWLS) (Diener et al., 1985) measures general life satisfaction by five items which are summed to create a single wellbeing score (for more detailed discussion of SWLS see chapter 5). Along with this measure, research has used other means to determine one's wellbeing. Table 3.3 gives an overview of different measures used to determine one's wellbeing. As reflected in table 3.3 use of Positive Affect

and Negative Affect Scale (PANAS) is common in wellbeing research. Thus they are discussed next.

Table 3.3: Different Studies Measuring Subjective wellbeing	
Studies	Measures used
Emmons and McCullough (2003)	Life satisfaction as a whole, Positive affect, negative affect, expected life satisfaction for upcoming week and response to aid
Froh et al., (2009a)	Positive affect
Froh et al. (2008)	Life satisfaction, Positive and negative affect, and reactions to aid
Froh et al. (2009b)	Life satisfaction, Positive affect and negative affect
Kashdan, et al., (2009)	Feelings upon receipt of autonomy and a gift (for women)
Kashdan et al. (2006)	Positive affect, negative affect, daily intrinsically motivating activity, Daily hedonic and eudemonic well-being, and daily self-esteem
Lambert et al. (2009)	Life satisfaction
McCullough et al. (2004)	Life satisfaction, Daily mood, positive affect, negative affect, optimism, and depression.
Naito et al., (2005)	Positive feelings
Park et al., (2004)	Life satisfaction
Peterson et al., (2007)	Life satisfaction
Sheldon and Lyubomirsky (2006)	Self-concordant motivation, Positive affect, negative affect,
Watkins et al., (2004)	Positive life event
Wood et al. (2008)	Life satisfaction
Wood et al., (2009)	Life satisfaction, purpose in life, environmental mastery, personal growth, self-acceptance and autonomy,

3.4.3.1.2. Positive and negative affect

Affect is another measure of wellbeing that is considered important (Blore et al., 2011; Cummins, 2010; Davern et al., 2007; Schwarz & Clore, 1983). Firstly, however, while looking at wellbeing literature one important

distinction needs to be made between the extensively used terms: emotions, mood and affect.

Emotion is seen as cognitively processed and object-directed. In the sense that specific causes like scoring good in an exam or getting into an argument are seen to generate specific emotions like happy or sad (Russell, 2003; Russell & Feldman Barrett, 1999). Whereas, mood is argued to have little cognitive content as it is not associated with any specific object or cause. Mood is communally identified as a general feeling of bad mood or good mood and is described as enduring and low in intensity.

Core affect is another construct that is considered vital (Russell, 2003; Russell & Feldman Barrett, 1999). Core affect or affect for simplicity, is seen as a biologically influenced system that operates outside of conscious awareness and is experienced as a state of mood. However, enquiry regarding current mood or external events such as negative life occasions can bring this state of mood into conscious awareness (Russell, 2003). Affect is considered as automatically regulated from within and is ongoing. Nonetheless, affect, similar to mood, is seen as an object-free sense of feeling bad or good (Russell, 2003: Russell & Feldman Barrett, 1999). These generalized feelings, in turn, enable individuals to interpret the world around them (Cummins, 2010).

Affect is seen as an important aspect of wellbeing (Cummins, 1995, 1998, 2010). Earlier in the domain of affects it was understood that emotions could be classified into two broad factors, positive emotions such as happiness and joy, and negative emotions like fear and sadness (Bradburn, 1969; Bradburn & Caplovitz, 1965). Though, initially it was assumed that

negative and positive emotions are contrasting ends of the same construct (see Diener & Emmons, 1985 for a review), it was later indicated that they are independent of each other (Bradburn & Caplovitz, 1965; Diener & Emmons, 1985). Watson and Tellegen (1985) termed these two as Negative Affect (NA) and Positive Affect (PA). They further developed an instrument to measure these two affects, which was shown to be robust and reliable (Watson & Tellegen, 1985). This instrument called Positive Affect and Negative Affect Scale (PANAS) is used extensively in research to measure one's subjective wellbeing.

In summary, studies investigating subjective well-being commonly examine the concept through Satisfaction With Life, Positive Affect and Negative Affect (Wood et al., 2010; Joseph & Wood, 2010). This study will be following the same lines.

3.4.3.2. Relation of wellbeing with opposing attitudes and the segments in the typology

Studies have examined linkage between materialism and different domains of subjective well-being. Specifically, studies taking happiness as the affective dimension of well-being and studies using life satisfaction as the cognitive dimension of well-being could be found, showing negative relationship between materialism and consumers' well-being (e.g. Belk 1984; Richins and Dowson, 1992; Torlak and Koc, 2007; Burroughs and Rindfleisch 2002; Kashdan and Breen 2007; Kasser 2002; Swinyard et al., 2001; Wright and Larsen 1993).

Burroughs and Rindfleisch (2002) found that materialism is not only negatively associated with life satisfaction, but also that highly

materialistic people report a lower subjective well-being due to their own disappointments. It can be assumed that when individuals have more money, they seem to have greater opportunities to achieve whatever they want, they can buy more luxurious consumer products, can manage to pay for better healthcare, and probably enjoy higher status, and so on. However, Jackson, (2005) highlighted that in high consumption societies, i.e. the developed world, reduced consumption could essentially increase well-being. Materialists are also shown to suffer from performance anxiety and depression (Pepper, et al., 2009) along with reduced levels of happiness and life satisfaction (Richins and Dawson, 1992).

Evidence suggests that while too much concern with possessions is linked with negative emotions and negative experiences, anti-consumption is linked with positive emotions (Cherrier, 2009; Shaw and Moraes, 2009). Individuals decrease consumption from their lives as they believe that over consumption brings with itself stress and decreases life satisfaction (Markowitz and Bowerman, 2012), making individuals adopt anti-consumption to achieve life satisfaction and increase well-being (Lee and Ahn, 2016; Cherrier and Murray, 2007; Iyer and Muncy, 2009; Etzioni, 1998; Shaw and Newholm, 2002; Jackson, 2005; Burroughs and Rindfleisch, 2002; Cherrier, 2009). Thus, literature suggests that materialism and wellbeing are related negatively, while anti-consumption and wellbeing seems to have a positive relationship (Lee and Ahn, 2016). However, there is call for further empirical research in this regard.

Based on the above discussion it is argued that anti-consumption attitude will have a positive relationship with well-being (represented by

higher satisfaction with life, more positive affect and less negative affect), while, materialistic attitude will have a negative relationship with well-being (represented by lower satisfaction with life, less positive affect and more negative affect).

From the above discussion following hypothesis, along with sub-hypotheses, are developed:

H9: This study expects a significant positive relationship between well-being and anti-consumption attitude and a significant negative relationship between well-being and materialistic attitude such that:

H9a: A significant positive relationship exists between satisfaction with life and anti-consumption attitude

H9b: A significant positive relationship exists between positive affect and anti-consumption attitude

H9c: A significant negative relationship exists between negative affect and anti-consumption attitude

H9d: A significant negative relationship exists between satisfaction with life and materialistic attitude

H9e: A significant negative relationship exists between positive affect and materialistic attitude

H9f: A significant positive relationship exists between negative affect and materialistic attitude

Accordingly, the four clusters/segments belonging to the four-attitudinal domains (proposed in section 3.3) would vary in terms of wellbeing. This makes way for the next hypothesis H10.

H10: The four segments in the typology vary in terms of wellbeing.

It is also proposed that anti-consumers (segment of consumers falling in anti-consumerist domain with high anti-consumption attitude and low

materialistic attitude) will experience highest wellbeing (most satisfied with life, least negative affect and highest positive affect), while, materialistic consumers (segment of consumers falling in materialistic domain with high materialistic attitude and low anti-consumption attitude) will experience low wellbeing (represented by low satisfaction with life, less positive affect and more negative affect).

Dualistic consumers (segment of consumers falling in dualistic domain holding both high anti-consumption attitude and high materialistic attitude) will experience lowest level of wellbeing (represented by lowest satisfaction with life, least positive affect and most negative affect) compared to other segments. This argument about dualistic consumers is based on the fact that dualistic consumers would, not only hold two contradictory attitudes, but would also hold contradictory values, where contradictory values result in decreased wellbeing (Burroughs and Rindfleisch, 2002). Thus this segment, if it exists, would consist of consumers who are always in a struggle to determine whether to choose anti-consumption or to let materialism win. As attitudes direct behaviour (Ajzen, 1988, 1991), holding high level of contradictory attitudes would mean these consumers would be unsure about every decision regarding their consumption behaviour. Therefore, these consumers would score lowest in terms of wellbeing.

Lastly, wellbeing experienced by disinterested consumers (segment of consumers falling in disinterested domain with low anti-consumption attitude and low materialistic attitude) is exploratory in nature,

as existing literature lacks insight for this combination of attitudes. And thus, no proposition is made in this regard.

Based on the above discussion, it is expected that the segments with different combination of anti-consumption attitude and materialistic attitude would vary in terms of their well-being, with anti-consumers experiencing higher wellbeing than materialistic consumers, and dualistic consumers experiencing lower wellbeing than the remaining three clusters.

3.4.4. Authenticity

The fourth and final psychographic variable used in order to validate 1) the opposite nature of anti-consumption attitude and materialistic attitude and 2) the proposed typology is authenticity. This section first gives an understanding of the concept of authenticity and then discusses the relationship of the three components of authenticity with anti-consumption and materialism, in order to propose next set of hypotheses.

3.4.4.1. *What is authenticity?*

Harter (2002) established that “there is no single, coherent body of literature on authentic behaviour, on the bedrock of knowledge” (p. 382), while, Lopez and Rice (2006) expressed it in similar terms as “absence of available measures of the construct” (p. 362). Though considered important, authenticity had been ignored, as a valid measure of the trait was not developed (Sheldon, 2004).

Nonetheless, a positive-psychology movement (see Linley et al., 2006) stimulated a revival of interest in authenticity. This was done through

first of all highlighting under-researched areas of the trait (Gable & Haidt, 2005) and secondly through initiating dialogue between humanistic and empirical psychologists to signify the validation of the trait through empirical testing (Joseph & Linley, 2006; Linley, 2006; Patterson & Joseph, 2007). As a result, authenticity received a large amount of importance and interest in recent years, particularly in the area of counselling, clinical studies and management (Avolio & Gardner, 2005; Kernis & Goldman, 2006 in Grégoire et al., 2014).

Utilization of both interpersonal and intrapersonal perspectives could be found in literature conceptualizing authenticity (Ménard & Brunet, 2012; Novicevic et al., 2006; Grégoire et al., 2014). The interpersonal perspective of authenticity utilizes philosophical terms like ethical choices and individual virtues to describe the term. Under this standpoint, an individual is authentic if he/she respects other individuals and social norms and also take responsibility for his/her decisions. Therefore, according to the Interpersonal perspective an individual is authentic if he/she exhibits integrity and is ethical. This essentially implicates judgement by others to determine the level of authenticity one exhibits. Extensive work of existentialist philosophers, like Sartre (1948) and Heidegger (1962), can be found on authenticity. In their work, these philosophers have linked authenticity to an individual's need to sustain a personal balance between one's responsibilities or will and collective expectations.

The other prevalent perspective of authenticity is intrapersonal. This understanding of authenticity is largely inspired by Kierkegaard's work (DeCarvalho, 1989). According to Kierkegaard (1987) authenticity is "that

one undertakes authentic action to the degree to which their emotional perceptions of situations are consistent and uncontaminated by social considerations that push aside authentic emotions” (Grégoire et al., 2014, pp.346). Thus, according to intrapersonal perspective the self is a psychological entity, distinct from the concept of soul and mind. This implies that to be authentic one’s acts need to be in accordance to their values and thus should show one’s real or true self (Erikson, 1959; Maslow, 1976). This understanding of authenticity does not incorporate moral judgment (Ménard, 2008). Rogers (1961) emphasized that one is authentic if there is harmony between one’s self and their immediate experience, thus, highlighting the significance of being one’s true self. Barrett-Lennard (1998) proposed a model theorizing authenticity based on Rogers’ person-centred psychology. According to this model authenticity is “consistency between the three levels of (a) a person’s primary experience, (b) their symbolized awareness, and (c) their outward behaviour and communication” (Barrett-Lennard, 1998, p. 82).

The first component of authenticity is authentic living. Authentic living characterizes the compatibility between behaviour and experience, as consciously perceived. It encompasses expressing emotions and behaving in a way that is coherent with what the individual is conscious of, that is, her/his emotions, psychological states, cognitions and beliefs. Putting it differently, authentic living implies that one expresses his/her true self in most situations and therefore, lives in harmony with his/her beliefs and values. The second component, self-alienation, represents the mismatch between real experience and conscious awareness. While some level of self-alienation is unavoidable, if this mismatch is huge it could cause psychopathology. The “subjective

feeling of not knowing oneself, or feeling out of touch with our true self” (Wood et al., 2008, p. 386) represents this aspect of authenticity. The last component of authenticity, accepting the influence of others, indicates the degree to which others can influence a person. In other words, this aspect of authenticity examines how susceptible the individual is to the belief that he/she has to fit other’s expectations.

While, “multiple meanings of authenticity and discrepancies in authenticity have been examined [throughout the] history of philosophy and psychology” (Novicevic et al., 2006, p. 65), only a few valid instruments to measure authenticity are available. Among these instruments the 12-item scale developed by Wood et al. (2008) is the most reliable one (Grégoire et al., 2014). The 12 items consist of 4-items for each dimension of authenticity (Wood et al., 2008). This thesis also takes the intrapersonal perspective of authenticity and utilizes authenticity scale developed by Wood et al., (2008).

3.4.4.2. Relation of authenticity with the opposing attitudes (anti-consumption attitude and materialistic attitude) and the proposed typology

Anti-consumption literature has cited Maslow’s (1970) theory of human motivations to explain the phenomenon (Etzioni, 1998; Zavestoski, 2002b). According to this need theory, physiological needs - ones which are necessary to maintain a healthy person - are the first level of human motivation and are at the base of an ascending hierarchy. Once an individual’s physiological, physical safety, love and esteem needs are met, he starts craving to meet the need for self-actualization, which is the need to do what one is suitable for as defined by Huneke (2005). Etzioni (1998), while

looking at Maslow's hierarchy and anti-consumption, elaborated that the members of advanced societies, the ones whose basic needs are met and who know and are assured that these needs would be met in future, are the ones attracted to anti-consumption (Huneke 2005).

Zavestoski (2002b) splits self-actualization into two sub-needs: need for authenticity and need for efficacy. Zavestoski (2002b), through interviews with individuals taking a course on voluntary simplicity, elucidated that consumption can help attain all needs, except authenticity. His study supported that individuals, in an attempt to satisfy the authenticity need, move from consumption to anti-consumption. Thus, anti-consumption literature reflects that individuals use anti-consumption to attain authenticity in their life (for example Zavestoski, 2001; Zavestoski, 2002b; Cherrier, 2009; Agarwal, 2013; Lee et al., 2009a). Current materialistic cultures, on the other hand, provide limited means to attain authenticity (Forgas, Williams, and Laham, 2004)

As this thesis examines authenticity as a three-dimensional construct, therefore the relation of the three aspects of authenticity, authentic living, self-alienation and accepting external influence, with both anti-consumption and materialistic attitudes is discussed next.

Self-alienation, the first aspect of authenticity, is the mismatch between actual experience and conscious awareness. An individual feels self-alienated if he has the feeling of not knowing oneself. Individuals adopting anti-consumption choose a low consumption lifestyle, as they know what they want from life and who they are. These individuals do not follow the society blindly, rather they discover themselves and follow their heart (Iyer

and Muncy 2009). Therefore, it is reasonable to argue that anti-consumption attitude would be negatively related to self-alienation. While, given that materialistic attitude is opposite to anti-consumption attitude, an inverse relationship would exist between materialistic attitude and self-alienation.

The second dimension of authenticity is *authentic living*. This dimension, as aforementioned, is an individual's choice to live in accordance with one's values and beliefs. Individuals adopt those anti-consumption acts that are in accordance to their values (Black and Cherrier, 2010), whereas materialists usually face value conflicts (Richins and Dawson, 1992). Thus, echoing a positive relationship of authentic living with anti-consumption attitude and a negative relationship between authentic living and materialistic attitude.

Lastly, the third dimension of authenticity is *accepting external influence*. Individuals adopting anti-consumption do not care about what society thinks about them (Iyer and Muncy, 2009) as they go against the mainstream culture. Whereas materialistic consumers are highly influenced by the society and they try to impress others by the display of their possessions. So it could be argued that anti-consumption attitude would relate negatively with this aspect of authenticity, while materialistic attitude will relate positively with it.

Based on the above discussion it is argued that anti-consumption attitude will have a negative relationship with self-alienation and external influence domain of authenticity, while having a positive relationship with authentic living. Materialistic attitude will have a positive relationship with

self-alienation and external influence domain of authenticity, while having a negative relationship with authentic living.

From the above discussion following hypothesis, along with sub-hypotheses, are developed:

H11: This study expects a significant positive relationship between authenticity and anti-consumption attitude and a significant negative relationship between authenticity and materialistic attitude such that:

H11a: A significant negative relationship exists between self-alienation and anti-consumption attitude.

H11b: A significant positive relationship exists between authentic living and anti-consumption attitude.

H11c: A significant negative relationship exists between accepting external influence and anti-consumption attitude.

H11d: A significant positive relationship exists between self-alienation and materialistic attitude

H11e: A significant negative relationship exists between authentic living and materialistic attitude

H11f: A significant positive relationship exists between accepting external influence and materialistic attitude.

Lastly, the variation among the four clusters in the proposed typology makes up the last hypothesis that this thesis plans to explore. The last hypothesis is:

H12: The four clusters in the proposed typology vary in terms of authenticity.

It is also proposed that anti-consumers (segment of consumers falling in anti-consumerist domain with high anti-consumption

attitude and low materialistic attitude) would experience high authenticity, while, materialistic consumers (segment falling in materialistic domain with high materialistic attitude and low anti-consumption attitude) would experience low authenticity.

Dualistic consumers (segment of consumers falling in dualistic domain with high level of both anti-consumption and materialistic attitude) would experience low authenticity. This argument is based on the understanding that consumers in this segment would not only have attitudinal conflict [as they hold two opposite attitudes], but would also face value conflict (as proposed in section 3.4.1.5). As a result, they would not know their true self, thus resulting in self-alienation. They would also be unable to live in accordance to the conflicting values, thus resulting in low level of authentic living. Lastly, these consumers would be prone to external influence as they would be unsure about their actions and would want affirmation from others.

For disinterested consumers (segment of consumers falling in the disinterested domain with low anti-consumption and low materialistic attitudes), examination of their relation with authenticity is more exploratory in nature, as existing literature lacks insight on authenticity for this combination of attitudes. Thus, no proposition is made in this regard. Based on the above discussion it is expected that the segments with different combination of anti-consumption attitude and materialistic attitude would vary in terms of authenticity, with segment(s) falling in anti-consumerist

domain experiencing more authenticity than the segment(s) falling in the remaining three domains.

In summary, it is proposed that the four psychographic variables – value orientations, environmental consciousness, wellbeing and authenticity – will have an inverse relationship with anti-consumption attitude and materialistic attitude. Additionally, with values as antecedents of attitudes, it is proposed that opposite values would act as antecedents of the two opposite attitudes being studied in this thesis. Thus, providing means to explore empirically the opposite nature of the two attitudes. It is also proposed that the four segments/clusters – anti-consumers, materialistic consumers, dualistic consumers and disinterested consumers - making up the proposed typology will differ from each other with respect to the four psychographic variables: value orientations, wellbeing, environmental consciousness and authenticity.

3.5. Summary

As mentioned in the first chapter the aim of this thesis is to (1) validate anti-consumption attitude and materialistic attitude as being opposite to each other and (2) classify consumers in terms of difference between their attitudinal balance (anti-consumption attitude and materialistic attitude). This chapter, while focusing on these aims, proposes four attitudinal domains [based on anti-consumption attitude (high and low) and materialistic attitude (high and low)] that a contemporary consumer can fall in. Further, a classification system/typology of consumers based on their belonging to one

of the four domains is proposed. Next, the chapter examines and elaborates the relationship of anti-consumption attitude and materialistic attitude with four psychographic variables - value, environmental consciousness, wellbeing and authenticity – in order to show how the attitudinal aspect of ant-consumption and materialism are opposite to each other. From there related hypotheses are developed. Additionally, the difference among the clusters belonging to different attitudinal domain, in terms of these four psychographic variables - value, wellbeing, environmental concerns and authenticity - is discussed so as to propose means to validate the typology. While doing so, 12 hypotheses are postulated. Table 3.4 presents the 12 hypotheses along with the sub-hypotheses for these twelve hypotheses.

The next chapter discusses the methodological standpoint of this thesis.

Table 3.4: List Of Hypotheses To Be Tested	
H1	This study expects a significant positive relationship between self-transcendence and anti-consumption attitude and a significant negative relationship between self-transcendence and materialistic attitude such that: H1a: A significant positive relationship exists between universalism and anti-consumption attitude. H1b: A significant positive relationship exists between benevolence and anti-consumption attitude H1c: A significant negative relationship exists between universalism and materialistic attitude. H1d: A significant negative relationship exists between benevolence and materialistic attitude.
H2	This study expects a significant negative relationship between self-enhancement and anti-consumption attitude and a significant positive relationship between self-enhancement and materialistic attitude such that: H2a: A significant negative relationship exists between power and anti-consumption attitude H2b: A significant negative relationship exists between achievement and anti-consumption attitude H2c: A significant negative relationship exists between hedonism and anti-consumption attitude H2d: A significant positive relationship exists between power and materialistic attitude H2e: A significant positive relationship exists between achievement and materialistic attitude H2f: A significant positive relationship exists between hedonism and materialistic attitude
H3	The four segments in the proposed typology vary in terms of self-transcendence/self-enhancement values.
H4	This study expects a significant positive relationship between openness to change and anti-consumption attitude and a significant negative relationship between openness to change and materialistic attitude such that: H4a: A significant positive relationship exists between self-direction and anti-consumption attitude

	<p>H4b: A significant positive relationship exists between stimulation and anti-consumption attitude</p> <p>H4c: A significant negative relationship exists between self-direction and materialistic attitude</p> <p>H4d: A significant negative relationship exists between stimulation and materialistic attitude</p>
H5	<p>This study expects a significant negative relationship between conservation and anti-consumption attitude and a significant positive relationship between conservation and materialistic attitude such that:</p> <p>H5a: A significant negative relationship exists between conformity and anti-consumption attitude</p> <p>H5b: A significant negative relationship exists between tradition and anti-consumption attitude</p> <p>H5c: A significant negative relationship exists between security and anti-consumption attitude</p> <p>H5d: A significant positive relationship exists between conformity and materialistic attitude</p> <p>H5e: A significant positive relationship exists between tradition and materialistic attitude</p> <p>H5f: A significant positive relationship exists between security and materialistic attitude</p>
H6	The four segments in the typology vary in terms of self-transcendence/self-enhancement values
H7	<p>This study expects a significant positive relationship between environmental consciousness and anti-consumption attitude and a significant negative relationship between environmental consciousness and materialistic attitude such that:</p> <p>H7a: A significant positive relationship exists between awareness of consequences and anti-consumption attitude.</p> <p>H7b: A significant positive relationship exists between environmental concerns and anti-consumption attitude.</p> <p>H7c: A significant negative relationship exists between awareness of consequences and materialist attitude.</p> <p>H7d: A significant negative relationship exists between environmental concerns and materialist attitude.</p>
H8	The four segments in the typology vary in terms of environmental consciousness.
H9	<p>This study expects a significant positive relationship between well-being and anti-consumption attitude and a significant negative relationship between well-being and materialistic attitude such that:</p> <p>H9a: A significant positive relationship exists between satisfaction with life and anti-consumption attitude</p> <p>H9b: A significant positive relationship exists between positive affect and anti-consumption attitude</p> <p>H9c: A significant negative relationship exists between negative affect and anti-consumption attitude</p> <p>H9d: A significant negative relationship exists between satisfaction with life and materialistic attitude</p> <p>H9e: A significant negative relationship exists between positive affect and materialistic attitude</p> <p>H9f: A significant positive relationship exists between negative affect and materialistic attitude</p>
H10	The four segments in the typology vary in terms of wellbeing.
H11	<p>This study expects a significant positive relationship between authenticity and anti-consumption attitude and a significant negative relationship between authenticity and materialistic attitude such that:</p> <p>H11a: A significant negative relationship exists between self-alienation and anti-consumption attitude.</p> <p>H11b: A significant positive relationship exists between authentic living and anti-consumption attitude</p> <p>H11c: A significant negative relationship exists between accepting external influence and anti-consumption attitude</p> <p>H11d: A significant positive relationship exists between self-alienation and materialistic attitude</p> <p>H11e: A significant negative relationship exists between authentic living and materialistic attitude</p> <p>H11f: A significant positive relationship exists between accepting external influence and materialistic attitude.</p>
H12	The four clusters in the proposed typology vary in terms of authenticity.

Chapter 4

METHODOLOGY

4.1. Introduction

Research methodology assists in answering the main research questions by keeping and making the important components of research project work together (Trochim, 2006). Several things determine the value of research, these involve how the investigator complements previous investigations, what does the new data add, and how much does the new data contribute to the testing of the researched topic (Hackley, 2003). This chapter will shed light on the main topics that formulate research methodology.

This chapter elaborates the position of this research in relation to the key scientific research paradigms. The chapter also explains the methodology chosen to collect and analyse the data to test the 12 hypotheses of interest. This chapter is organized into 9 main sections. First section gives an overview of this chapter. Section 2 presents the justification of research philosophy. Third section presents the research design and discusses divergent research approaches and research strategy. Fourth section describes the research methods. This includes discussion of sources of data collection, sample and sampling procedure. The choice of Cardiff consumers is also discussed. Fifth section presents the preliminary study of Cardiff consumers' anti-consumption Behaviour. Sixth section looks at the instruments used. This includes instruments used to measure the two attitudes - anti-consumption and

materialistic - and the four psychographic variables: ten values, wellbeing, environmental consciousness and authenticity. The section also discusses the two pre-tests conducted in this study. Section 7 talks about the survey design and data collection. Section 8 looks at the ethical considerations that this study had to keep in account. Lastly, with section 9, the chapter concludes with a summary and the process of data preparation.

4.2. Research philosophy

Research philosophy is considered important when undertaking research. Research philosophy, which provides direction to the researcher, is the position an investigator takes in conducting research (Saunders et al. 2009). It helps to clarify the research design, which revolves around it (Corbetta 2003). Research philosophy defines the way knowledge is formulated and deemed acceptable in the study (Saunders et al., 2007; Bryman and Bell, 2003).

A good study depends deeply on the context of the study, the nature of the research question and the research paradigm. Different research philosophies form different research paradigms. Research paradigm is a framework that profoundly sways how we see the world, controls viewpoint about how things are allied and thus, is the framework in which theories are formed (Voce, 2004). Ontological, epistemological and methodological assumptions are the basic beliefs that define any specific research paradigm (Guba and Lincoln, 2008), which then guides research design (Corbetta 2003).

Both epistemology and ontology are branches of philosophy that tries to describe the existence of something. Epistemology signifies to the nature of knowing or construction of knowledge and answers the question of how we know what we know. It involves the origin, scope and nature of knowledge. Ontology involves the nature of reality, therefore probing how something exists (Krauss, 2005). Methodology, the final element of research paradigm, refers to the precise practices that the investigator practices to inspect that reality (Healy and Perry 2000). In this way while ontology is ‘being’, epistemology is referred to as ‘knowing’ and methodology is ‘studying’ (Bryman and Bell, 2007; Burrell and Morgan, 1979; Buchanan and Bryman, 2009; Denzin and Lincoln, 2003; Guba and Lincoln, 2005; Saunders et al., 2009).

There are three dominant philosophies of science: positivism, constructionism and critical realism (Alvesson and Sköldberg, 2009). This thesis employs critical realism. An overview of the three paradigms is presented in Table 4.1.

Positivism tests hypothesis in a deductive manner (theory verified by observation), and has been a dominant philosophy of science during the twentieth century (Alvesson and Sköldberg, 2009). According to positivism, there is only one reality and this reality (truth) is driven by undeniable natural laws (Guba and Lincoln, 1994). It further believes that data already exists and the only task of an investigator is to systematize and collect that data into an observed reality. Though extensively used, this thesis distinguishes itself from positivism as this study takes the viewpoint that theories/laws are only the best available knowledge that are yet to be falsified, and that there exists a

social world that is constructed by our life-experiences, knowledge and desires (Bryman and Bell, 2007; Gummesson, 2000). The reality about this social world could only be apprehended imperfectly and as the societies change, so does this reality, thus, relating to Critical Realism (Guba and Lincoln, 1994).

Table 4.1: Research Paradigm Comparison						
Phenomenology ←-----→ positivism	Issue	Ontology	Epistemology	Methodology	Inquiry aim	Nature of knowledge
	Positivism	Naïve realism - it is assumed that the reality is understandable and driven by absolute natural laws. Testing of theories relating actual objects, structure and processes could help obtain the true nature of reality	Dualist / objectivist; confirmation of hypothesis through empirical analysis, in pursuit of universal laws or principles.	Hypothetical-manipulative / deductive experiments; verification of hypotheses; chiefly quantitative methods	Explanation: prediction and control	Verified hypotheses established as facts or laws
	Critical Realism	“real” reality but only imperfectly and probabilistically apprehend-able	Modified dualist/objectivist; critical tradition/ community; findings probably true.	Modified experimental/manipulative; critical multiplism; falsification of hypotheses; may include quantitative methods	Explanation: prediction and control	Non-falsified hypotheses that are probable facts or laws
	Interpretivism / Constructivism	Relativism – local and specific co-constructed realities; the social world is produced/reinforced by humans through their action/interaction.	Transactional/subjectivist; co-created findings; understanding social world through interpretation of actions of participants; researchers’ assumptions, values, beliefs, and interests intervene to shape the investigations.	Hermeneutical/dialectical; action research; interpretive case study; holistic ethnography	Understanding; reconstruction	Individual or collective restorations coalescing around consensus

Source: Based on Alvesson and Sköldberg, 2009

Opposite to positivism is Constructivism/interpretivism. According to this paradigm the world is created through one's mind, therefore, the

understanding of the world should be through the mind (Bryman, 2008; Denzin and Lincoln, 2003; Alvesson and Sköldberg, 2009; Guba and Lincoln, 2005). According to interpretivism it is “predicated upon the view that a strategy is required that respects the differences between people and objectives and the natural sciences and therefore requires the social scientist to grasp the subjective meaning of social action” (Bryman and Bell, 2007, pp. 19). Interpretivism is more inclined towards qualitative research and is focused on exploring phenomena via analysing the meaning individuals associate with that phenomenon (Bryman, 2008; Saunter et al., 2009; Guba and Lincoln, 1994). This thesis distances itself from interpretivism as it does not reject the presence of a real world only because the models about it are moulded as a way to simplify its complexity. Through thoughts and laws one positions their models into use in the social-world, and accordingly makes them ‘real’.

Critical realism, the approach this thesis takes, is often seen as the middle-point between the two contrasting philosophical-standpoints of positivism and interpretivism (Guba and Lincoln, 2005; Alvesson and Sköldberg, 2009; Guba and Lincoln, 1994). By integrating elements of both positivism and phenomenology, critical realism brings together the epistemological perspectives of both the research philosophies (Guba and Lincoln, 2005; Saunter et al., 2009). This study seeks to understand different attitudinal balance consumers in current era hold by investigating their anti-consumption and materialistic attitudes and classifying consumers on the basis of different combinations of these two attitudes. Thus, it investigates the existing reality, however it is by no means the ultimate truth, as these

attitudinal combinations are prone to change with changing culture. Therefore, the ontological position of research that this study takes is critical realism.

Epistemologically critical realism follows that, though, it is possible to estimate reality, it is not possible to fully know the reality. Following critical realism, this thesis acknowledges that acceptable knowledge could be derived from quantitative research, yet, this knowledge is disposed to change with the shifting environment.

The final element of research paradigm is methodology. The methodology is based on some philosophical paradigm, making it more than just a collection of procedures, techniques, documentation aids and tools (Avison and Fitzgerald, 1995).

Methodologically, a research can be quantitative or qualitative (Kroll and Neri, 2009). While, Quantitative research tests hypotheses through collection and analysis of data, Qualitative research, follows an inductive approach by giving weight to the significance of words. These two approaches offer complementary views of the social-world. Qualitative approach focuses on gaining the richness (obtained through qualitative methods) so as to improve understanding by getting the in-depth information of phenomenon under study. Quantitative approach focuses on quantitatively examining precise or basic concepts (Cupchik 2001). Hence, generally speaking, qualitative-researchers do not employ measurements and quantitative-researchers do. Though, positivism favours quantitative methodology, social constructionism is mainly qualitative. Nevertheless, critical realism does not favour either; instead, it bridges qualitative and quantitative studies (Alvesson and Sköldberg, 2009).

Given that, under critical realism the methodology selection depends on the aim of research, the present study used quantitative data to formulate and validate a typology of consumers. In conclusion, a research design was selected for the present research following a critical realist philosophy.

4.3. Research design

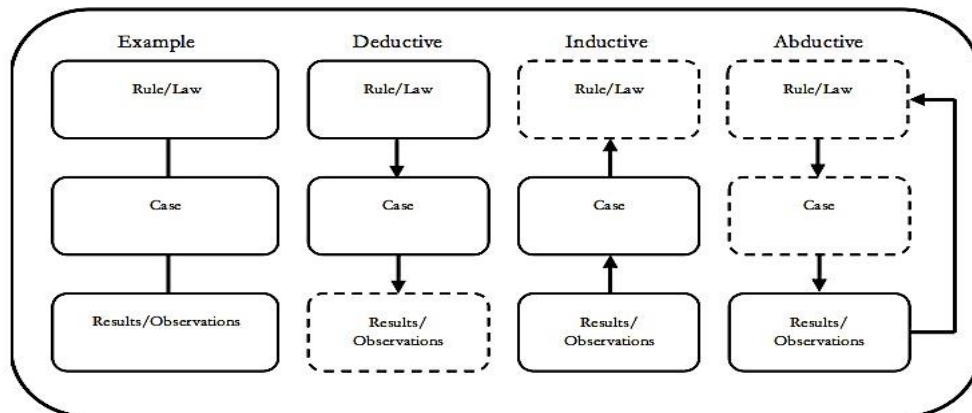
Research design provides a framework for both the collection and then the analyses of data (Bryman, 2004; Kroll and Neri, 2009). It is the objectives of the research that determines the selection of an appropriate research design. Moreover, it should be coherent with the chosen methodology (Halcomb et al., 2009).

An understanding and selection of the relationship between theory and research is the first step towards choosing an appropriate research design. In other words, a researcher must determine what comes first- data or theory. In terms of the relationship between data and theory there could be deductive (theory----confirmation), inductive (observation-----theory), or abductive reasoning. Deductive reasoning, with its theory to confirmation nature, is used to construct a theory that is subjected to a thorough test. Thus, the process is generation of theory (general), through hypothesis (rule), to confirmation (particulate), as presented by arrows in figure 4.1. Contrary to this is inductive reasoning, where observational statements develop the initial base, with some conclusion and/or hypothetical rule established which cannot be verified with ultimate certainty. The main aim of this approach is to generate a better understanding of the phenomenon under examination. As

could be seen in figure 4.1, induction has opposite relationship with law, case and observation. In simple words, when adopting deductive approach one tests hypothesis already developed through analysis of existing knowledge (Saunders et al. 2000; DeVaus 2001), whereas, when adopting an inductive approach one collects and analyses data so as to generate some theory. It is, however, very uncommon to use either of the two methods in isolation, and usually both the methods are used concurrently (see e.g. Glaser 1992: p.18). Making way for the third and final form of approach one can choose; abductive reasoning. As presented in figure 4.1, abductive reasoning focuses on formation and evaluation of explanatory hypotheses (Thagard and Shelley 1997). A guiding principle, be it a well developed theory or just a fuzzy intuitive-concept, advanced from earlier works, is the starting point of Abductive approach (Fischer 2001b). Under abductive approach, literature is used to develop explanatory hypotheses, which are then tested, with the aim to introduce and/or validate a new theory/idea or concept.

As one of the main aims of this thesis is to produce and then validate a typology of consumers by constructing hypotheses through examination of past literature and further testing these hypotheses through empirical data analysis with no generally-accepted theory/framework already available, abductive reasoning is most appropriate for this thesis.

Figure 4.1: Types of Inference (Source: Fischer 2001b)



Boxes with continuous lines contain premises/hypotheses that are presupposed as given true. Boxes with dotted lines contain hypotheses that are inferred.

In terms of research design, conventionally 3 categories exist. These are: exploratory, descriptive, and causal. Exploratory research is used to obtain new insights/information, to develop research priorities, to define terms, and to clarify problems (Robson, 1993; Burns and Bush, 2006). Several methods exist that could be used to conduct exploratory-research. These involve case analysis, secondary data analysis, projective techniques, experience survey, and focus groups. Exploratory research has several advantages. As exploratory-research is fast if secondary data-analysis is utilized. It is also inexpensive as compared to primary data-collection. Exploratory research, furthermore, is a means to design an appropriate causal or descriptive research study (Burns and Bush, 2006).

The second research design is Descriptive. This research design is considered suitable for hypotheses testing, as it presents an accurate sketch of situation, events, or persons (Robson, 1993). This research design helps to describe and measure marketing phenomena like questions of what, where,

how, when, and who. Being cross-sectional in nature, this design is seen as a mean to an end (Saunders et al. 2000). By Cross-sectional in nature it means that the data-collection happens at one single-period in time and is usually labelled as a snapshot of the population (Burns and Bush, 2006). Longitudinal studies, in comparison, collect data from the same sample units of population over a period of time in order to map the changes.

Lastly, causal research design is the third research design and is concerned with identifying the cause and effect relationship between variables (Burns and Bush, 2006), making it different from the other two experimental techniques in which independent variables are manipulated in order to observe the affect of a dependent variable. Although, true experiments are occasional in business studies, nevertheless, they incline to be extremely strong in internal validity (Bryman and Bell 2007).

As descriptive approach is considered most suitable for hypotheses testing, and as this thesis focuses at testing structured hypotheses. Thus, this thesis used a descriptive research design.

To accomplish the aims and objectives of this particular research as stated in Chapter 1, the collection of data through mixed methods was considered most suitable. Mixed method is a research tool that collects both quantitative and qualitative data in a single study and amalgamates these data at some stage of the research process (Halcomb et al., 2009). Quantitative and Qualitative data can be collected either concurrently or sequentially. In concurrent studies, both quantitative and qualitative data are gathered at the same time, whereas in sequential studies, one form of data collection is followed by the other. When using mix method, it is important to decide

whether both the data collection methods will have equal importance or if one method will be more used than the other, and thus will have priority over the other method in the study. Table 4.2 present the possible combinations of priority and implementation of mixed method.

Table 4.2: Mixed Method Design Matrix		
Priority	Implementation Order	
	Concurrent	Sequential
Equal importance	QUAL + QUANT	QUAL \Rightarrow QUANT QUANT \Rightarrow QUAL
Unequal importance	QUANT + qual QUAL + quant	QUANT \Rightarrow qual quant \Rightarrow QUAL QUAL \Rightarrow quant qual \Rightarrow QUANT

Source: Kroll and Neri, 2009

The current study used mixed method along with a descriptive research design. Sequential gathering was adopted for mixed methods, with priority given to quantitative element (qual \Rightarrow QUANT). Two focus groups with individuals who have had some experience of anti-consumption in their life were conducted. The purpose was to explore consumers so as to understand if anti-consumption is actually a common happening or not, as well as to get an idea of what individuals view anti-consumption as, and what seems to motivate them. It is important to highlight the fact that the aim of these focus groups was to understand the position of anti-consumption, that is to say, if it's a common happening or not. Therefore, the questionnaire survey guide had only questions related to anti-consumption and not materialism. Quantitative data collection took place through self-administered and face-to-face surveys. Both these methods are discussed in sub-section 4.7. It is important to point here that though past research in the area of anti-consumption has focused more on qualitative methods, the current study

mainly focuses on quantitative analysis so as to answer to the call for quantitative research in the field (Iyer and Muncy 2009; Lee and Ahn, 2016).

4.4. Sample and sampling procedure

This section elaborates the sample and the sampling procedure for survey data collection used in this research. A sample could be seen as a subset of the population that is representative of the entire group (Burns and Bush, 2006). A sample is more appropriate than a census because 1) it is cheaper than a census as a sample involves a smaller population size, and 2) examining data produced by sample is easier compared to the enormous data produced by a census. The correct sample size is subject to the purpose of the survey. If the sample size is too massive, the investigator ends up wasting resources and time. However, if the sample size is too small, then there is likelihood that the investigator will overlook significant research findings. Therefore, a proper sample size is fundamental for research (Hair et al., 2008).

Two basic sampling classifications are probability sampling and non-probability sampling. All sampling methodologies are classified under these two general categories. In the former, the examiner knows the accurate possibility of choosing each member of the population, whereas in the non-probability sampling the accurate size of population is unknown, accordingly in this case the probability of being a part of the sample is unknown. There are pros and cons of both sampling methods. In true sense, the results obtained from probability samples are the only results that can be generalized. Similarly, this sampling-technique permits the academic to stipulate the

sampling error. Four sampling methods could be used under probability sampling. These are systematic sampling, simple random sampling, stratified sampling and cluster sampling (Burns and Bush, 2006).

Compared to probability sampling, non-probability sampling is usually less time consuming, less complicated and easier to administer. However, the findings generated through use of non-probability sampling method have to be limited to the person or elements sampled as this method prohibits the study's findings to be generalized (Fairfax County Department of Systems Management for Human Services, 2003). The four basic types of sampling techniques that come under non-probability sampling are quota sampling, snowball sampling (referral sampling), convenience sampling, and self-selecting sampling (judgement sampling) (Burns and Bush, 2006).

The present study consisted of 288 respondents, recruited by convenience sampling. When deciding a suitable sample size, one needs to consider the data-analysis technique, along with its requirements, that the study plans to use (Luck and Rubin, 1987). Generally, a larger data set is needed as the data analysis gets sophisticated (Luck and Rubin 1987).

Cluster analysis is one of the main data analysis technique used in this thesis. It is important to have an adequate sample size to generate meaningful clusters (Hair et al. 1998). The rule of thumb is if the research aims to identify large groups then a small sample is adequate, but if the study aims to identify small groups then a large sample is needed (Hair et al. 1998). The range of sample size that are used in studies that compare groups are from 150-1200. In fact, there is no rule of thumb for determining minimum sample size for cluster analysis (Siddiqui, 2013). Given that regression analysis and

discriminant function analysis are two of the main analytical techniques, other than cluster analysis, used in this particular thesis the decision of sample size was based on these techniques.

Both Siddiqui (2013) and Hair et al., (2008) suggested that when conducting a multiple regression there should be 15 observations for each predictor variable. The present research uses 18 independent variables, thus the minimum sample size when considering regression analysis should be 270. According to Hair et al., (2008), when using Discriminant Function Analysis the smallest sample size should be five observations per predictor, even if the predictor is not used in the analyse (like in case of step-wise discriminant analysis analysis). As mentioned above, there are 18 independent variables in this study, thus the minimum sample size when considering discriminant analysis should be 90. A sample is considered small if it is less than 100 and is considered to be large if its more than 400 (Hair et al. 1998). This thesis took a moderate approach and the aim was 270 useable questionnaires. However, scholars suggest that one should increase the count of sample size by 40-50% to account for uncooperative subjects (Salkind, 1997; Fink, 1995; Kotrlik and Higgins, 2001). Keeping this in mind, four hundred (400) copies of the final questionnaire, each in a booklet form, were prepared. The aim was to obtain at least 270 fully filled questionnaires within a period of 12 weeks. This time span was based on the resources and time available to the researcher. The final survey was conducted over a period of 12 weeks, commencing in the first week of January 2014 until last week of March 2014.

Survey data was gathered at about 50 points in Cardiff. Table 4.3 displays the locations selected for data collection. Before going ahead with the data collection, a thorough study of the census (2011) was undertaken. The goal was to make sure that the sample represents the general population of UK, as this thesis aims to classify general consumers of the current era, thus, the sample should be representative of the population. The population of interest was Cardiff consumers, defined as, females and males aged 18 to 60+. Minors were excluded from the survey. The sample also covered diverse age groups, socio-economic groups and educational backgrounds. However, as in the census (2011) it is mentioned that 93% of the population in Wales described themselves as white and there are more females than males, the sample was aimed at more white (in terms of ethnicity) and slightly bent toward females. As a small token of appreciation, participants were offered entry to a moderate prize draw. This was subject to participant's willingness to enter the draw.

In 12 weeks a total of 330 questionnaires were distributed. Participants were selected randomly at the indicated locations. After a short introduction of the research and researcher, individuals were asked if they would be interested in filling the questionnaire and most of the time the response to the above was positive. The willing individuals were given a questionnaire to fill in. Each questionnaire was firstly numbered at the back in a serial from 1-400. This was done to keep a check of response rate. 42 individuals took the questionnaire, but later withdraw. More than 50% of these individuals attributed their withdrawal to shortage of time they had to spare. In total 288

completed questionnaires were obtained, giving a response rate of 87%, which was in excess of the initial anticipation.

Table 4.3: List of Data Collection Points

1	The capitol shopping centre	26	Red dragon centre
2	Maindy pool	27	Aberconway building (Cardiff university)
3	St. David's shopping centre	28	Cardiff central library
4	John Lewis Shopping Centre	29	Julian Hodge Building (Cardiff University)
5	The lounge (student Union)	30	Hadyn Ellis Building (Cardiff University)
6	Cathays community centre	31	Queen's Building
7	Cardiff Central market	32	Cardiff Central railway station
8	Park place	33	Cardiff bay railway station
9	Heath Hospital	34	Different coffee shops on queen street
10	Woodwill road neighbourhood	35	Postgraduate centre (student union)
11	Wales Millennium Centre	36	City Church
12	Cardiff national museum	37	The Friary Centre
13	Bingo Castle	38	Cathay's Park
14	Bute Park	39	Canton Health Community Centre
15	Queens Arcade	40	City Hall lawn
16	Cardiff castle	41	Western Leisure Centre
17	Art and Social studies library	42	Roath Park
18	STAR centre	43	Al-Meenar Community Centre
19	Channel View Centre	44	Cardiff Bay
20	Fairwater Leisure Centre	45	Bambeans
21	Column Drive	46	Waterloo Garden
22	Dar-ul-isra Community Centre	47	Cardiff central Bus station
23	City Road neighbourhood	48	South Riverside Communities First
24	Face 11	49	Huggard Centre
25	Cardiff Information Centre	50	Crews road neighbourhood

Anti-consumption practices are seen as part of the developed world (Alexander, 2011), while it is not a concept that is common in developing countries (Schrader and Thøgersen, 2011). As urbanisation increases (The World Bank, 2014) the importance of cities in developing sustainable systems becomes more important (e.g. Bulkeley et al., 2010; Hodson and Marvin, 2010). Cardiff was selected because it is the Capital of Wales and therefore it was considered to be representative of the country's consumers. In addition, Cardiff is the largest city in terms of

population, compared to any other city in Wales. The city has more than 70% of its 346,100 population aged between 20 and 60+ years old (Census 2011).

Evidence shows that a significant number of individuals in affluent societies are making changes in their lifestyles that entail earning less money as they question continued consumption growth (Schor, 1998; Hamilton, 2003). This has made way for sustainable consumption research that examines anti-consumption consumer behaviour (Agarwal, 2013). There are reasons to suggest that Cardiff consumers' lifestyles are becoming more orientated towards sustainability. Environmental Performance Index published in 2014 (Yale Centre for Environmental Law & Policy, 2014) has shown that the UK is at 12th position out of 178 participating countries. Researchers like Kenworthy, Satterthwaite and Lee have stated that cities provide the ideal platform for future green and sustainable initiatives (Barley, 2010). Sustainability programs are already in place and advertised in Cardiff. Cardiff council has committed to invest £33 million to develop sustainable communities in the city (Cardiff Council, 2014). The current research aims to understand how consumers of economically developed countries (like the UK), who are faced with the challenge of finding a balance between their materialistic attitude and anti-consumption attitude, can be classified. Given that Cardiff is a big city with good economic conditions and a focus towards sustainability, it was considered ideal for this research.

Convenience sampling was used for this research. In convenience sampling, the researcher recruited subjects because they are easy to select. Convenient sampling is used when the population is too large and it becomes impossible to include every individual in the sample (Malhotra et al., 2012).

Convenience sampling is the most common sampling technique and is less cost and time intensive. A criticism of this methodology is that not all subjects in the population get equal chance to be a part of the sample. However, given the big number of data points used to collect data in this study, it was considered appropriate to use convenience sampling. In summary, a total of 288 fully filled questionnaires were obtained.

An overview of the steps leading to the final survey is presented in table 4.4. The first step was literature review. This included critical evaluation of writings from books, conference proceedings, periodicals, academic journals and workshop proceedings. In the initial phase, two focus groups, with individuals who have had some experience of anti-consumption in their life, were conducted. The main purpose of these focus groups was to check if anti-consumption is actually a common practise. The next section, section 4.5, discusses the findings for these focus groups in detail. The next stage was the sorting round. Scales to measure materialistic and anti-consumption attitudes were collected and discussed with group of two judges (2 PhD student) and a Lecturer at Cardiff Business School. This was done to generate construct validity of the scales. Additionally, the scales used in this study to measure the four psychographic variables were discussed with a senior lecturer at Cardiff Business School (Supervisor of this thesis). This was done to make sure that the wording of the items used to measure different constructs in the study are suitable for consumers of UK in general and consumer of Cardiff in particular. As a result of the discussions, changes were made to some of the items.

Table 4.4: Overview of steps taken to develop the final survey in this study			
Method	Type	Number	Year
Literature Review	Examination of academic magazines and journals, periodicals, books, conferences and workshops proceedings.	-----	September 2010-September-2015
Focus groups	Each focus group comprised of 8 individuals with some experience of anti-consumption. The main aim was to get an understanding of what individuals view anti-consumption as and what seems to motivate them. And also to see if anti-consumption is a common practice or not.	2 Focus Groups	March-May 2011
Sorting Rounds	Sorting of items for questionnaires by a group of 2 judges (PhD student) and Feedback from the supervisor. The objective was to ensure content validity.	2 Rounds	September 2013
First Pilot Study	Paper questionnaires to post-graduate students in business school. The aim was to get feedback on the structure of questionnaire	20 usable replies	October 2013
Second Pilot Study	Paper questionnaires to consumers. The aim was to establish initial reliability and validity. And to get feedback on the structure of the questionnaire	30 Usable Replies	December 2013
Final Postal Survey	Face-to-face and self-administered questionnaires to consumers from Cardiff	288 Usable Replies	January-March 2014

A questionnaire was then constructed by using the items. Two pilot surveys were conducted to obtain feedback on the questionnaire leading to finalizing of the questionnaire. A detail discussion of these steps is presented in section 4.6. The strongest and most significant in terms of the used methods is the final paper-based survey. The questionnaire survey was utilized as the main data collection instrument as it allows investigators to inspect and explain associations between constructs (Bryman and Bell, 2003; Saunder et al., 2009).

4.5. A preliminary study of Cardiff consumers' anti-consumption

This section describes the preliminary findings of Cardiff consumers' anti-consumption obtained from the two focus groups. Due to its exploratory nature, qualitative focus group were used to gain initial understanding of how consumers of Cardiff view anti-consumption. Focus groups are a commonly used method (Mason, 1996). There are three main types of approaches a researcher can chose from. These are structured, semi-structured and unstructured (Saunder, et al., 2009). This study used semi-structured approach, as this approach is a source of getting rich insight into the participant's point of view while keeping the topic on track (Bryman and Bell, 2007). Structured approach, with strict questions in place, limit flexibility in topic discussed, whereas, unstructured approach can lead discussions to directions not in the interest of the research (Saunders, et al., 2009).

Due to limited time and resources focus group approach was used. Focus groups are also referred to as group interview technique and are seen as means of enhancing social investigation (Morgan, 1993). Focus groups are less costly than face-to-face interviews where one individual is interviewed at a given time. Focus groups are also considered flexible, and can benefit from group dynamic and permit reasonable probing (Morgan, 1993). The group setting encourages participants to contribute more. This tool is used to obtain phenomenological data in natural settings and is suitable if research is exploratory in nature, hence making it suitable for this particular piece of study.

One disadvantage of focus groups over quantitative methods is that this form of data collection is time consuming and expensive. Analysing and interpreting the qualitative data obtained can be time consuming and if the researcher is new, it can be challenging to interpret the data (Greenbaum, 1998, cited in Stokes and Bergin, 2006, pp. 28-29). Furthermore, it can be expensive to train interviewers' in conducting the interviews.

Concepts that were to be explored through the study were used to formulate a set of discussion guidelines that were used by the moderator during the focus group sessions. As aforementioned, the aim of these two focus groups was to understand how common anti-consumption is. Due to this, the discussion guideline that was formulated had questions related to anti-consumption, and no question related to materialism was included in the discussion guideline. This was reasonable as the aim of the focus group was not to gain understanding about materialism, rather it was to see how common anti-consumption practice is. When determining the characteristic of the two focus groups, Age was used as break characteristic - the characteristics that differentiate groups from each other - whereas, the control characteristic - the characteristics that are common to all groups - was anti-consumption behaviour. On these basis two groups were formed. First was for participants aged between 20-35 years, while the second group consisted of participants aged between 36-70 years.

The participants in this study were all living in the UK for an appropriate span of time. By no means was this an effort to represent the population of anti-consumers in general, on the contrary, it would be more appropriate to claim that a cross-section of people in the population was taken

in order to get general patterns across a wide range of cases and a variety of views, in accordance with the exploratory nature of this research. A non-probability, snowball sampling (Flick, 2009, p.122) was preferred. The wide range of age gave an opportunity to gain diverse opinions due to different life stages. A Facebook event was made and initially few individuals were invited to it. An introduction of the topic and an idea about who could participate in one of the two focus groups was mentioned on the event. The following was written on the Facebook event:

Anti-consumption in simple words means against consumption. if you avoid some product, are against some company and don't buy their products, believe that living simply is needed to save the world, try to reduce consumption because of religious, social, environmental or any other reason, are against the consumer culture, don't use products from some particular manufacturer, support local business or have any other similar behaviour then you can be a part of this study.

Individuals who were invited on that page were asked to invite their friends who they thought would be interested to participate. The respondents were also asked to bring individuals to one of the focus groups who were interested in the study but were not Facebook users. This technique helped to gather participants for the two groups. Additionally, females who had a past history of buying second hand goods were invited to take part in one of the focus groups. This was based on the understanding that shopping at second-hand shops has been identified as a form of anti-consumption (Binay and Brace-Govan, 2008). The two focus groups incorporated a total of 16

participants (8 in each group). It could be reasoned that more detailed data could be produced from more participants, however due to the sample's diversity, soon after the first focus group it was clear to the researcher that anti-consumption was practiced by almost all individuals and was a common happening. A copy of the focus group discussion guideline and consent form is included in Appendix One.

The researcher led all the focus groups during the period starting from 1st of August to 18th of August 2011. Once the participants for each group were decided, a place and time was decided that was convenient for all the members of that particular focus group. Two potential participants were dropped from the focus groups because the time slot provided by them was not suitable for the remaining participants in that focus group. A relaxed atmosphere was provided in both the focus groups. The data was collected through observing, listening and taking notes. Additionally, all the focus groups were video recorded. This facilitated the note taking, as the videos taken were used to understand participants' expressions afterwards as well. As a token of thanks, soft drink and tea was provided to participants during the focus groups.

At the start of each focus group the researcher introduced herself and explained the research objective. Each participant was provided with a consent form prior to the focus group. This was done to make participants aware of their right to remain anonymous and their right to voluntary involvement and withdrawal from the project at any given time. The participants were also informed that the research project abided with all the ethical rules of Cardiff Business School and had approval from the Cardiff

Business School Ethical Committee. Participants were then encouraged to elaborate liberally upon their experiences and ideas, to feel comfortable and take into consideration the fact that there are no correct or wrong answers.

The most challenging part of almost all of the research is the analysis of the data collected. However not much is written about analysing focus group data, especially from a social science perspective (Morgan, 1993). Basically there are two parts of the analysis of data collected through focus groups: mechanical part and interpretive part (Seidel and Clark, 1984 cited in Morgan, 1993). The first part, namely the mechanical part encompasses physically organizing and subdividing the data into sections. The interpretive part comprises of defining criteria for organizing the data into logically useful subdivisions (in essence coding the documents) and the exploration for patterns within and between these subdivisions to draw evocative conclusions.

The transcripts were prepared for each focus group and were analysed using content analysis and coding process. Initially a set of codes corresponding to each item in the focus group discussion guideline was developed. As the guideline had both major topics to be discussed and subtopics (specific questions) and along with this, few subtopics had probes, a separate code was assigned to every item at each level. In addition, any topic that was assigned a code of a subtopic was also connected with the code of the major topic under which the subtopic falls in the guideline. As the author went through the transcripts, coding was done according to the scheme developed. Furthermore, additional codes were also created that arose and were of interest but were not specifically mentioned in the guideline. The whole text

was read several times. Through coding anti-consumption activities and the frequency of these activities being practiced was determined.

From the two focus groups it was understood that different individuals practiced different level of anti-consumption in their lives. However, escaping consumption completely was not possible. This reinforced the argument that anti-consumption has moved from being a “minor stream of niche consumers” to “becoming a major trend in the overall market” (Choi, 2011, p. 117) and “It’s quiet, counterculture, potentially subversive, but also mainstream” (Maniates 2002, pp.199). For example Participant 4 (female 25) said

“it is not human to say that I will never consume extra or I will never buy something... you know....hmmm... like at times that is not possible, but you try your level best. And this struggle of consuming less and living simply is what I call anti-consumption”.

While participant 8 (male 20) said

“ anti-consumption for me is like Ramadan, you stop yourself from everything that is not good for you or for others around you, and this in one way or another makes you live simply..... at least at times, if not always”.

Both the above statements by participants reflect the idea that anti-consumption practices are common part of their life. Also as a participant 15 (male 57) stated

“All my friends drink, and they have been my friends for so long now.... I mean I avoid alcohol because of religious reasons of course, but yes I have

had alcohol a few times in life... you know... it's difficult to run away from it as it is a part of culture".

This echoes the fact that although the participants practice anti-consumption, escaping consumption completely is not possible. This is revealed in the statement made by participant 12 (female 48) who stated

"I don't like this crap of big companies. If I put myself in this consumption war I will lose. There is no point in it.... I am a complete person and I don't need these big brands to complete me.... but these advertisements target kids... and then my youngest son wants something... I can't say no to him always, you know he is just a kid. This is where I struggle."

And participant 14 (female 66) said

"It was difficult with my kids at home. They want to have fast food every day, and none of them would ever care about electricity... but it's much easier to live the way I want to now, as they ... I mean my kids are all living in their own houses".

In summary, the findings show that all respondents were able to relate to some experience of anti-consumption in their lives, but at the same time expressed how consumption is not escapable completely. The understanding gave researcher the support to take this research further, develop and validate a typology of consumers in terms of the balance between their anti-consumption and materialistic attitudes. It is important to note here that the main aim of the two focus groups was to explore how common anti-consumption is. For this reason, only questions pertaining solely to anti-

consumption were added in the questionnaire guide. Although, qualitative data related to materialism could have added to the research, however, due to limited time and resources, no qualitative data related to materialism was gathered.

4.6. The instrument

This section described the instrument used in this study. This section first discusses all the measurement scales this study has utilized, next is a discussion on designing the survey questionnaire, and lastly is the discussion of the two pre-test conducted prior to the main data collection.

4.6.1. Measurement scales used in this study

This section discusses the scales that were used to operationalize different constructs used in this study. The conceptualization of these constructs has been described in Chapter 3. Discussion on form of response to these measurement scales is also given.

4.6.1.1- Operationalization of anti-consumption attitudes

Iyer and Muncy's (2009) scale of the measurement of global impact attitude was used without modification. The scale had four items measuring the attitude. Sample questions include "We must all do our part to conserve." and "If we all consume less, the world would be a better place." The scale was measured on a 7-point Likert scale ranging from 1 being 'completely disagree' to 7 being 'completely agree'.

Table 4.5: Adjustments Made To Attitude Scales Used In The Thesis		
MATERIALISITC ATTITUDE SCALE		
Original scale	Adjustments	Scale used in this thesis
<p>1. My dream in life is to be able to own expensive things.</p> <p>2. People judge others by the things they own</p> <p>3. I buy some things that I secretly hope will impress other people</p> <p>4. Money is the most important thing to consider in choosing a job.</p> <p>5. I think others judge me as a person by the kinds of products and brands I use</p> <p>6. I am more concerned with personal growth and fulfillment than with material possessions</p>	<p>1. Item no#2 replaced with "The things one owns says a lot about how he/she is doing in life."</p> <p>2. Item added to scale: "Some of the most important achievements in life include acquiring material possessions"</p>	<p>1. My dream in life is to be able to own expensive things.</p> <p>2. The things one owns says a lot about how he/she is doing in life</p> <p>3. I buy some things that I secretly hope will impress other people</p> <p>4. Money is the most important thing to consider in choosing a job.</p> <p>5. I think others judge me as a person by the kinds of products and brands I use</p> <p>6. I am more concerned with personal growth and fulfillment than with material possessions.</p> <p>7. Some of the most important achievements in life include acquiring material possessions</p>
ANTI-CONSUMPTION ATTITUDE SCALE		
Original scale	Adjustments	Scale used in this thesis
<p>1. Given the choice, I would rather buy organic food.</p> <p>2. I make specific efforts to buy products made out of recycled material.</p> <p>3. "Waste not, Want not" is a philosophy I follow.</p> <p>4. I try to recycle as much as I can.</p> <p>5. We must all do our part to conserve the environment.</p> <p>6. If we all consume less, the world would be a better place.</p> <p>7. Most people buy way too many things that they really don't need.</p> <p>8. If the world continues to use up its resources, it will not survive.</p>	<p>Item added:</p> <p>1. I am more concerned with personal growth and fulfillment than with material possessions</p>	<p>1. Given the choice, I would rather buy organic food.</p> <p>2. I make specific efforts to buy products made out of recycled material.</p> <p>3. "Waste not, Want not" is a philosophy I follow.</p> <p>4. I try to recycle as much as I can.</p> <p>5. We must all do our part to conserve the environment.</p> <p>6. If we all consume less; the world would be a better place.</p> <p>7. Most people buy way too many things that they really don't need.</p> <p>8. If the world continues to use up its resources, it will not survive.</p> <p>9. I am more concerned with personal growth and fulfillment than with material possessions</p>

Iyer and Muncy's (2009) scale of the measurement of voluntary simplicity attitude was used with some modifications. Scale developed by Iyer and Muncy to measure voluntary simplicity attitude consists of four items. However, none of the four items examine the anti-materialistic aspect of voluntary simplicity. Given that Voluntary Simplicity is an anti-materialistic lifestyle by definition (Nepomuceno, 2012; Etzioni, 1998; Gregg, 1936; Shama, 1981), it was considered important to add an item to measure this aspect of voluntary simplicity attitude. The new item: "I am more concerned with personal growth and fulfilment than with material possessions" was added to cover the full spectrum of voluntary simplicity attitude. The questions were measured on a 7-point Likert scale ranging from 1 being 'completely disagree' to 7 being 'completely agree'. Table 4.5 lists adjustments made to the items measuring anti-consumption attitude.

4.6.1.2- Operationalization of materialistic attitude

A modified version of Moschis and Churchill's (1978) scale was used in this thesis. This scale has been adopted by different studies in past, for example both Lui et al., (2012) and Schaefer et al., (2004) have used a seven-item version of materialistic attitude scale. For this study, the materialistic attitude scale was discussed with two judges (1 PhD student and 1 academician) from Cardiff Business School. The discussion lead to replacement of one item "people judge others by the things they own" by "the things one owns says a lot about how he/she is doing in life" which was adapted from Richen and Dawson's (1992) materialistic value scale. It was considered, after discussion with the judges, that the replaced item was better

suited for individuals from the UK. Additionally, one item “some of the most important achievement in life includes acquiring material possessions” was added to the scale. This item was also taken from Richen and Dawson’s (1992) materialistic value scale. This second item highlighted the significance of material possessions in an individual’s life, and given that Moschis and Churchill (1978) defined materialistic attitudes as “orientations emphasizing possessions and money for personal happiness and social progress” it was considered appropriate to include the item. In this way a seven-item scale is used to operationalize materialistic attitude in this thesis. A 7-point Likert scale with (7) being ‘strongly agree’ and (1) being ‘strongly disagree’ is used as the response scale. Sample questions include “it is true that money can buy happiness” and “I buy some things that I secretly hope will impress other people”. Table 4.5 present the adjustments made to materialistic scale.

To establish construct validity for both materialistic attitude and anti-consumption attitude scales, 2 judges (both PhD students) were asked to sort the items into construct categories. Following Davis’ (1986) and Moore and Benbasta (1991) approach to establish construct validity, two judges (both PhD students) were asked to rank how well the 16 items (9 items measuring anti-consumption attitude and 7 items measuring materialistic attitude) fit the construct definitions. The judges were asked to sort items into two categories, materialism and anti-consumption. The two judges established that 9 items of anti-consumption and 7 items of materialism correctly fit the two constructs. Thus content validity for items in the two scales was achieved.

4.6.1.3- Schwartz Value Survey (SVS) for measurement of the motivational values

Schwartz value survey (SVS) with 58 items inventory (Schwartz, 1992) was used without modification to measure the ten motivational values. Following Hansen (2008), a 7-point Likert scale ranging from 1 being ‘not important’ to 7 being ‘very important’ was used to measure respondents’ assessment of how important the values were to them in their life. Table 4.6 present the values items used in this thesis.

4.6.1.4- Operationalization of environmental consciousness

Hansla’s (Hansla et al, 2008; Hansal, 2011) scale of measurement of environmental consciousness was used without modification. Discussed in chapter 3, section 3.4.3, environmental concerns and awareness of consequences represent the two components of environmental consciousness.

Five items, including “The balance in nature is delicate and easily upset” and “Over the next several decades, thousands of species will become extinct” measured environmental consciousness on a 7-point Likert scale, with 7 being ‘strongly agree’ and 1 being ‘strongly disagree’. Also adapted from Hansla’s (2008) study, participants were asked to indicate the degree to which they were concerned about harmful effects of environmental problems for five forms of living beings including “all people”, “plants” and “animals”. A 5-point scale was used to measure the response with 5 being ‘Very much concerned’ and 1 being ‘Not concerned at all’. List of the items used to operationalize environmental consciousness is presented in table 4.6.

Table 4.6: List Of Items Used To Operationalize Values And Environmental Consciousness	
Values	
1.EQUALITY (equal opportunity for all) 2.INNER HARMONY (at peace with myself) 3. SOCIAL POWER (control over others, dominance) 4. PLEASURE (gratification of desires) 5. FREEDOM (freedom of action and thought) 6. A SPIRITUAL LIFE (emphasis on spiritual not material matters) 7. SENSE OF BELONGING (feeling that others care about me) 8. SOCIAL ORDER (stability of society) 9. AN EXCITING LIFE (stimulating experiences) 10. MEANING IN LIFE (a purpose in life) 11. POLITENESS (courtesy, good manners) 12. WEALTH (material possessions, money) 13. NATIONAL SECURITY (protection of my nation from enemies) 14. SELF RESPECT (belief in one's own worth) 15. RECIPROCATION OF FAVOURS (avoidance of indebtedness) 16. CREATIVITY (uniqueness, imagination) 17. A WORLD AT PEACE (free of war and conflict) 18. RESPECT FOR TRADITION (preservation of time-honoured customs) 19. MATURE LOVE (deep emotional & spiritual intimacy) 20. SELF-DISCIPLINE (self-restraint, resistance to temptation) 21. PRIVACY (the right to have a private sphere) 22. FAMILY SECURITY (safety for loved ones) 23. SOCIAL RECOGNITION (respect, approval by others) 24. UNITY WITH NATURE (fitting into nature) 25. A VARIED LIFE (filled with challenge, novelty and change) 26. WISDOM (a mature understanding of life) 27. AUTHORITY (the right to lead or command) 28. TRUE FRIENDSHIP (close, supportive friends) 29. A WORLD OF BEAUTY (beauty of nature and the arts)	30 SOCIAL JUSTICE (correcting injustice, care for the weak) 31. INDEPENDENT (self-reliant, self-sufficient) 32. MODERATE (avoiding extremes of feeling & action) 33. LOYAL (faithful to my friends, group) 34. AMBITIOUS (hard-working, aspiring) 35. BROADMINDED (tolerant of different ideas and beliefs) 36. HUMBLE (modest, self-effacing) 37. DARING (seeking adventure, risk) 38. PROTECTING THE ENVIRONMENT (preserving nature) 39. INFLUENTIAL (having an impact on people and events) 40. HONOURING OF PARENTS AND ELDERS (showing respect) 41. CHOOSING OWN GOALS (selecting own purposes) 42. HEALTHY (not being sick physically or mentally) 43. CAPABLE (competent, effective, efficient) 44. ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances) 45. HONEST (genuine, sincere) 46. PRESERVING MY PUBLIC IMAGE (protecting my "face") 47. OBEDIENT (dutiful, meeting obligations) 48. INTELLIGENT (logical, thinking) 49. HELPFUL (working for the welfare of others) 50. ENJOYING LIFE (enjoying food, sex, leisure, etc.) 51. DEVOUT (holding to religious faith & belief) 52. RESPONSIBLE (dependable, reliable) 53. CURIOUS (interested in everything, exploring) 54. FORGIVING (willing to pardon others) 55. SUCCESSFUL (achieving goals) 56. CLEAN (neat, tidy) 57. SELF-INDULGENT (doing pleasant things) 58. OBSERVING SOCIAL NORMS (to maintain face)
Environmental Consciousness	
Awareness of consequences	Environmental concern
1. The effects of pollution on public health are worse than we realise 2. Pollution generated in one country can harm people in other parts of the world. 3. The balance in nature is delicate and easily upset 4. Over the next several decades, thousands of species will become extinct. 5. Claims that current levels of pollution are changing the environment are exaggerated	1. Indicate the degree to which you are concerned about harmful effects of environmental problems for: a) All people b) People of UK c) Children d) My Children e) Plants f) Marine life g) Birds h) Animals

4.6.1.5- Operationalization of subjective wellbeing

To measure the cognitive component of subjective wellbeing Diener et al.'s (1985) Satisfaction With Life (SWL) scale was used without modification. This scale consists of five items that were measured on a 7-point Likert scale ranging from 7 being 'strongly agree' to 1 being 'strongly disagree'. Sample questions include "In most ways my life is close to my ideal" and "The conditions of my life are excellent".

The affective domain of subjective wellbeing was measured through Watson et al.'s (1988) Positive and Negative Affect Scale (PANAS), on a scale of 5, with 1 being 'not at all' and 5 being 'frequently', participants were asked to report the extent they felt certain states over the past few weeks on 20 items. With 10 items for positive affect and 10 for negative affect, including "irritable" and "hostile" for negative affect, and "proud" and "enthusiastic" for positive affect. Table 4.7 gives a detail of the items used to measure wellbeing.

4.6.1.6- Operationalization of authenticity

Following Barrett-Lennard (1998, p. 82 in Wood et al, 2008) conceptualization, this study operationalizes authenticity with its three constructs, self-alienation, authentic living and accepting external influence, through 12 items that are measured on a 7-point Likert scale with 7 being 'strongly agree' and 1 being 'strongly disagree'. Authentic living is expressed through four items (AUTL1-AUTL4), self-alienation also through four items (AUTSA1-AUTSA4), and four items (AUTEX1-AUTEX4) measure the third aspect of accepting external influence. Sample questions include "I live in

accordance with my values and beliefs” and “I don’t know how I really feel inside”. Table 4.7 give the list of these 12 items.

Table 4.7: List Of Items Used To Operationalize Wellbeing And Authenticity		
Wellbeing		
Satisfaction with life	Positive affect	Negative affect
1. In most ways my life is close to my ideal. 2. The conditions of my life are excellent. 3. I am satisfied with my life. 4. So far I have got the important things I want in life. 5. If I could live my life again, I would change almost nothing.	1. Interested 2. Excited 3. Strong 4. Enthusiastic 5. Proud 6. Alert 7. Inspired 8. Determined 9. Attentive 10. Active	1. Distressed 2. Upset 3. Guilty 4. Scared 5. Hostile 6. Irritable 7. Ashamed 8. Nervous 9. Jittery 10. Afraid
Authenticity		
Self-alienation	Authentic living	Accepting external influence
1. I do not know how I really feel inside. 2. I feel as if I do not know myself very well. 3. I feel out of touch with the ‘real’ me. 4. I feel alienated from myself.	1. I think it is better to be yourself than to be popular. 2. I always stand by what I believe in. 3. I am true to myself in most situations. 4. I live in accordance with my values and beliefs.	1. I am strongly influenced by the opinions of others 2. I usually do what other people tell me to do. 3. I always feel I need to do what others expect me to do. 4. Other people influence me greatly.

In summary, each variable was measured using multivariate measurements. A summated scale is the term used for such scales. Summated scale is when several single items are used to measure one variable. The aim is to avoid the use of only one variable to characterize a concept (Hair et al., 1998). The two main benefits of a summated scale are firstly, the use of multiple-variables reduces the dependence on a single response and thus offers means to overcome measurement error. In this way a multiple-variable scale generate true response better than what could be attained though a single response. Secondly, a summated scale has the capability to capture various aspects of a concept in a single measure, thus generating more well-rounded standpoints (Hair et al., 1998).

All but three constructs - positive affect, negative affect and environmental concern - in the study were measured by asking participants questions to be answered on a 7-point Likert scale ranging from (1) being 'strongly disagree' to (7) being 'strongly agree'. Although originally these scales (except for Schwartz Value survey which uses a 7-point Likert scale) used 5-point Likert scale, however 5 and 7 point scales are shown to generate similar results (Daws 2008). Additionally, participants usually ignore the extremes points when responding to questionnaire items (Hair et al., 2008), thus selection of a 7-point Likert scale offers enough choice (if respondents omit extreme options, they will still have 5 options to choose from) and yet makes things manageable for participants, as a 9-point or 11-point scale could result in only a few respondents having a clear idea of the difference between these options (Dawes, 2008). Whereas, for positive affect, negative affect and environmental concern the participants had to answer on a 5-point Likert scale ranging from (1) being 'strongly disagree' to (5) being 'strongly agree'. This was done to keep comparability of results.

4.6.2. Designing the questionnaire

A questionnaire helps to translate the research objectives into specific questions, serve as the quality control of any feedback given by the respondents, speed up data analysis, and to standardize the feedback from participants, thus, making an important part of the research process (Burns and Bush, 2006). A questionnaire with measurement scales for materialistic attitude, anti-consumption attitudes, ten motivational values, cognitive and affective components of subjective wellbeing, belief and awareness

components of environmental consciousness and three components of authenticity was developed. Given its significance, it is very important to have a well designed questionnaire. Figure 4.2 presents the steps involved in questionnaire design process.

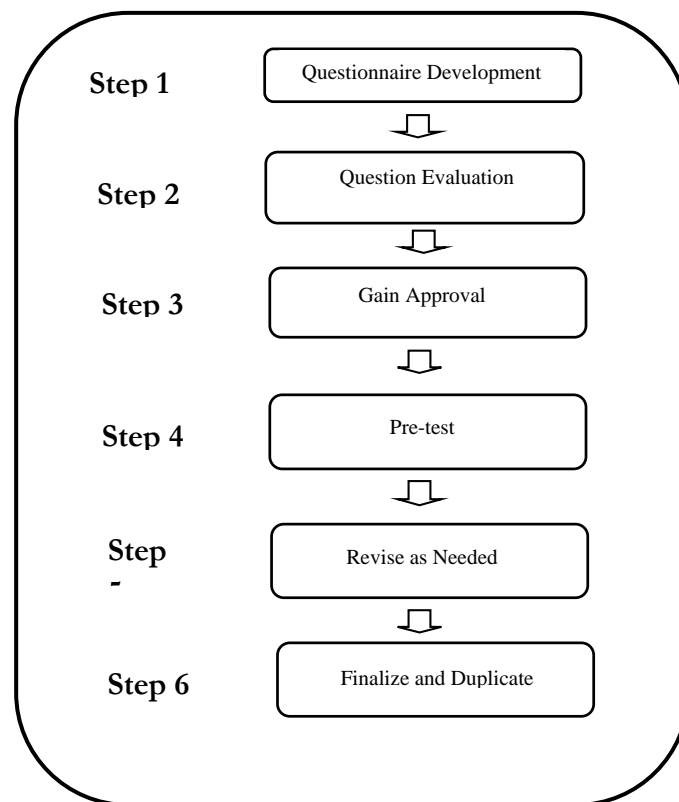


Figure 4.2: Steps involved in Questionnaire Design Process

The aim of the study was to examine consumers' attitudinal balance between their anti-consumption and materialistic attitudes, so as to classify these consumers with respect to difference in this balance. Apart from that, the study wanted to measure consumer's values, level of subjective wellbeing, level of environmental consciousness and authenticity in order to validate the classification. The first step in the questionnaire design, as shown in figure 4.2, is questionnaire development. While developing a questionnaire, the sequence of the questions presented in the questionnaire is considered vital for success of a study (Churchill, 1992). Given the significance of structure of a

questionnaire, much emphasis was placed on the design and layout of the questionnaire. As suggested by Churchill (1992), the first set of items were non-threatening and simple. The aim was to encourage respondents to relax and be motivated to answer the entire questionnaire with a relaxed mind. The last section of the questionnaire had personal questions, which could be sensitive. These included questions related to demographics or personal profile. Additionally, the only two open-ended questions, which asked respondents for a feedback or comments about the questionnaire, and contact detail to be considered in the prize draw, were placed at the end of the questionnaire. The supervisor of this thesis and research ethics committee members of Cardiff University then evaluated the questionnaire. Once approval was gained, the study moved to the next step.

The next step was to conduct pre-tests among selected respondents. Two pre-tests were conducted. Both the pre-test were aimed at identifying potential problems with the survey design. Details are discussed in sub-section 4.6.3. Following the first pre-test, changes were made to the survey design. This followed a pre-test with the improved design of the questionnaire. The two pre-tests led to finalization of the questionnaire and the questionnaire was ready to be tested among the actual consumers' survey.

4.6.3. Pre-tests

Conducting a pilot study or pretesting could be viewed as a rehearsal before the actual survey and is considered as the most important step in survey development (Churchill and Iacobucci, 2002; Cooper and Emory, 1995). Two

pilot studies were done in this research before going for the main data collection. These two pilot tests are discussed below.

4.6.3.1. First pilot test

Pilot testing is important in development of a good questionnaire (Churchill, 1992; Dillon et al., 1990). Pretesting gives an opportunity to gain response from real population so as to detect a range of potential mistakes, varying from the simply inconvenient ones to potentially catastrophic ones that can ruin the whole research. Viewing pilot testing as the best safety net, this research conducted two pilot studies. Being an initial test, the sample size was kept quite small in both the studies. The aim of the first pilot test was to confirm that the mechanics of composing the questionnaire had been ample. Keeping this in mind, for the first pre-test, paper based questionnaires were handed to a convenient sample of 20 randomly selected post-graduate students from Cardiff University. This sample was chosen so as to gain opinions about the questionnaire from individuals who had good questionnaire and research related skills and knowledge. Cardiff University is ranked 5th in the UK (REF, 2014) and among the top 125 Universities in the world (QS World Rankings 2014/2015) for research excellence, thus, making the sample for the first pilot-test suitable. The first pre-test showed that on average, participants took about 20-30 minutes to fully answer the questionnaire. The respondents were also requested to comment on the layout, wording, instructions and length of the questionnaire.

Feedback from the first pre-test showed that some of the participants criticised the design of the questionnaire as having cluttered appearance. In

response to this criticism, questions were rearranged and related questions were put together in a group to give the illusion of reduced length of the questionnaire. Each question also was numbered so respondents could keep track of their progress.

Few respondents also criticised the design of the questionnaire. In response the questionnaire was printed in a way that it formed a small booklet. The booklet format of the questionnaire not only made the questionnaire look shorter, but also offered ease of reading and turning pages along with a reduced chance of misplaced or lost pages. Basically, the aim of the first pre-test was to make sure that the guidelines for the ordering of the questions agreed by many researchers (e.g. Churchill, 1992; Malhotra, 1996) is followed. The pre-tests acted as a mode of validating and improving the structure of the questionnaire.

4.6.3.2. Second pilot test

The full-scale pilot test of the revised questionnaire was the penultimate stage of the validation process. Questionnaires were given to 30 randomly selected individuals. The principal aim of this test was to validate the appropriateness, reliability and comprehensiveness of the measurement scales. At this stage 30 usable questionnaires were returned. Among the respondents, 52% were female and 48% were male. Data obtained at this stage was used for initial tests.

One of the initial tests is reliability. Reliability refers to the accuracy, reproducibility, stability over time and consistency of a measurement instrument (Kerlinger, 1979). Reliability could be calculated through use of

several statistical methods, like Cronbach's alpha, test-retest approach, and split-half technique (McDaniel and Gates, 2005). Among these, the internal consistency method (Cronbach's alpha) is the most used method for determining reliability (Koufteros, 1999). Keeping this in mind, this study used the same. Normally, scales with an alpha score over 0.7 are considered reliable (Churchill, 1979). From the second pilot-test it was validated that all the scales had Cronbach's alpha values above 0.7. Table 4.8 gives the alpha values for each scale obtained through the second pilot-test.

Table 4.8: Reliability Analysis For Scales Based On Second Pilot-Test		
Variables	Cronbach's Alpha	Number of items
Schwartz Values	0.949	58
Anti-Consumption Attitude		
Global Impact Attitude	0.775	4
Voluntary Simplifier Attitude	0.736	5
Materialistic Attitude	0.767	7
Subjective Wellbeing		
Satisfaction With Life	0.814	5
Positive Affect	0.783	10
Negative Affect	0.723	10
Environmental Consciousness		
Awareness Of Consequences	0.70	5
Environmental Concern	0.712	8
Authenticity	0.711	12

However, due to the small sample size chosen for the second pre-test, any other analytical test was not considered suitable at this stage. Along with checking reliability, the second pre-test was seen a rehearsal before the actual survey. As the samples for the second pre-test were similar to those of the proposed main sample, their feedback on instructions and wording of the measurement scales was considered important to validate the questionnaire. Respondents were asked to comment on the wordings, ease of understanding and structure of the questionnaire. The extensive literature review, and the

feedback and recommendations received from the lecturers, researchers and participants were also considered as a valuable means to improve content validity. Most of the participants affirmed the ease and clarity of not only the wording of items but also the instructions. Few participants, who fell in the elder age group, recommended a bigger font sizes. On average, it took about 25 minutes to answer the questionnaire fully.

Based on the feedback from the second pilot-test the font size of the questionnaire was increased by two points. After a few adjustments in margins, the questionnaire was ready for the main survey. A copy of the final questionnaire used in this study is provided in Appendix Two.

4.7. Survey design and data collection

In this study, survey approach with a structured questionnaire was employed as the main method for data collection. There are several benefits related to a structured questionnaire. A structured questionnaire confirms a degree of uniformity as it guarantees that all the respondents will answer questions in the same order. Additionally the length of a unstructured questionnaire is usually not controllable, while for a structured questionnaire the length is better controlled (Churchill and Iacobucci, 2002; Saunders et al., 2009)

To test the hypotheses presented in chapter 3, a survey approach, with its advantages like ease of administration, suitability for tabulation, suitability for statistical analysis, and standardization, was considered suitable to generate data for this study (Burns and Bush, 2006).

When considering means of administering the questionnaire there are two available types. These are interview administered and self-administered (Bryman and Bell, 2007; Saunders et al., 2009). In case of self-administered questionnaires, postal services, internet or delivery and collection could be used as a means of distribution. While the interview administered questionnaires are usually completed via face-to-face or telephonic interviews. Initially, the option of Internet survey was considered, as they are lower in cost than paper based questionnaires. However, Schwartz (1992) advises to use SVS on paper based surveys and not on internet surveys due to the multi-sectored structure of values (Schwartz, 2009), and given that the values orientations by Schwartz (1992) are an important element of this study, the idea of internet survey was dropped. Self-administer method, wherein the participant completes the survey on her/his own, was adopted as the main method to administer the survey. There are three main advantages of adopting this approach of administering a survey. These advantages are reduced cost and no interviewer evaluation apprehension. Nevertheless, this approach results in lack of monitoring, lack of respondent control, and high questionnaire requirements.

A few respondents preferred that the researcher conducted the survey in a face-to-face interview manner, thus both interview administered and self-administered approaches were used, with self-administered approach as the dominant one. In a face-to-face survey, the researcher reads questions to the participant and registers their responses. This approach offers adaptability, feedback, rapport and quality control of participants (Burns and Bush, 2006). This method of survey administration also helps the researcher to avoid any

incomplete questionnaires. Nonetheless, this method has its drawback for example human error, slowness, fear of interviewer evaluation (presence of investigator who may generate nervousness) and cost.

In summary, this study used survey for main data collection. The main data collection involved several procedures. Participants were contacted directly by the investigator either through telephone, and e-mail or face-to-face meeting and an introduction of the researcher and a brief description of the research was given to them. These individuals were then asked if they would be interested in filling the questionnaire. 80% of the times, the participants answered in the affirmative. The willing individuals were then given a questionnaire to fill in. Out of the total, 7 (five elderly participants and two with slow reading ability) participants preferred that the researcher read the questionnaire, thus a face-to-face approach was used for these respondents. Participants were encouraged to feel free to ask any questions related to research. On receiving the questionnaire back, the researcher quickly went through every page of the questionnaire to make sure all the questions were answered. In case some question was not answered, the participant was requested to provide an answer to that specific question. Once the participant had completed the questionnaire he/she was offered the opportunity to enter 6 lucky draws - three £25, one £50, one £75 and one £100- as a token of appreciation. Due to the length of the questionnaire, it took from 20 to 45 minutes to complete a questionnaire. Participants were willing to participate because they found the research topic interesting and relevant to them. Additionally, few of the participants were interested to know more about the findings of this research project.

4.8. Ethical issues

Ethical considerations are an important part of any research (Ritchie et al., 2013). The first ethical issue this research considered was privacy of the respondents. Respondents usually refuse to or are reluctant to answer questions that contain personal information that the participant does not want to make public. Such information could be related to income, age, specific beliefs or even their actual consumption behaviour. It is mandatory for an investigator to keep participant's privacy, anonymity and confidentiality (Ritchie et al., 2013). Keeping this in mind, participants of this research were informed that they have the right to deny answering any question that they do not find appropriate. They were also informed that they could withdraw from this study at any time without giving a reason. The participants were guaranteed that the material they provide would be treated as confidential and anonymous.

Next ethical consideration was informed consent. Ethically each respondent should be fully informed about the research process before they make the decision to participate (Ritchie et al., 2013). Keeping this in mind, each respondent was given as much information as required. The participants were also given the opportunity to ask any question if needed. This was done to make sure that the participants had full information about this research before deciding to participate, thus leading to an informed decision. A copy of the consent form and the ethics form for this study are provided in Appendix two. Finally, the confidentiality of records was the last ethical consideration. Confidentiality of records means that the findings of research should be clear

of any individual identification. For this purpose, the investigator was very careful when dealing with the identities of participants. Participants were guaranteed that the research findings from this study would not have any individual identifier.

Further, to keep the anonymity of participants, they were not required to give any contact details. However, they had an option to provide a contact detail (email/telephone) if they wanted to be a part of the prize draw, so the researcher could contact them in case they are one of the winners. Finally, participants who were interested in findings of the study were asked to provide a working email address on which they could be emailed the findings once the research is published.

4.9. Summary

The current research used mixed method in order to develop, validate and explore consumer categories with respect to their anti-consumption and materialistic attitudes. A preliminary study of Cardiff consumers via two focus groups was conducted in order to explore how embedded anti-consumption was in the current consumer culture. Data were collected and analysed to assess whether anti-consumption has become a common happening or not. This was important as it made the basis for the main argument of the thesis that consumers of current era are faced with the challenge of managing between two contradictory attitudes – materialistic attitude and anti-consumption attitude. This chapter also gives justification of the methodology and the rationale for the choice of Cardiff as a context for

the study.

Chapter 5 presents the various steps that were taken to transform the data before it could be used for quantitative analysis. These steps involved entering the data into the computer, transforming the data, checking data accuracy and developing a database that was used for the various analyses. Quantitative data obtained for this thesis came from the self-administered and face-to-face survey. The raw data was entered into an SPSS file using a standard SPSS version 20 statistical program. Once this was done, the file was re-examined and data entered was checked again. Help was taken from a PhD student who checked that the data was entered correctly from the questionnaires to the SPSS file. After it was assured that data had been entered correctly, one item that had to be reverse coded in scale to measure environmental concern was identified. Reverse coding was done for the item stating “Claims that current levels of pollution are changing the environment are exaggerated”. That is to say for this item 1 represented ‘strongly agree’, while 7 represented ‘strongly disagree’. SPSS’s transform data option was used for this purpose.

Next, the items were grouped. As the items measuring different variables were presented randomly in the questionnaire, it was mandatory to group different items that were measuring a single variable. For example, seven items measuring materialistic attitude were grouped together. Similarly, 5 items measuring voluntary simplicity attitude were grouped together and 4 items measuring global impact attitude were grouped together. The same was done for the items measuring other variables under examination in this thesis. To generate a single value for each variable, the values of the items in each

group were added together and an average was taken. This was done for all the variables. As a result, a composite measure was generated for each variable. The next two chapters present the results of the quantitative analysis of data collected.

Chapter 5

DESCRIPTIVE ANALYSIS

5.1. Introduction

This chapter presents the basic statistics related to the respondents' demographic profile and the constructs studied. This is done through use of SPSS version 20 and its related literature (Hair et al., 2008; Bryman, 2004; Burn and Bush, 2006; Pallant, 2007; Malhotra et al., 2012). Descriptive analyses are used early in the analysis process to describe the general configuration of responses and as a way to interpret the characteristic of respondents (Burns and Bush, 2006).

This chapter is divided into six sections. The first section describes an overview of chapter 5 and order of presentation. The second section looks at non-response bias. The third section offers a description of the characteristics of the individuals who participated in the study. It is considered useful to collect information about sample's socio-demographic profile along with any other relevant background information, when studying humans, because this helps to generate an understanding of the characteristics of the sample (Pallant, 2007). The statistical concept of percentage is used for this section.

The fourth section presents an overview of how the respondents answered the survey questions related to the attitudes and different aspects of wellbeing, environmental consciousness and authenticity. The concept of percentage frequencies, central tendency (mean) and dispersion (Standard deviation) is used for this section. The fifth section deals with psychometric

properties of the measurement scale. Analysis are conducted upon the reliability and dimensionality of the scale used in this study. Cronbach α and item-total correlation are used in order to check reliability of scales, while exploratory factor analysis is used to check dimensionality of scale.

The next stage involves data preparation and screening in order to ensure that the data meets all requirements for multivariate analysis that would be conducted and reported in the next chapter for testing the 12 hypotheses. Thus, sixth section looks at data screening and preparation. This includes evaluation of missing data and its impact, identifying outliers, and assessment of normality. Mahalanobis D2 is utilized for analysis of multivariate outliers, while skewness and kurtosis are used for assessing normality.

5.2. Non-response bias

The final data collection was done over a period of 12 weeks, commencing in the first week of January 2014 until last week of March 2014. Paper based questionnaire were handed out to a randomly selected sample of 330 consumers in Cardiff. 288 fully filled useable questionnaires were received back, giving a response rate of 85%. Armstrong and Overton (1977) and Lambert and Harrington (1990) advised comparing the last quartile participants with the first quartile participants to check for any potential non-response bias. This is the most widely used technique (Wagner and Kemmerling, 2010). Mann-Whitney-U test and Wilcoxon-W test were conducted to check non-response bias and the results yielded no significant

differences ($p = 0.05$) between the last quartile and the first quartile respondents. The results showed that most assessments generated no significant differences ($p > 0.05$) between the two groups with regard to the various aspects of their anti-consumption and materialistic attitudes, wellbeing, environmental consciousness and authenticity. Hence, it was presumed that respondents did not differ from non-respondents and thus non-response bias was not a concern in the present study (see Appendix Three).

5.3. Overall sample demographic profile

This section discusses the general demographic profile of the respondents and the results of descriptive statistics. The final data for this study was collected from different regions of Cardiff city. Before going ahead with the data collection, a good study of the census (2011) was conducted. According to the census (2011), 93% of the population in Wales described themselves as white, there were more females than males, and that education and employment continued to increase while unemployment continued to fall. The goal was to make sure that the sample represents the general population of UK. Since this thesis aims to classify general consumers of current era, thus the sample should be representative of the population. Table 5.1 and figure 5.1 show the general demographic profile of the survey participants.

Table 5.1: Overall Demographic Profile of Survey Respondents

Demographic Variable	Category	Research Sample (n = 288)	
		Frequency	%age
Gender	Female	190	66%
	Male	98	34%
Age	18-25	89	31%
	26-35	70	24%
	36-50	76	27%
	51-65	43	15%
	66 or over	10	3%
Highest Educational Qualification	Primary education	8	2%
	Secondary education	51	18%
	A-levels/College	68	24%
	Higher education (Degree)	97	34%
	Postgraduate degree (e.g. master's, PhD)	64	22%
Occupation	Student	53	18%
	Clerical Staff	71	25%
	Self-employed	55	19%
	Retired/Pensioner	9	3%
	Others	16	6%
	Unemployed	3	1%
	Technical Staff	15	5%
	Housewife/husband	4	1%
	Professional/senior management	62	22%
Religious orientation	Christian	135	47%
	Muslim	9	3%
	Do not want to say	5	2%
	Other religious affiliations	18	5%
	Jewish	2	1%
	Buddhist	2	1%
	No Affiliation	117	41%
Ethnic origins	White	264	91%
	Asian or Asian British	10	4%
	Other	3	1%
	Black or Black British	2	1%
	Mixed	9	3%
Annual household income	Less than £10,000	48	16%
	£10,001 - £15,000	36	13%
	£15,001 - £20,000	44	15%
	£20,001 - £25,000	23	8%
	£25,001 - £35,000	38	13%
	£35,001 - £45,000	38	13%
	£45,001 - £55,000	24	9%
	£55,001 - £70,000	23	8%
	£70,001 - £100,000	11	4%
	above £100,000	3	1%
Believe in decreasing general consumption	Yes	190	66%
	No	98	34%

With respect to gender, the majority in the study were female (N=190), representing 66% of the population, while males were comparatively lesser in proportion (34%, N=98). According to the 2011 census, there were more women than men in Wales (Census 2011) thus the slight bend toward women was aimed to represent the population better.

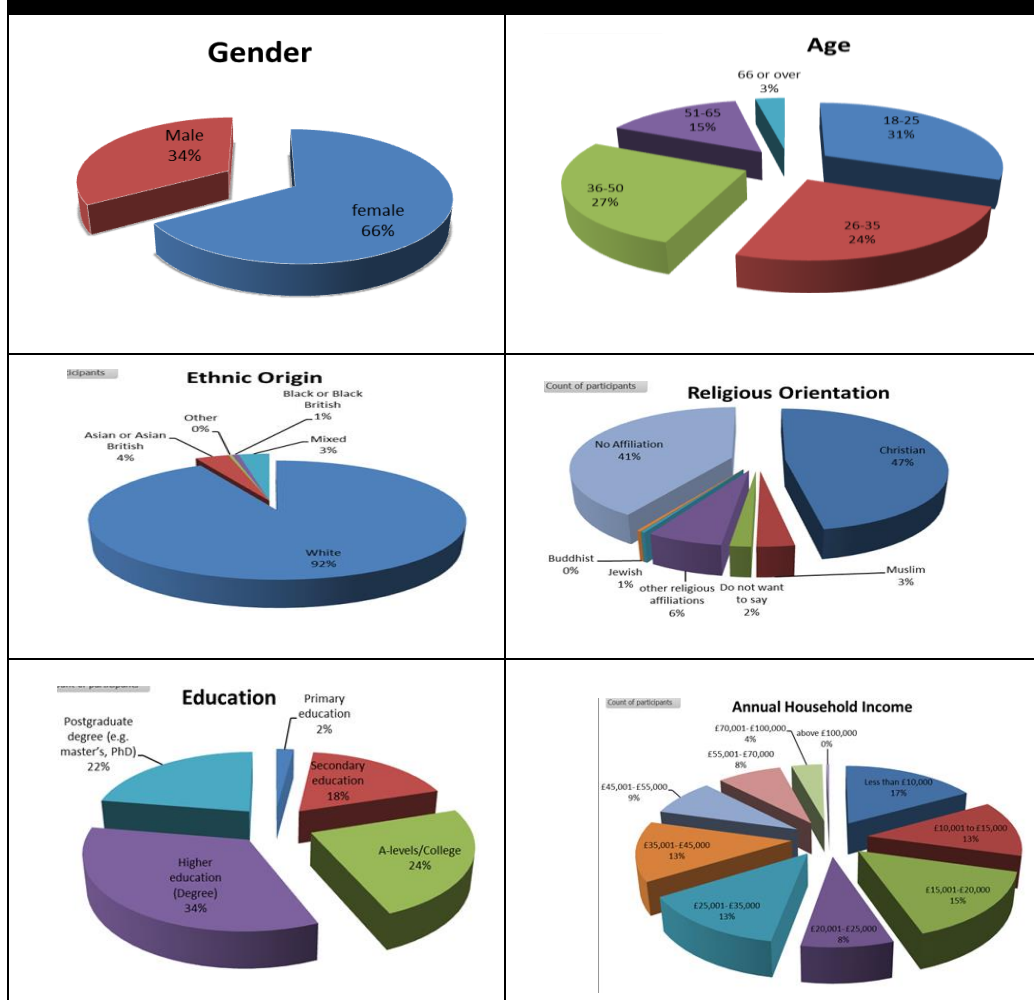
The sample has a good blend of age with 31% (N=89) of respondents falling between 18-25 years, 51% of respondents falling between 26 and 50 years of age (24%, N=70 and 27%, N=76, falling in age groups of 26-35 and 36-50 respectively). Figure 5.1, shows that 15% of respondents were aged between 51 and 65 and only 3% were aged above 65.

In the 2011 census 93% of Wales' population described themselves as white British and those describing their ethnic group as Asian were the second largest group (Census 2011). The vast majority of participants (92%, N=264) in this study expressed their ethnic origin as white British, followed by Asians representing 4% (N=10), mixed representing 3% (N=9) and Blacks representing 1% (N=2).

Given the fact that as per the 2011 census more than half of the population of Wales gave Christianity as their religion and 32.1% said that they had no religion, the sample represents a good coverage of the religious affiliation of Wales, as 47% (N=135) of participants gave their religion as Christianity and 41% (N=117) expressed that they had no religious affiliation. The sample also has representation of other religious affiliation with 3% (N=9) Muslims, 1% (N=2) Jewish and 6% (N=18) with other religious

affiliation, while, 2% (N=2) of the sample preferred not to disclose their religion.

Figure 5.1: A Pictorial Profile of the Survey Respondents



In term of education, census (2011) reflected that there were more individuals with level 4 or higher qualification, e.g. bachelor's degree, than individuals with no qualification. In the sample 34% (N=97) of respondents had higher education where 22% (N=64) had postgraduate degree, 24% (N=68) of respondents had A-level as highest qualification, 18% (N=51) had

secondary education and only 2% (N=6) had primary education. This shows that more than 50% of the participants had university degree, and thus, the sample consisted of well-educated individuals.

With respect to occupation of the participants, the largest group belonged to clerical staff representing 25% (N=71) of the population, followed by professional/senior management representing 22% (N=62). 19% (N=55) of respondents claimed to be self-employed, whereas 18% (N=53) of the sample selected student as occupation. Furthermore 6% (N=16) of the respondents stated their occupation as other, 5% (N=15) were working as technical staff, 3% (N=9) were retired or seeking pension, 1% (N=2) were unemployed and 1 % (N=3) were housewives/husbands. In term of annual household income 17% (N=48) of the participants indicated that their total household income was less than 10,000£, 15% (N=44) had 15,001-20,000£ annual household income, 13% of the participants fell within each of the three income groups with annual income of 10,001-15,000£, 25,001-35,000£ and 35,001-45,000£ (N= 36, 38 and 38 respectively). Both 20,001-25,000£ and 55,001-70,000£ ranges had 8% of participants each (N=23). Whereas 9% (N=24) of the participants fell in the range of 45,001-55,000£ household income and only 4% (N=11) indicated to have 70,001-100, 00£ annual household income.

Given that this study aims to classify the contemporary consumers in terms of their anti-consumption and materialistic attitudes, it is important that the sample represents the general population of UK. To achieve this goal, census (2011) was used as a guide. After 5 weeks of data collection, an initial

examination was done to see the demographic profile of respondents. These initial findings were compared with the results of census (2011) so as to determine if the data matches the characteristics in terms of age, gender, occupation and education with the general population. It was revealed through this initial examination that the data had no major deviations from the structure reflected in census (2011). This is also evident from the above discussion, as the sample appears to be a representative of general population as described in census (2011).

5.4. Descriptive analysis of variables

This section looks at the descriptive statistics of the variables operationalized in the present study. This study uses multivariate measurements for each variable. These scales are known as summated scales. A summated scale is one where a number of single variables are measured into one amalgamated measure. The purpose is to avoid the use of only one variable to characterize a concept (Hair et al., 1998).

Tables 5.2, 5.3 and 5.4 present results of means and standard deviations for each variable of all the constructs. For ease of understanding, first the scales measuring the attitudes (materialistic attitude and anti-consumption attitude with global impact attitude and voluntary simplicity attitude) are discussed. This is followed by a discussion of results of means and standard deviations of the four psychographic variables that are used for validating the clusters in the proposed typology. Keeping the order of discussion that has been used in previous chapters, first the scales to measure

well-being are discussed, this is followed by discussion of scales measuring environmental consciousness and authenticity. Descriptive analysis of the ten vales was not considered suitable. The Reason for this is discussed in section 5.4.2.4.

5.4.1. Descriptive analysis of attitudes

This sub-section discusses the descriptive statistics and response frequencies through the use of mean, standard deviation and percentage for

1. Materialistic attitude
2. Anti-consumption attitude
 - a. Global Impact attitude
 - b. Voluntary Simplicity attitude

Table 5.2: Descriptive Statistics for Clustering Constructs												
Construct		Response Scale (%)							Respondents percentage		Mean	SD
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	Low	High		
Materialistic Attitude	MAT1	10.7	8.7	13.9	20.8	10.5	10.8	14.6	33.3	35.9	4.22	1.834
	MAT2	18.8	7.3	10.1	16.0	18.8	11.1	18.1	36.2	48.0	4.14	2.081
	MAT3	25.7	5.9	9.7	12.8	15.3	16.3	14.2	41.3	45.8	3.92	2.187
	MAT4	18.1	8.3	8.3	14.2	19.4	16.3	15.3	34.7	51	4.19	2.060
	MAT5	14.2	8.3	13.2	19.4	19.1	15.3	10.4	35.7	44.8	4.08	1.868
	MAT6	28.8	8	5.6	12.2	16.3	12.5	16.7	42.4	45.5	3.83	2.263
	MAT7	20.5	9.7	10.8	17	17	13.2	11.8	41	42	3.87	2.024
Voluntary Simplicity Attitude	VS1	0.7	2.1	5.2	21.9	24.7	25.3	20.1	8.0	70.1	5.24	1.32
	VS2	11.5	7.6	9.7	20.5	17.7	12.2	20.8	28.8	50.7	4.45	1.95
	VS3	12.8	13.2	14.6	25.7	17.7	8.7	7.3	40.6	33.7	3.77	1.73
	VS4	4.2	7.3	9.4	26.4	22.2	17.4	13.2	20.9	52.8	4.61	1.58
	VS5	2.8	1.7	4.9	12.5	16.7	26.7	34.7	9.4	78.1	5.58	1.49
Global Impact Attitude	GI1	0.3	1.0	3.8	9.4	18.8	26.0	40.6	5.2	85.4	5.85	1.25
	GI2	1.7	3.8	5.2	15.3	20.8	22.2	30.9	10.7	73.9	5.41	1.51
	GI3	0.7	0.3	3.8	8.3	17.4	26.7	42.7	4.8	86.8	5.93	1.23
	GI4	1.0	5.2	3.5	15.3	18.8	19.4	36.8	9.7	75	5.51	1.53

A 7-point scale was used for all items.

Value less than 4 = low,

Value more than 4 = high

Value of 4 =moderate

5.4.1.1. Materialistic attitude

Materialistic attitude is measured by seven items on a 7-point Likert scale. On this 7 point scale, a value of less than 4 is considered low, a value of more than 4 is considered high and value of 4 is considered the mid-point or moderate. Accordingly, the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. The response frequencies and descriptive statistics for materialism are presented in table 5.2. Based on the frequency distribution and mean score for each item, participants demonstrated slightly high to slightly low level of materialistic attitude. This argument is based on the fact that the mean of all the 7 items measuring materialistic attitude ranges between value of 3.83 to 4.22, thus, being more close to the middle value of 4. More than 40% agreed with the views that their dream in life was to own expensive things (48% for MAT2, mean= 4.14, SD=2.081), that some of the most important achievement in life includes acquiring material possessions (45.5% for MAT6, mean=3.83, SD=2.263), that money is the most important thing to consider in choosing a job (44.8% agreed with MAT5, mean= 4.08, SD=1.868), that usually others judge them as a person by the kinds of products and brands they use (42% agreed with MAT7, mean=3.87, SD=2.024), that money can buy happiness (35.9% agreed with MAT1, mean= 4.22, SD=1.834) and that the things one owns says a lot about how he/she is doing in life (45.8% agreed with MAT 3, mean=3.92, SD= 2.187). Lastly 51% of respondents agreed with the idea of buying things that they secretly hoped

will impress others (MAT4, mean=4.19, SD=2.06). Thus, a moderate level of materialism seems to be the norm.

5.4.1.2. Anti-consumption attitude

As discussed in chapter 3, section 3.2, general anti-consumption attitude is measured through global impact attitude and voluntary simplicity attitude. Five items are used to measure voluntary simplicity attitude while four items are used to measure global impact attitude.

5.4.1.2.1. Voluntary simplicity attitude

Voluntary simplicity attitude (VS) is measured through five items. The response frequencies and descriptive statistics for voluntary simplicity are presented in table 5.2. Here as well, the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. On inspection of the mean scores concerning the voluntary simplistic attitude by respondents (VS1-VS5) it could be seen that participants demonstrate high voluntary simplistic attitude. For instance, more than 70% (70.1% and 78% respectively) agreed that they are more concerned with personal growth and fulfilment than with material possessions, and that they try to recycle as much as they can (VS1 and VS5, mean= 5.24 and 5.58, SD=1.32 and 1.49 respectively). Likewise, more than 50% (50% and 52%) of the participants highly agreed with the statements that given the choice they would rather buy organic food and that waste not, want not is the philosophy they follow (VS2 and VS4, mean= 4.45 and 4.61, SD=

1.95 and 1.58 respectively). Nevertheless, participants had a low agreement with the statement that they make specific efforts to buy products made out of recycled materials (40.6% disagree with VS3, mean=3.77; SD=1.73). One reason for slightly lower agreement with VS3 could be the effort that is required to buy products made out of recycled materials. The busy lifestyle practiced in current consumerist societies makes it hard and challenging to go out of ones way to be an anti-consumer, rather many individuals try to adopt anti-consumption in every day practices (Black and Cherrier, 2010) to the extent that they don't have to put a huge amount of extra effort into it.

5.4.1.2.2. Global impact attitude

A four-item scale measures the global impact attitude of individuals (GI1-GI4). The response frequencies and descriptive statistics for the global impact are presented in table 5.2. The respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. On examination of the mean scores concerning the global impact attitude by participants it is interesting to note that all items have mean values of above 5, signifying the presence of a high level of global impact attitude. As could be seen from table 5.2, more than 85% (85.4% and 86.8% respectively) agreed that we must all do our part to conserve the environment (GI1, mean=5.85, SD=1.25), and that most people buy way too many things that they really don't need (GI3, mean= 5.93, SD=1.23). Similarly, more than 70% (73.9% and 75% respectively) agreed that if we all consume less, the world would be a better place (GI2, mean=5.41, SD=1.51) and that if we all

continue to use up the world's resources, the planet will not survive (GI4, mean= 5.51, SD=1.53). Together, these findings show that a large share of respondents expressed a high global impact attitude.

5.4.2. Descriptive analysis of the four psychographic variables

Table 5.3 presents the descriptive statistics and response frequencies for the four psychographic variables this thesis uses to validate the clusters in the proposed typology. As discussed in chapter 3, satisfaction with life, positive affect and negative affect are used to evaluate wellbeing, while awareness of consequences and environmental concern indicates one's environmental consciousness. Authentic Living, Self-alienation and External Influence are the three components that determine authenticity.

1. Well-being
 - a. Satisfaction with Life
 - b. Negative Affect
 - c. Positive Affect
2. Environmental consciousness
 - a. Awareness of Consequences
 - b. Environmental Concern
3. Authenticity
 - a. Authentic living
 - b. Self-alienation
 - c. External influence
4. Value orientations

Descriptive statistics and response frequencies for each of these four variables are discussed below.

5.4.2.1. Descriptive analysis of subjective well-being

Discussed in chapter 3 section 3.4.2, this study measures the cognitive component of subjective well-being through the Satisfaction with Life Scale adapted from Diener et al. (1985), and the affective domain of subjective well-being through the Positive And Negative Affect Scale (PANAS) adapted from Crawford and Henry (2004) and Watson et al., (1988). This section looks at the descriptive analysis of items that are used to operationalize

1. Satisfaction with life
2. Positive affect
3. Negative affect.

5.4.2.1.1. Satisfaction with life

Satisfaction with life scale (SWL1-SWL5) consists of five items and is a reliable and a valid scale (Diener et al. 1999). These five items are measured on a 7-point Likert scale with a response range from 1 (strongly disagree) to 7 (strongly agree). The response frequencies and descriptive statistics for each item of satisfaction with life are presented in table 5.3. Given that a 7-point scale was used, value less than 4 was considered low, value more than 4 was considered high and value of 4 was considered moderate. Accordingly, the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. On review of the mean scores regarding the satisfaction with life experienced by the respondents it is interesting to see that all five items have a mean value exceeding the midpoint, i.e. 4, signifying that a substantial amount of

participants experience high satisfaction with life. The outcome is further verified through frequency results. For example, 72.9% respondents agreed that they are satisfied with their life (SWL3, mean=5.10; SD=1.40), whereas 71.5% agreed that so far they have got the important things they want in life (SWL4, mean=5.17; SD=1.57). 65.3% indicated that the condition of their life are excellent (SWL2, mean=4.84; SD=1.38) and 64.9% agreed that in most ways their life is close to their ideal (SWL1, mean=4.64; SD=1.50). Finally, item stating, “If I could live my life again, I would change almost nothing” received slightly less agreement (44.1%) compared to other items (SWL5, mean=4.64; SD=1.50).

5.4.2.1.2. Positive affect

The study used ten items to measure frequency of positive emotional experiences (i.e. interested, excited, enthusiastic, proud, inspired, determined, attentive, alert, strong and active). ‘Past few weeks’ was used as reference time point. The participants had to specify for each of the chosen emotions how frequently they had felt them during the past few weeks ranging from 1 being not at all to 5 representing frequently. The response frequencies and descriptive statistics for each of the ten positive emotions are presented in table 5.3. Given that a 5-point scale was used, value less than 3 was considered low, value more than 3 was considered high and value of 3 was considered moderate. Accordingly, the respondents’ percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1 or 2 as answer to that item, while the respondents’ percentage (high) for the same item is calculated by adding percentage of respondents who chose 4 or 5 for that item. It could be seen from the table that the mean for all items is

higher than the midpoint 3, thus indicating that majority of respondents' experienced positive emotions during the last few weeks prior to data collection. The frequency analysis shows that more than 50% of the participants experienced all positive affect except for being inspired (PA5). 75% reflected the experience of feeling interested, while 58.3% felt excited, 66.3% felt strong, 60.4% felt enthusiastic, 63.5% felt alert, 59.8% felt inspired, 66.3% felt determined, 75% felt attentive and 59.8% felt active (PA1, PA2, PA3, PA4, PA6, PA7, PA8, PA9, PA10 ; mean=4.05, 3.69, 3.78, 3.62, 3.81, 3.64, 3.8, 4.0 and 3.63; SD=.944, 1.032, .947, 1.123, .945, .970, .95, .95 and .971 respectively). Lastly, 47.2% of participants experienced being inspired (PA5, mean= 3.30; SD=1.117).

5.4.2.1.3. Negative affect

Like positive emotional experience, the study used ten items to measure frequency of negative emotional experiences (i.e. distressed, upset, scared, irritable, nervous, jittery, afraid, guilty, hostile and ashamed) with the 'past few weeks' as a reference time point. The response frequencies and descriptive statistics for each of the ten negative emotions are presented in table 5.3. Similar to positive affect the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1 or 2 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 4 or 5 for that item. From the table it could be analysed that participants experienced less negative emotions, as all but one emotions (irritable NA4) had mean below the midpoint 3. Frequencies of the nine emotions (NA1, NA2, NA3, NA5, NA6, NA7, NA8, NA9 and NA10) echo the same results.

Table 5.3: Descriptive Statistics for Well-being Constructs												
Construct		Response Scale (%)							Respondents percentage		Mean	SD
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	Low	High		
Satisfaction with Life	SWL1	3.1	8.7	11.1	12.2	35.1	22.9	6.9	22.9	64.9	4.64	1.50
	SWL2	0.7	5.9	12.2	16.0	29.9	26.4	9.0	18.8	65.3	4.84	1.38
	SWL3	0.3	5.6	11.1	10.1	25.0	35.4	12.5	17.0	72.9	5.10	1.40
	SWL4	1.7	5.9	9.7	11.1	20.1	29.9	21.5	17.3	71.5	5.17	1.57
	SWL5	7.6	13.5	19.8	14.9	14.9	18.8	10.4	40.9	44.1	4.13	1.80
Positive Affect		(1)	(2)	(3)	(4)	(5)			Low	High	Mean	SD
	PA1	1.7	3.5	19.8	37.8	37.2			5.2	75.0	4.05	.944
	PA2	2.4	9.7	29.5	33.0	25.3			12.1	58.3	3.69	1.032
	PA3	2.1	6.9	24.7	43.4	22.9			9	66.3	3.78	.947
	PA4	4.2	14.2	21.2	36.1	24.3			18.4	60.4	3.62	1.123
	PA5	7.3	16.3	29.2	33.7	13.5			23.6	47.2	3.30	1.117
	PA6	.7	8.0	27.8	36.8	26.7			8.7	63.5	3.81	.945
	PA7	2.4	9.4	28.5	41.0	18.8			11.8	59.8	3.64	.970
	PA8	2.2	6.7	24.7	43.4	22.9			8.9	66.3	3.8	.95
	PA9	1.6	3.7	19.5	37.8	37.2			5.3	75.0	4.0	.95
	PA10	2.2	9.5	28.5	41.0	18.8			11.7	59.8	3.63	.971
Negative Affect	NA1	16.0	26.0	26.4	19.4	12.2			42	31.6	2.86	1.251
	NA2	14.9	27.8	25.7	19.1	12.5			42.7	31.6	2.86	1.246
	NA3	41.0	25.0	17.7	10.4	5.9			66	16.3	2.15	1.232
	NA4	6.3	21.5	28.5	27.1	16.7			27.8	43.8	3.26	1.157
	NA5	16.3	24.0	24.0	24.7	11.1			40.3	35.8	2.90	1.257
	NA6	31.9	26.7	23.3	12.5	5.6			58.6	18.1	2.33	1.203
	NA7	44.1	25.7	12.8	12.5	4.9			69.8	17.4	2.08	1.227
	NA8	15.9	26.1	26.4	19.5	12.1			42	31.6	2.9	1.3
	NA9	41.1	24.9	17.7	10.	6.3			66	16.3	2.1	1.2
	NA10	44.3	25.5	12.8	12.3	5			69.8	17.3	2.0	1.22

For SWL value less than 4= low, more than 4= high and 4=moderate

For PA and NA value less than 3=low, more than 3=high and 3=moderate

Specifically, 42% of the participants had low experience of distress, 42.7% had low experience of being upset, 66% had experienced low level of being scared, 40.3% had not felt nervous much, 58.6% experienced low level of jittery, 69.8% had no or low experience of being afraid, 42% had not felt guilty, 66% had low experience of feeling hostile and 69.8% had not felt ashamed in the last few weeks (NA1, NA2, NA3, NA5, NA6 and NA7, NA8, NA9 and NA10 respectively, mean= 2.86,2.86, 2.15,2.90, 2.33, 2.08, 2.9, 2.1 and 2.0 respectively; SD=1.251, 1.246, 1.235, 1.257, 1.203, 1.227, 1.3, 1.2

and 1.22 respectively). Lastly, 43.8% of the participants experienced high irritability (NA4, mean=3.26; SD=1.157).

A prevalent belief among scholars is that most of the time individuals are contented with their life (Diener & Diener, 1996; Cummins, 1995). An initial look at the wellbeing of participants of this study reflects the same, thus supporting past research.

5.4.2.2. Descriptive analysis of environmental consciousness

As discussed in chapter 3 section 3.4.3, this thesis assesses environmental consciousness through awareness of consequences and environmental concerns. Descriptive analysis of both awareness of consequences and environmental concerns are discussed below and presented in table 5.4.

5.4.2.2.1. Awareness of consequences

This study uses a five-item scale to measure awareness of consequences of human activities on the earth (AC1-AC5) on a 7-point scale. Accordingly, the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. The response frequencies and descriptive statistics for awareness of consequences are presented in table 5.4. From table 5.4 it is clear that a majority of participants are aware of the consequences that human actions have for the environment. For example, 82.6% of participants stated that pollution generated in one country can harm people in other parts of the world (AC2,

mean=5.78, SD=1.29). More than 75% (75.7% and 76.1% respectively) of participants agreed that the balance in nature is delicate and easily upset (AC3, mean=5.52; SD=1.33) and that over the next several decades, thousands of species will become extinct (AC4, mean=5.55; SD=1.39). 67.1% of participants agreed that the effects of pollution on public health are worse than we realise (AC1, mean=5.16; SD=1.47) and 52.1% disagreed with the claim that current levels of pollution are changing the environment are exaggerated. Overall, the scale reflects that majority of participants are aware of the consequences that pollution and human activities have on earth.

Table 5.4: Descriptive Statistics for Discriminating Constructs

Construct		Response Scale (%)							Respondents percentage		Mean	SD
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	Low	High		
Awareness of Consequences	AC1	1.7	4.2	5.2	21.9	21.2	24.7	21.2	11.1	67.1	5.16	1.47
	AC2	0.3	2.1	2.1	12.8	19.4	24.0	39.2	4.5	82.6	5.78	1.29
	AC3	0.0	1.7	5.6	17.0	20.5	24.3	30.9	7.3	75.7	5.52	1.33
	AC4	0.7	2.8	3.1	17.4	18.8	25.0	32.3	6.6	76.1	5.55	1.39
	AC5	5.6	5.9	12.2	24.3	18.1	17.0	17.0	23.7	52.1	4.62	1.69
Authenticity	AUTL1	.7	1.7	.3	6.9	19.8	35.1	35.4	2.7	90.3	5.90	1.143
	AUTL2	.3	1.7	5.2	14.6	25.3	29.9	22.9	7.2	78.1	5.44	1.262
	AUTL3	.7	1.0	2.8	12.8	27.4	34.4	20.8	4.5	82.6	5.52	1.166
	AUTL4	1	1.4	3.1	15.6	26.4	31.3	21.2	5.5	78.9	5.43	1.245
	AUTSA1	21.9	19.1	15.3	14.2	11.5	11.5	6.6	56.3	29.6	3.35	1.909
	AUTSA2	30.2	25.7	11.8	12.8	11.1	6.3	2.1	67.7	19.5	2.76	1.699
	AUTSA3	25	23.3	14.9	16.3	10.1	6.6	3.8	63.2	20.5	2.98	1.736
	AUTSA4	42.7	23.3	12.8	12.8	5.2	2.1	1	78.8	8.3	2.25	1.441
	AUTEX1	16.3	16	21.9	21.9	16	5.2	2.8	54.2	24	3.32	1.578
	AUTEX2	24.7	21.2	21.2	15.6	13.2	2.8	1.4	67.1	17.4	2.85	1.530
	AUTEX3	18.8	14.6	18.1	18.4	17.7	8.3	4.2	51.5	30.2	3.43	1.740
	AUTEX4	14.9	20.1	14.9	22.9	16	8.0	3.1	49.9	27.1	3.41	1.650
Environmental Concern		(1)	(2)	(3)	(4)	(5)			Low	High	Mean	SD
	EC1	1.4	1.7	18.8	49.0	29.2			3.1	78.2	4.02	0.82
	EC2	1.7	3.1	18.8	50.0	26.4			4.8	76.4	3.96	0.86
	EC3	1.4	1.4	11.8	41.3	44.1			2.8	85.4	4.25	0.82
	EC4	4.2	1.0	12.5	27.4	54.9			5.2	82.3	4.28	1.01
	EC5	1.0	3.8	27.4	40.3	27.4			4.8	67.7	3.89	0.89
	EC6	0.7	4.9	21.9	41.3	31.3			5.6	72.6	3.98	0.88
	EC7	0.7	4.2	23.6	43.8	27.8			4.9	71.6	3.94	0.85
	EC8	0.3	3.1	20.1	43.8	32.6			3.4	76.4	4.06	0.82

For awareness of consequences and authenticity value less than 4 = low, more than 4 = high and 4 = moderate

For environmental concern value less than 3 = low, more than 3 = high and 3 = moderate

5.4.2.2.2. Environmental concern

Environmental concern is measured through eight items that are measured on a 5-point scale. Accordingly, the respondents' percentage (low) for each item is calculated by totalling the percentage of respondents who selected 1 or 2 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 4 or 5 for that item. The response frequencies and descriptive statistics for environmental concern are presented in table 5.4. On examination of the frequencies for environmental concern it can be seen that a majority of participants (all above 65%) are concerned about the harmful effects of environmental problems for all people (EC1, 78.2%, mean=4.02; SD=0.82), for people of UK (EC2, 76.4%, mean=3.96; SD=0.86), for children (EC3, 85.4%, mean=4.25; SD=0.82), for their children (EC4, 82.3%, mean=4.28; SD=1.01), for plants (EC5, 67.7%, mean=3.89; SD=0.89), for marine life (EC6, 72.6%, mean=3.98; SD=0.88), for birds (EC7, 71.6%, mean=3.94; SD=0.85), and/or for animals (EC8, 76.4%, mean=4.06; SD=0.82). Thus, it could be concluded that a majority of participants were concerned about the harmful effects that pollution and human activities have on the environment.

5.4.2.3. Descriptive analysis of authenticity

Authenticity, in this study, is seen as a tripartite construct as proposed by Barrett-Lennard (1998) and discussed in chapter 3 section 3.4.4. The first aspect of authenticity is self-alienation. Self-alienation reflects an individual's experience of feeling out of touch with one's true self and/or not knowing

oneself. Authentic living makes up the second aspect of authenticity. Authentic living means expressing emotions and behaving in a way that is consistent with one's values and beliefs. Thus, it means being true to one's self. Finally, accepting external influence makes up the third and final aspect of authenticity. As the name suggests this aspect of authenticity reflects the degree to which one accepts the influence of others. Accepting external influence reflects the understanding that one has to act in a way so as to fulfil expectations of others.

The current study operationalizes these three aspects of authenticity through 12 items, four items for each construct adapted from Wood et al, (2008), that are measured on a seven point Likert scale (1 being strongly disagree – 7 being strongly agree). Authentic living is expressed through four items (AUTL1-AUTL4), self-alienation is measured through four items (AUTSA1-AUTSA4) and four items (AUTEX1-AUTEX4) measure the third aspect, i.e. accepting external influence. Accordingly, the respondents' percentage (low) for each item is calculated by totaling the percentage of respondents who selected 1, 2 or 3 as answer to that item, while the respondents' percentage (high) for the same item is calculated by adding percentage of respondents who chose 5, 6 or 7 for that item. The response frequencies and descriptive statistics for all the 12 constructs are presented in table 5.4. From table 5.4 it can be seen that more than 70% of participants experienced high authentic living, as 78% participants strongly agreed that they stand by what they believe in (AUTL2, mean= 5.44, SD=1.262) and that they live in accordance with their values and beliefs (AUTL4, mean= 5.43, SD=1.245). While 82% of the people strongly agreed that they are true to

themselves in most situations (AUTL3, mean= 5.52, SD=1.166) and 90% of the participating individuals strongly agreed that they think it is better to be yourself than to be popular (AUTL1, mean= 5.90, SD= 1.143). This shows that the participants experienced high level of authentic living.

More than half of the participants reflected low level of self-alienation. As the table shows, 53% of participants strongly reflected that the statement “I don’t know how I really feel inside” does not describe them at all (AUTSA1, mean=3.35, SD=1.909). Whereas 67% and 63% of participants strongly agreed that the statements I feel as if I don’t know myself very well (AUTSA2, mean= 2.76, SD=1.699) and I feel out of touch with the real me (AUTSA3, mean= 2.9, SD=1.736) did not describe them respectively. A total of 78.8% strongly disagreed with the statement that I feel alienated from myself (AUTSA4, mean=2.25, SD=1.441). Thus, the majority of participants felt low self-alienation.

Finally, the third aspect of authenticity was also seen as being low in the participants, more than 50% of participants did not agree that any of the statement used to operationalize accepting external influence reflected them strongly. For example, 54.2% disagreed with the statement that they are strongly influenced by the opinions of other (AUTEX1, mean=3.32, SD= 1.578), while 67% disagreed with the statement that they usually do what other people tell them to do (AUTEX2, mean=2.85, SD=1.53). Also, 51.4% of the participants disagreed with the statement that they always need to do what others expect them to do (AUTEX3, mean=3.43, SD=1.74) and 50% disagreed to the notion that other people influence them greatly (AUTEX4, mean=3.14, SD=1.65). Putting it all together, it can be seen that a majority of

participants have a high level of authentic living, low level of self-alienation and low level of accepting external influence. Thus the participants experience high authenticity.

5.4.2.4. Descriptive analysis of the ten individual values

Schwartz (2009, p.4) indicated, “that for most purposes it is necessary to make a correction for individual differences in use of the response scale” when examining the ten values. For using the values in correlation analysis, regression analysis or group comparisons, the raw score of values cannot be used as this will not give meaningful results (Schwartz, 2009). Following instructions given by Schwartz (2009), each individual’s total score on all value items was calculated and divide by 58 (the total number of items). This generated a score (mean Rating called MRAT) for each individual. For each individual, each item’s score was then centred around that individual’s MRAT. These new scores for the 58 values were called centred scores. Finally, score for the 10 values was computed by taking means of the centred scores of items presenting that value. Due to this process, results generated a wide range of value scores and it was not suitable to determine a single midpoint for all the values. For this reason, this study did not consider descriptive analysis of the ten values to be suitable.

5.5. Psychometric properties of the measurement scales

Psychometrics branches from psychology and is concerned with the construction and validation of measurement scales (Guilford, 1954). This study has used summated scales to measure the psychographic variables.

Conceptual definition, dimensionality, reliability, and validity are the four basic issues related to any summated scale (Hair et al., 1998). It has been explained that:

The starting point for creating any summated scale is its conceptual definition. The conceptual definition specifies the theoretical basis for the summated scale by defining the concept being represented in terms of its applicability to the research context. ... Dimensionality [focuses] on the items which are unidimensional meaning that they are strongly associated with each other and represent a single factor. ...Reliability is an assessment of the degree of consistency between multiple measurements of a variable. ...Validity is the extent to which a scale or set of measures accurately represent the concept of interest (Hair et al., 1998, pp. 117-118).

This study does not develop a new scale, rather uses already developed scales (discussed in chapter 4). Therefore, this section only looks at the dimensionality and reliability of the scales used in the study.

5.5.1. Dimensionality of the scales

In order to use a summated scale one important requirement is that of uni-dimensionality. To assess dimensionality of a scale the appropriate statistical technique to be used is factor analysis (Hair et al, 2008). Factor analysis investigates whether factors exist by analysing the correlations between two or more variables. Factor analysis could be seen as a tool of data reduction. Additionally, factor analysis is utilized to identify and refine the constructs that are underlying an observed variable (Pallant, 2007). The purpose of factor analysis is what makes it different from any other dependent

technique such as multivariate analysis of variance. Factor analysis is not designed for prediction purposes, rather, this technique is utilized for identification of structure.

Factor analysis has two main approaches, namely (1) exploratory factor analysis and (2) confirmatory factor analysis. Exploratory factor analysis (EFA) helps to discover the likely interrelationship between a set of variables without imposing a predetermined arrangement on the outcome. Confirmatory factor analysis (CFA) instead is comparatively a more complex set of techniques, which is usually used later in the research process so as to verify the factor structure and to test hypotheses between observed variables (Pallant, 2007). All the scales used in this study are taken from past researches and are well established, however it is appropriate to use EFA so as to validate their structure.

Factor analysis comprises of different allied techniques: Principal Component Analysis (PCA) and Factor Analysis (FA). These two arrangements of techniques are comparable in many ways; nevertheless, they do vary in a number of ways. When applying PCA, analysis transforms the original variables into a smaller set and then all of the variables are analysed. On the other hand, in FA, the factors are engaged from a mathematical model and merely the shared variance is analysed (Tabachnick and Fidell, 2001). This research implements PCA instead of FA, as PCA tends to be the more robust method. PCA has been claimed to be a simpler mathematical model that avoids some of the possible problems that are related with factor analysis in factor interdependency (Stevens, 1996 cited in Pallant, 2007). Large loadings

are obtained through PCA rather than other methods (Cooper, 2002 cited in Brace et al., 2006). Factor analysis using the principal components method (PCA) helps to explain as much variance in the data as possible (Kim and Mueller, 1978). For these reasons it could be concluded that PCA is the superior selection for a simple empirical summary of the data set (Tabachnick and Fidell, 2001). Although PCA and FA are two arrangements of techniques under factor analysis, in order to avoid confusion for this section, this study will use the term factor analysis as a general term to express the entire family of techniques with FA being one of the techniques in the group of factor analysis.

5.5.1.1. Steps in conducting factor analysis

Conducting of factor analysis involves three steps: 1) assessment of the suitability of the data for factor analysis, 2) principal component analysis to extract the factors from the correlation matrix and 3) factor rotation if more than one factor is extracted. The above steps were undertaken for all the variables used in the study and the results are discussed below.

5.5.1.1.1. Assessment of suitability of data

To assess the suitability of data for factor analysis, a matrix of correlation is produced for the total affective variable combinations in addition to the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity. These two measures assist to verify if the data set is suitable for factor analysis or not. In case of KMO a value of 0.6 and above is considered a positive signal for conducting factor analysis. Also the Bartlett's test of Sphericity should be significant ($p < 0.05$) if one wants to conduct the factor

analysis (Pallant, 2007). The results of KMO and Bartlett's test for all the variables are given in table 5.5 below.

As could be seen in table 5.5 the KMO value for all the variables exceeded the recommended value of 0.6. Also the Bartlett's test of Sphericity had statistical significance. Thus, it was concluded that the data was suitable for factor analysis.

Table 5.5: Tests for Assessment of Suitability of Data				
Variables	Kaiser-Meyer-Olkin Measure of Sampling Adequacy	Bartlett's Test of Sphericity		
		Approx. Chi-Square	df	sig
Global Impact	.834	561.662	6	.000
Materialism	.905	858.631	21	.000
Voluntary Simplicity	.876	691.489	10	.000
Awareness of Consequences	.785	353.410	10	.000
Environmental Concern	.855	1914.522	28	.000
Satisfaction With Life	.814	624.774	10	.000
Positive Affect	.858	465.845	21	.000
Negative Affect	.832	742.004	21	.000
Authenticity	.834	1460.548	66	.000
Conformity	.672	150.076	6	.000
Tradition	.731	136.758	10	.000
Security	.692	147.222	10	.000
Stimulation	.667	170.776	3	.000
Self-direction	.674	150.889	10	.000
Hedonism	.650	110.375	3	.000
Achievement	.749	238.138	6	.000
Power	.756	328.603	10	.000
Benevolence	.773	246.610	10	.000
Universalism	.808	532.840	21	.000

5.5.1.1.2. Principal component analysis

Once it was decided that data was suitable for factor analysis, the next step was to perform principal component analysis so as to extract the factors from the correlation matrix. This was done with the aim of defining the minutest number of factors that can be used to best characterise the interrelations

among variables (Pallant, 2007). Kaiser's principle or eigenvalue rule of 1.0 or higher was used to assist in the judgement regarding the number of factors to retain. Findings of this step for this study are shown in table 5.6 and 5.7.

Table 5.6: Total Variance Explained for Variables with Single Factor Loading			
	Component	Extraction Sums of Squared Loadings	
		Total	% of variance
Global Impact	1	2.908	72.705
Voluntary simplicity	1	3.353	67.067
Awareness of Consequences	1	2.560	51.205
Environmental Concern	1	4.623	79.264
Satisfaction With Life	1	3.144	62.882
Security	1	1.964	48.204
Stimulation	1	1.922	64.06
Positive Affect	1	3.150	45.003
Negative Affect	1	3.608	51.542
Conformity	1	1.933	48.317
Tradition	1	1.997	39.944
Self-Direction	1	1.973	39.465
Hedonism	1	1.753	58.419
Achievement	1	2.234	55.848
Power	1	2.532	50.638
Benevolence	1	2.354	47.075
Universalism	1	3.005	42.927
Materialism	1	4.042	57.740

Table 5.6 represents all the variables that recorded only one component with eigenvalues above 1. For all the variables in this table the solution was not rotated because only one factor was extracted. From the table it could be seen that the percentage of variance that was explained by each component varied from 39% to 79% (for self-direction and environmental concern respectively).

Table 5.7: Total Variance Explained for Authenticity							
Variable	Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
		Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
Authenticity	1	4.536	37.801	37.801	2.734	22.781	22.781
	2	2.031	16.926	54.726	2.729	22.742	45.523
	3	1.401	11.673	66.399	2.505	20.876	66.399

Authenticity, however, produced more than one factor solution. The results are shown in table 5.7. For authenticity the three components explained 66% of variance.

5.5.1.1.3. Factor rotation

For authenticity the factors were rotated. Varimax method was used to minimise the number of components that had high loadings on each other. This method also preserved independence among the factors. A factor loading is calculated to see the pattern of which variables are possibly explained by which factor (Brace et al., 2006). Squared factor loadings specify what percentage of variance in an original variable is described by a factor. To test the uni-dimensionality items for each summated scale should load decidedly on a single factor. The factor loading is considered statistically significant at 0.3 and above. However, Hair et al., (1998) specified that values of more than 0.3 are considered to meet the minimal level, whereas, 0.4 are reflected as more significant and the ones that are more than 0.5 are essentially important.

Table 5.8 represents the results of the factor analysis for all variables used in the study. From table 5.8 it could be seen that 12 items measuring authenticity load significantly on three factors representing the three constructs of authenticity, i.e. authentic- living, self-alienation and accepting

external influence. All other items loaded significantly only on their respective factor.

Table 5.8 shows that 7 items of materialistic attitude, 5 items of voluntary simplicity attitude and 4 items of global impact attitude loaded heavily (>0.5). Looking at the values; 4 items of conformity, 5 items of tradition, 5 items of benevolence, 8 items of universalism, 5 items of power, 4 items of achievement, 3 items of hedonism, 5 items of self-direction and 3 items of stimulation loaded heavily (>0.5). While, 4 out of 5 items of security also loaded heavily (>0.5), the fifth item (V15) had near to high loading of 4.91. Among constructs of subjective wellbeing, 5 items of satisfaction with life, 10 items of positive Affect and 10 items of negative Affect loaded heavily (>0.5). All the eight items of environmental concern loaded heavily (>0.5). From out of the 5 items of awareness of consequences, 4 loaded heavily (>0.5), while one item (AC5) had loading of 0.319 which was within acceptable range.

Lastly, 12 items of authenticity generated three factor solutions. AUTEX1, AUTEX2, AUTEX3 and AUTEX4 loaded heavily (>0.5) on one factor representing external influence. AUTL1, AUTL2, AUTL3 and AUTL4 loaded heavily on second factor forming authentic living. AUTSA1, AUTSA2, AUTSA3 and AUTSA4 loaded heavily on the third factor named self-alienation.

Table 5.8: Factor Analysis (Principal Component Analysis)

Materialism	Component Matrix	Global Impact	Component Matrix		
MAT1	.823	GI1	.852		
MAT2	.741	GI2	.856		
MAT3	.764	GI3	.852		
MAT4	.665	GI4	.851		
MAT5	.734	Satisfaction With Life			
MAT6	.798	SWL1	.791		
MAT7	.784	SWL2	.795		
Positive Affect		SWL3	.881		
PA1	.603	SWL4	.820		
PA2	.722	SWL5	.662		
PA3	.776	Voluntary Simplicity			
PA4	.656	VS1	.838		
PA5	.648	VS2	.857		
PA6	.658	VS3	.841		
PA7	.616	VS4	.817		
PA8	.657	VS5	.736		
PA9	.65	Hedonism			
PA10	.755	V4	.738		
Conformity		V50	.770		
V11	.653	V57	.784		
V20	.599	Awareness of Consequences			
V40	.800	AC1	.766		
V47	.713	AC2	.805		
Tradition		AC3	.818		
V18	.694	AC4	.744		
V32	.593	AC5	.319		
V36	.561	Negative Affect			
V44	.656	NA1	.741		
V51	.647	NA2	.740		
Benevolence		NA3	.694		
V33	.553	NA4	.599		
V45	.733	NA5	.724		
V49	.731	NA6	.699		
V52	.749	NA7	.811		
V54	.644	NA8	.754		
Universalism		NA9	.575		
V1	.622	NA10	.69		
V17	.671	Self-Direction			
V24	.770	V5	.549		
V26	.523	V16	.531		
V29	.702	V31	.599		
V30	.643	V41	.774		
V35	.542	V53	.657		
V38	.700	Security			
Power		V8	.782		
V3	.703	V13	.733		
V12	.708	V15	.489		
V27	.712	V22	.522		
V46	.704	V56	.551		
V58	.732	Stimulation			
Achievement		V9	.791		
V34	.793	V25	.772		
V39	.686	V37	.837		
V43	.692	Three Factor for Authenticity		Rotated Component Matrix	
V55	.810	AUTEX1	.746	.255	-.068
Environmental Concern		AUTEX2	.790	.217	-.195
EC1	.783	AUTEX3	.794	.213	-.067
EC2	.874	AUTEX4	.819	.123	-.116
EC3	.875	AUTL1	-.045	.017	.697
EC4	.744	AUTL2	-.170	-.026	.810
EC5	.883	AUTL3	-.147	-.145	.816
EC6	.944	AUTL4	-.045	-.180	.756
EC7	.933	AUTSA1	.236	.757	-.001
EC8	.862	AUTSA2	.281	.786	-.205
		AUTSA3	.087	.811	-.148
		AUTSA4	.233	.808	-.016

5.5.2. Reliability of scales

Reliability looks at correlation of a scale, an item or an instrument with a hypothetical one, thus referring to the consistency of a measure (Cherry, 2010). There are four possible ways to estimate reliability, namely: internal consistency, test-retest reliability, split-half reliability and inter-rater reliability. This study uses internal consistency to assess the scales. Internal consistency applies to the consistency among the variables in a summated scale (Hair et al., 2008, pp. 125). The rationale for internal consistency is that each item making up a scale should be measuring the same underlying attribute and thus all items should be fairly strongly correlated with each other (Brace et al., 2006). Items with correlations falling below an acceptable value of 0.3 (Field, 2009; Pallant, 2007, pp.98) and items that do not load in the expected direction should be removed at this point. The current study uses Cronbach's alpha (α) and the item-total correlation (Pallant, 2007) in order to measure internal consistency of the variables studied.

5.5.2.1. Cronbach's alpha

The use of Cronbach's alpha is suggested to be the most frequently used and most commonly recognized approach for evaluating the reliability of a multi-item scale (e.g. Hair et al., 2008; Pallant, 2007). Though there is no fixed standard as to how high the coefficient should be so as to consider the scale as reliable, the commonly established lower limit for Cronbach's alpha is 0.70 (Hair et al., 2008, pp. 125). Some scholars have reasoned that Cronbach's alpha may decrease to 0.6 in exploratory research (Price and Mueller, 1986, pp. 6; Robinson et al., 1991). A low coefficient alpha value

specifies that some items do not share the same meaning: consequently, these poor performing items can be recognized and accordingly removed.

Table 5.9 shows the preliminary reliability analysis for all scales used in this study. Notably, the coefficient alpha value is greater than 0.70 for all the scales except for a few value items. Still the reliability value for the individual values is within the range of variation usually observed for the individual value types (Joshi & Ghaedi, 2009; Schwartz et al., 1997).

Broadly speaking, the estimates of reliability for all variables apart from values were fairly good as they are all above the cut-off point indicated by Hair et al., (2008). Kline (2005), however, noted that the positive relationship of Cronbach's alpha value to the number of items in the scale makes it an estimate that needs to be used with care as an increase in the number of items on the scale, even with the identical degree of inter-correlation, will possibly increase the scale's reliability (Field, 2009). Likewise, Pallant (2007) suggested that since Cronbach's alpha are rather sensitive to the number of items in the scale, the item-total correlation should also be calculated for the items. For this reason the item-total correlation is also reported in this study.

5.5.2.2. Item-total correlation

The degree to which each item correlates with the total score is indicated by the item-total correlation score (Hair et al., 2008). Pallant (2007; pp. 98) and Field (2009) suggested that a value less than 0.3 indicates that the item is measuring something diverse from the scale as a whole. For the same

reason, Briggs and Cheek (1986) recommended an optimum range for the item-total correlation of 0.2 to 0.4.

As reflected in table 5.9, most of the items have an item-total correlation above 0.3. This indicates a good correlation between items within their given scales. Markedly, examination of the item-total correlation statistics revealed five items with item-total correlations below 0.3 (item AC5, AUTL1, AUTL2, AUTL3 and AUTL4) from awareness of consequences and authenticity scales. Nonetheless, item removal is not considered suitable at this stage for one reason: Pallant (2007, pp.98) recommended that for recognized, well-validated scale, item omission should only be considered if the alpha value of scale is below 0.7. In the current study, awareness of consequences and authenticity scales have a Cronbach's alpha greater than the suggested cut-off point (0.70), 0.719 and 0.716 respectively. Therefore, these values are thought to be acceptable.

Grounded on the encouraging Cronbach's alpha values and item-total correlations shown in table 5.9, the scales utilized in the study can be considered reasonably reliable with the present sample. Thus, all items were retained. Although all items are taken for further analysis at this stage, item deletion can be performed to bring up the alpha value (see alpha if item deleted in table 5.9). For instance, upon review of the results, it can be seen that if one item AC5 is deleted from awareness of consequences for this study the Cronbach's alpha value increases from 0.719 to 0.797, whereas deletion of the four items AUTL1, AUTL2, AUTL3 and AUTL4, from the original scale

of authenticity would increase the Cronbach's alpha value from 0.716 to 0.744. This, however, is not considered suitable.

Table 5.9: Reliability Test of Employed Constructs

Items	Item-total correlation	α if item deleted	α	Items	Item-total correlation	α if item deleted	α
Materialistic Attitude	MAT1	.739	.849	Awareness of Consequences	AC1	.537	.646
	MAT2	.463	.861		AC2	.612	.623
	MAT3	.447	.857		AC3	.626	.616
	MAT4	.363	.871		AC4	.517	.656
	MAT5	.402	.861		AC5	.197	.797
	MAT6	.513	.851	Environmental Concern	EC1	.570	.674
	MAT7	.480	.854		EC2	.586	.669
Hedonism	V4	.425	.579		EC3	.544	.677
	V50	.473	.530		EC4	.400	.693
	V57	.478	.514		EC5	.646	.658
Voluntary Simplicity Attitude	VS1	.732	.844		EC6	.628	.662
	VS2	.759	.837		EC7	.676	.656
	VS3	.737	.843		EC8	.212	.870
	VS4	.705	.851	Satisfaction With Life	SWL1	.647	.809
	VS5	.606	.873		SWL2	.655	.809
Global Impact Attitude	GI1	.729	.840		SWL3	.771	.779
	GI2	.736	.837		SWL4	.692	.797
	GI3	.729	.840		SWL5	.517	.854
	GI4	.728	.840	Positive Affect	PA1	.457	.821
Power	V3	.510	.717		PA2	.566	.811
	V12	.518	.714		PA3	.626	.806
	V27	.522	.712		PA4	.513	.817
	V46	.518	.714		PA5	.468	.821
	V58	.545	.704		PA6	.536	.814
Conformity	V11	.359	.598		PA7	.542	.814
	V20	.348	.601		PA8	.626	.806
	V40	.523	.477		PA9	.536	.814
	V47	.443	.539		PA10	.457	.821
Authenticity	AUTL1	.021	.731	Negative Affect	NA1	.636	.832
	AUTL2	-.052	.741		NA2	.617	.834
	AUTL3	-.107	.744		NA3	.574	.838
	AUTL4	-.088	.744		NA4	.500	.844
	AUTSA1	.544	.664		NA5	.588	.836
	AUTSA2	.564	.663		NA6	.562	.839
	AUTSA3	.451	.682		NA7	.676	.828
	AUTSA4	.593	.665		NA8	.562	.839
	AUTEX1	.530	.671		NA9	.588	.836
	AUTEX2	.507	.675		NA10	.617	.834
	AUTEX3	.536	.668	Tradition	V18	.437	.531
	AUTEX4	.474	.679		V32	.342	.581
Universalism	V1	.388	.777		V36	.317	.592
	V17	.519	.757		V44	.394	.554
	V24	.620	.738		V51	.390	.563
	V26	.383	.778		V33	.339	.703
	V29	.528	.757	Benevolence	V45	.521	.640
	V30	.503	.761		V49	.528	.631
	V35	.435	.771		V52	.539	.626
	V38	.544	.753		V54	.428	.685
Stimulation	V9	.530	.637	Self-Direction	V5	.298	.577
	V25	.507	.665		V16	.301	.584
	V37	.591	.565		V31	.325	.562
Achievement	V34	.576	.637		V41	.505	.472
	V39	.463	.712		V53	.411	.524
	V43	.464	.704	Security	V8	.511	.453
	V55	.602	.620		V13	.451	.478
					V15	.259	.593
					V22	.269	.585
					V56	.307	.568

5.6. Data preparation and screening

Data screening and preparation includes evaluation of missing data and its impact, identifying outliers, and tests for assumptions underlying most multivariate techniques. This is an important part of any multivariate analysis (Hair et al., 2008), and thus, was considered useful before the data was used for testing the 12 hypotheses. The data was checked for missing data followed by outliers' analysis and assessment of normality.

5.6.1. Missing data

Missing data could be one of the most troublesome issues in most data analyses. Hair et al., (2008) indicated that there could be two major impacts of missing data. First, it could cause loss of statistical power and second, in certain situations missing data could result in serious biases in results if it is not appropriately recognized and accommodated for in the analysis.

Though missing data could be a major issue to deal with, the 288 questionnaires obtained for this study were fully filled and had no missing data. Once this was confirmed and checked for, the issue of missing data was put aside.

5.6.2. Checking for outliers

Outliers are defined as cases with “extreme” values that are very different from the rest of the data (Tabachnick and Fidell, 2011). Though the term extreme is not defined firmly, a generally accepted rule of thumb is that

values greater than three deviations away from the mean are reflected as outliers (Kline, 2005). Additionally, observations with standardised variables values beyond ± 2.5 for small sample (80 or fewer observations), or score of ± 3.0 for bigger sample sizes are considered as outliers (Hair et al., 2008). Outliers can be identified from a univariate, bivariate, or multivariate positions depending on the number of variables considered.

This study did not identify univariate outliers, reason being the use of a seven-point Likert scale for most items in the research, with which the response option could reflect as outliers where they actually might be just an extreme point of the scale. The study was interested in identifying multivariate outliers. Generally, Mahalanobis D^2 distance is used to identify multivariate outliers. Mahalanobis D^2 indicates the distance in standard deviation units among a set of scores for a specific case and the sample means for all variables (Hair et al., 2008). A large Mahalanobis distance value signifies a case as having extreme value on one or more of the independent variables. Mahalanobis distance values were calculated for each participant through the use of regression in SPSS and was then compared with a critical X value with degree of freedom equal to the number of clustering variables, i.e. three in this study: voluntary simplicity, global impact and materialism, and probability of $p < 0.001$ (Tabachnick and Fidell, 2007). The results indicated the presence of two outliers (see Appendix Four). Nevertheless, it was decided to keep all the cases, as there was inadequate proof that these outliers were not part of the population as some participants might genuinely have responses considerably different from the majority of the respondents, which still is part of the target population. Furthermore, the rationale for the

study was to identify clusters of individuals, with two clusters representing the two extreme sets of individuals on the basis of the anti-consumption and materialistic attitudes. For these reason the outliers were an important part of the data and were retained. Furthermore, Kline (2005) suggested that the occurrence of few outliers within a large sample should be a petty concern. Additionally Hair et al., (2008), pp. 67) suggested that the deletion of outliers runs the risk of improving the multivariate analysis but limiting its generalizability.

5.6.3. Assessing normality

The supposition about the degree to which the sample data's distribution resembles a normal distribution is referred to as normality. In a normal distribution - a theoretical distribution that is symmetrical - the horizontal axis characterises all potential values of the variable and the vertical axis embodies the likelihood of those values occurring (Hair et al., 2008). Tabachnick and Fidell (2001) suggested normality of continuous variables to be the most important assumption in multivariate analysis. To assess normality of variables one can use either statistical method or graphical methods. Graphical methods such as histogram and normality probability plot match the actual cumulative data scores to a normal cumulative distribution. In case of normal distribution of data, the line representing the actual data and the diagonal lines would follow each other closely (Hair et al., 1998). In term of statistical methods, Skewness and kurtosis are the two components of normality (Hair et al., 2008; Tabachnick and Fidell, 2001). Skewness indicates the balance of the distribution; a variable whose mean is not in the

centre of the distribution is referred to as skewed variable. A positive skewness signifies a distribution bend to the left, while a negative skewness echoes a shift to the right. Kurtosis reflects the '*peakedness*' or '*flatness*' of the distribution in comparison to normal distribution. A variable can show significant kurtosis, a noteworthy skewness, or at times both (Tabachnick and Fidell, 2001, pp.71)

The current study utilized statistical methods to check the normality of variables. It is suggested that absolute skewness value falling outside the range of 3.0 specify a considerably skewed distribution, while for kurtosis a value greater than 10.0 suggests a problem (Kline, 2005). According to Hair et al., (2008), however, a value falling outside the range of -1 to 1 in case of skewness indicates substantially skewed distribution. Table 5.10 shows the normality test results for continuous variables used in the study. It can be seen that the mean range from 2.08 (item NA10) to 5.92 (item AUTL1), for skewness the values range from -1.627 (item EC4) to 1.082 (item AUTSA4), and scores for kurtosis range from -1.496 (item MAT6) to 2.867 (item AUTL1). Although some items seem slightly skewed when using criteria mentioned by Hair et al., (2008), nevertheless, these results validate that skewness and kurtosis statistics for all constructs are surely within the acceptance level specified by Kline (2005). As items seem to be normally distributed in the study, there is no requirement for transformation of non-normal distributed variables as that would present additional problems by altering the meanings of the actual responses (Kline, 2005).

Table 5.10: Normality Assessment for Variables Used in the Study										
	Items	Mean	Skewness	Kurtosis		Items	Mean	Skewness	Kurtosis	
Materialistic Attitude	MAT1	4.22	-.161	-.872	Awareness of Consequences	AC1	5.15	-.612	-.087	
	MAT2	4.14	-.184	-1.205		AC2	5.78	-.961	.490	
	MAT3	3.92	-.105	-1.409		AC3	5.53	-.558	-.583	
	MAT4	4.19	-.276	-1.204		AC4	5.55	-.797	.111	
	MAT5	4.08	-.199	-.984		AC5	4.63	-.325	-.629	
	MAT6	3.83	-.022	-1.496	Satisfaction With Life	SWL1	4.64	-.641	-.262	
	MAT7	3.87	-.052	-1.233		SWL2	4.84	-.487	-.387	
Voluntary Simplicity Attitude	VS1	4.45	-.274	-.922		SWL3	5.10	-.721	-.264	
	VS2	4.10	-.181	-.829		SWL4	5.18	-.759	-.255	
	VS3	4.51	-.252	-.787		SWL5	4.14	-.041	-1.109	
	VS4	5.07	-.584	-.770	Positive Affect	PA1	4.06	-.889	.619	
	VS5	4.40	-.268	-.488		PA2	3.67	-.43	-.42	
Global Impact Attitude	GI1	5.43	-.856	-.377		PA3	3.81	-.382	-.536	
	GI2	5.05	-.420	-.930		PA4	3.78	-.642	.214	
	GI3	5.20	-.633	-.872		PA5	3.62	-.537	-.536	
	GI4	5.15	-.700	-.673		PA6	3.62	-.426	-.423	
Authenticity	AUTL1	5.9	-1.413	2.867		Positive Affect	PA7	3.30	-.339	-.587
	AUTL2	5.44	-0.657	0.062			PA8	3.81	-.382	-.536
	AUTL3	5.52	-.833	1.036			PA9	3.64	-.499	-.072
	AUTL4	5.43	-.803	.882			PA10	3.65	-.527	-.528
	AUTEX1	3.32	2.07	-.665	Negative Affect		NA1	2.86	.154	-.967
	AUTEX2	2.85	.477	-.616			NA2	2.86	.183	-.960
	AUTEX3	3.43	.165	-.947		NA3	2.78	.65	-.72	
	AUTEX4	3.41	.187	-.896		NA4	2.15	.811	-.400	
	AUTSA1	3.35	.374	-1.06		NA5	2.58	.81	-.43	
	AUTSA2	2.76	.71	-.609		NA6	3.26	-.121	-.864	
	AUTSA3	2.98	0.602	-.624		NA7	2.43	.67	-.78	
	AUTSA4	2.25	1.082	0.459		NA8	2.90	.026	-1.058	
	Environmental Concern	EC1	4.03	-.848	1.308	NA9	2.33	.550	-.664	
		EC2	3.96	-.898	1.281	NA10	2.08	.889	-.362	
EC3		4.25	-1.255	2.199						
EC4		4.28	-1.627	2.495						
EC5		3.89	-.482	-.039						
EC6		3.98	-.612	-.034						
EC7		3.94	-.538	.024						
EC8		4.05	-.582	-.038						

5.7. Summary

Chapter 5 provides the initial descriptive findings obtained from the empirical survey. It also deals with the descriptive analysis for the variables studied in this thesis. A variety of different types of analyses were conducted in order to describe the data, check for psychometric properties (reliability and

dimensionality) of measurement scale and preparation of data for hypotheses testing by checking for outliers, missing data and normality of the scales. Chapter 6 attempts to test the 12 hypotheses proposed in chapter three through employing a variety of different types of analysis.

Chapter 6

HYPOTHESES TESTING

6.1. Introduction

This chapter discusses hypotheses testing and their results. Hypotheses testing refers to the statistical procedure that is used to reject or accept hypotheses based on sample information (Burns and Bush, 2006). This chapter is organized into three sections.

The first section, 6.2, shows the findings for the hypotheses related to anti-consumption attitude and materialistic attitude as being opposite to each other. This section is further subdivided into two sub-sections. The first sub-section, 6.2.1, examines the inverse relationship of anti-consumption attitude and materialistic attitude with each one of the psychographic variables by using correlation analysis. The second sub-section, 6.2.2, examines value orientations and environmental consciousness as antecedents of the two opposing attitudes – anti-consumption and materialistic - by using standard multiple regression analysis. The hypotheses these two subsections look at are H1 (with sub-hypotheses H1a-d), H2 (with sub-hypotheses H2a-f), H4 (with sub-hypotheses H4a-d), H5 (with sub-hypotheses H5a-f), H7 (with sub-hypotheses H7a-d), H9 (with sub-hypotheses H9a-f) and H11 (with sub-hypotheses H11a-f).

Next, the chapter proceeds to the development and validation of the proposed typology of consumers in terms of the balance they may exhibit between the contradictory attitudes of anti-consumption and materialism. Therefore, the second section, 6.3, examines if a typology of consumers exists in terms of different combinations of anti-consumption attitude and materialistic attitude. The presence of clusters/segments in terms of anti-consumption and materialistic attitudes is examined through the use of cluster analysis.

The third section 6.4 attempts to validate the typology produced in the previous section. The hypotheses this section attempts to test are H3, H6, H8, H10 and H12. This section is further divided into two sub-sections. The first sub-section, 6.4.1, presents the results of one-way ANOVA and post-hoc tests to assess the difference in psychographic variables among the clusters. Finally the second sub-section, 6.4.2, presents the results of the Discriminant Function Analysis, which reveals the discriminating power of the psychographic variables among the clusters.

Altogether, section 6.2 assesses the opposite nature of anti-consumption attitude and materialistic attitude, section 6.3 examines the existence of clusters with respect to the possible combinations of these two attitudes that a consumer can exhibit and finally section 6.4, validates the typology produced in section 6.3.

6.2. The opposing attitudes

To empirically explore the opposing nature of anti-consumption attitude and materialistic attitude, this section first tests the relationship of these two attitudes with value orientations, environmental consciousness, wellbeing and authenticity. The section secondly examines opposite value orientations and inverse level of environmental consciousness as antecedents of the two attitudes.

6.2.1. The inverse relationship of the four psychographic variables with the two attitudes

This sub-section aims to test the relationship of the four psychographic variables -values, environmental consciousness, wellbeing and authenticity - with the two attitudes: anti-consumption and materialistic. Pearson product-moment correlation (r) is used to indicate the direction and strength of the relationship between variables (Pallant, 2007). This procedure is designed for continuous variables and is appropriate for use in this study wherein the variables are continuous. The value of correlation varies from 1 to -1. A correlation of 1.0 signifies a perfect positive correlation, a correlation of 0 indicates no relationship and a correlation of -1.0 signifies a perfect negative correlation.

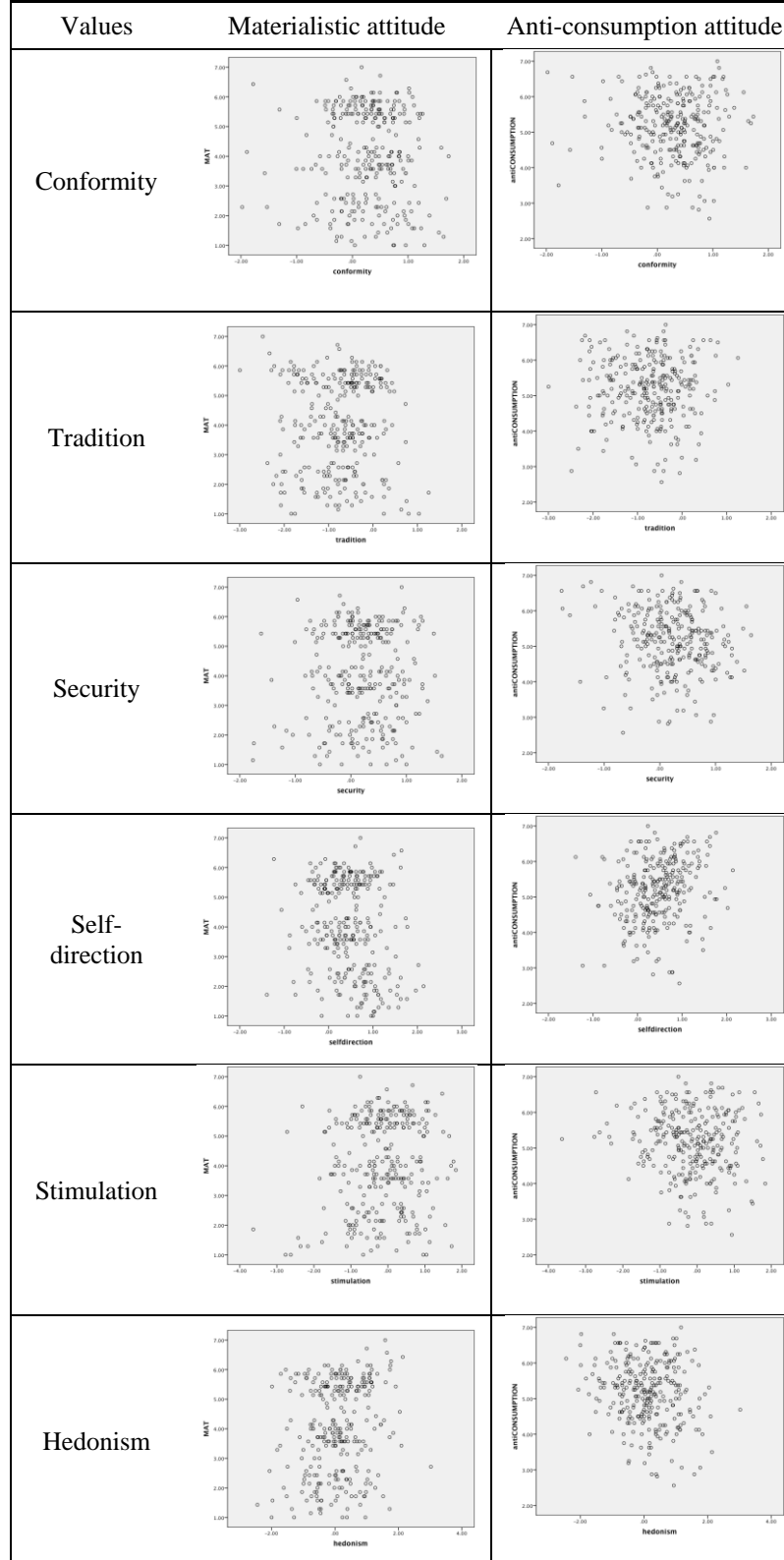
In order to check for the violation of the assumptions of linearity and homoscedasticity, preliminary analyses were conducted using scatterplot. From the preliminary analyses it was first seen if the data points were spread all over the place, which would suggest a very low correlation, or if the data

points were arranged in a narrow cigar shape thus suggesting a strong correlation.

Next, to check for the linearity assumption for Pearson correlation, it was seen if there is a straight line or a curved line through the main cluster of points. A straight line suggests that the assumption of linearity is not violated, whereas a curved line indicates curvilinear relationship, thus violating the assumption of linearity. In the latter case, the Pearson correlation should not be used.

Finally, if the shape is even from one end to the other and then starts to narrow and become fatter, then this analysis violates the assumption of homoscedasticity. The homoscedasticity should show a fairly even cigar shape along its length. Figures 6.1, 6.2, 6.3 and 6.4 show preliminary analyses of values, wellbeing, environmental consciousness and authenticity with materialistic attitude and anti-consumption attitude for correlation. From the preliminary analyses no violation of the assumptions of linearity and homoscedasticity is seen.

Figure 6.1: Preliminary Analysis of the Ten Values and the Two Attitudes for Correlation



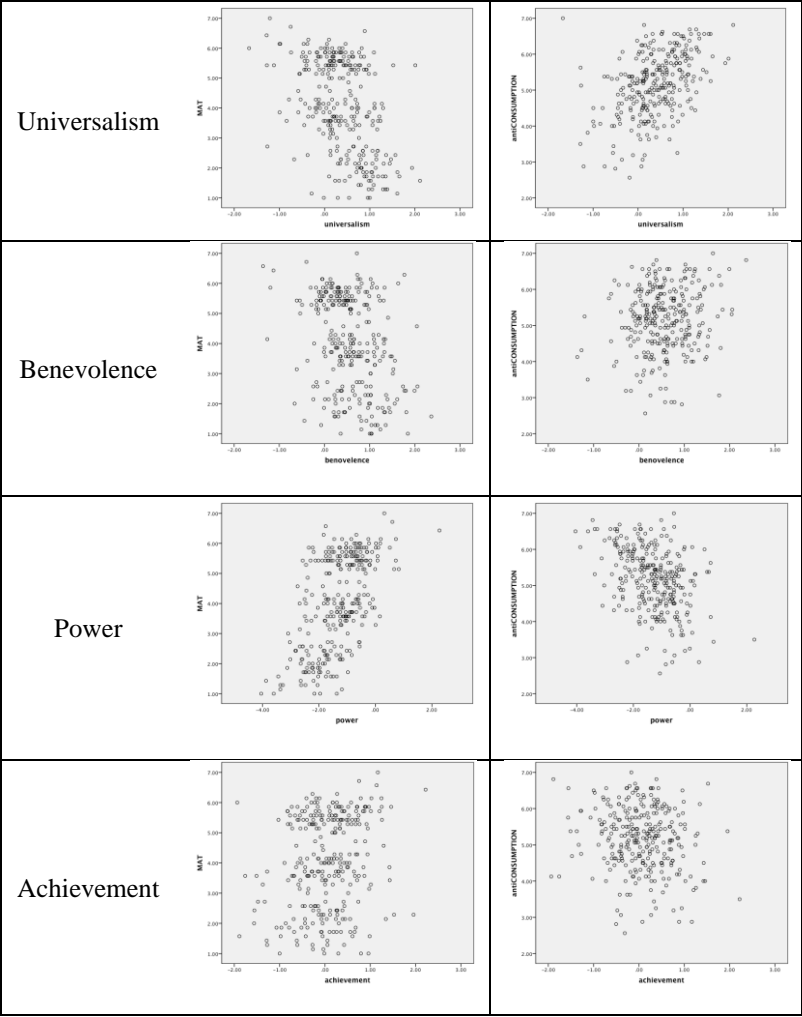


Figure 6.2: Preliminary Analysis of the Three Components of Subjective Wellbeing and the Two Attitudes for Correlation

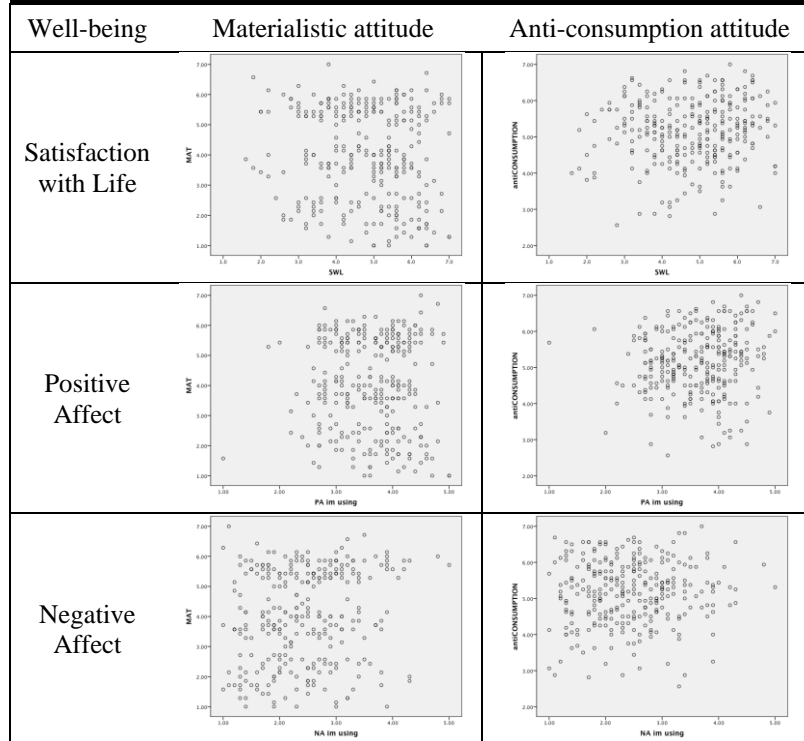
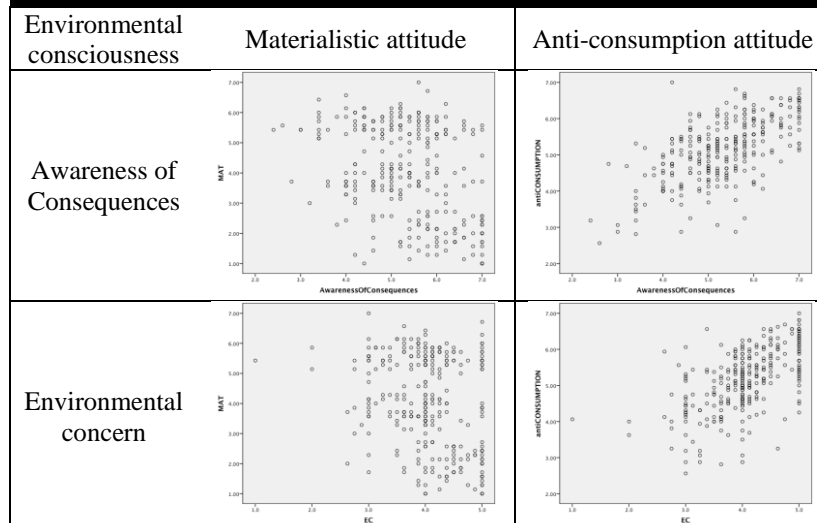
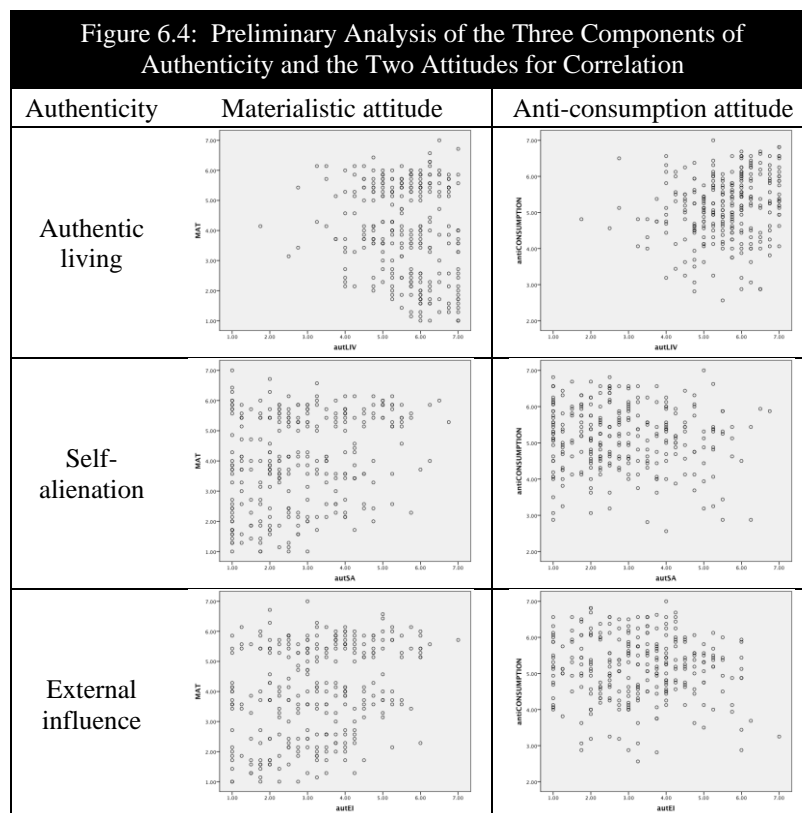


Figure 6.3: Preliminary Analysis of the Two Components of Environmental Consciousness and the Two Attitudes for Correlation





After checking the distribution of data on the scatterplot, the study proceeded with the Pearson Correlation analysis. Given that the specified direction of the relationship between the psychographic variables and the attitudes is explicitly stated in the hypotheses, One-tailed tests of significance were performed. Table 6.1 presents the strength of the relationship in Pearson correlation.

Table 6.1: interpretation of Pearson correlation (r)	
0	No relationship
.10 to .29 or -.10 to -.29	Small
.30 to .49 or -.30 to -.49	Moderate
.50 to 1.0 or -.50 to -1.0	Large

Cohen, 1988, cited in Pallant, 2007, p.126

Table 6.2 presents the results of Pearson correlation of the four psychographic variables with the two attitudes: anti-consumption attitude and materialistic attitude.

Table 6.2: Results of Pearson's Correlation Between the Psychographic Variables and the Two Attitudes (N=288, One-Tailed in All Cases)

Variables			Attitudes	
			Anti-consumption	Materialistic
Individual values	Universalism	r	.489**	-.412**
		sig.	.000	.000
	Benevolence	r	.136*	-.413**
		sig.	.010	.000
	Power	r	-.400**	.583**
		sig.	.000	.000
	Achievement	r	-.153**	.218**
		sig.	.005	.000
	Hedonism	r	-.183**	.225**
		sig.	.001	.000
	Self-direction	r	.204**	-.199**
		sig.	.000	.000
	Stimulation	r	.097	-.121*
		sig.	.051	.020
	Conformity	r	-.050	.049
		sig.	.200	.205
	Tradition	r	-.007	.008
		sig.	.455	.446
	Security	r	-.141**	.009
		sig.	.008	.436
Environmental consciousness	Awareness of Consequences	r	.634**	-.260**
		sig.	.000	.000
	Environmental concern	r	.586**	-.179**
		sig.	.000	.001
Wellbeing	Satisfaction With Life	r	.113*	-.141**
		sig.	.028	.008
	Positive affect	r	.107*	-.006
		sig.	.034	.461
	Negative affect	r	.053	.207**
		sig.	.186	.000
Authenticity	Authentic living	r	.200**	-.120*
		sig.	.000	.021
	Self-alienation	r	-.080	.252**
		sig.	.089	.000
	External influence	r	-.063	.236**
		sig.	.142	.000

* Correlation is significant at $p < 0.05$

**Correlation is significant at $p < 0.01$

6.2.1.1. Correlation between the ten values and the two attitudes

Results of correlation between anti-consumption attitude and the ten values show that both universalism and benevolence had a significant positive relationship with anti-consumption attitude ($p < .01$) and a significant negative relationship with materialistic attitude ($p < .01$), thus providing initial support

for H1 (H1a-d). Additionally, power, achievement and hedonism – the values opposite to universalism and benevolence- related to both the attitudes in the predicted manner. All three of the self-enhancement values (power, achievement and hedonism) had a significant negative relationship with anti-consumption attitude and a positive relationship with materialistic attitude ($p<.01$), thus supporting H2 (H2a-f).

When examining the horizontal axis of values with openness to change (self-direction and stimulation) vs conservation (conformity, tradition and security), results reveal that a significant positive relationship exists between self-direction and anti-consumption attitude and a significant negative relationship exists between self-direction and materialistic attitude ($p<.01$), thus supporting H4a and H4c. However, stimulation only had a significant negative relationship with materialistic attitude ($p<.05$), and though the relationship of stimulation with anti-consumption attitude was in the direction predicted, it was not significant. Thus, supporting H4d but not H4b. Lastly, the values of conformity, tradition and security showed weak results. Though the relationship of conformity and tradition with anti-consumption attitude and materialistic attitude was in the predicted direction, the relationship was not significant. Thus, not supporting H5a, H5b, H5d and H5e. Finally a significant negative relationship existed between security and anti-consumption attitude ($P<.01$) and a positive but not significant relationship existed between security and materialistic attitude, thus, supporting H5c and not supporting H5f.

6.2.1.2. Correlation between environmental consciousness and the two attitudes

This sub-section presents results for hypothesis 7 along with sub-hypotheses, which examines the relationship between the two components of environmental consciousness and the two opposing attitudes. From table 6.2 it is evident that both awareness of consequences and environmental concern had a highly significant positive relationship with anti-consumption attitude and a highly significant negative relation with materialistic attitude ($p < .01$). Thus, H7 (H7a-d) was supported.

6.2.1.3. Correlation between wellbeing and the two attitudes

This sub-section discusses results related to hypothesis 9, which looks at the relation of the three components of subjective wellbeing with the two opposite attitudes. As predicted, satisfaction with life and positive affect had a significant positive relationship with anti-consumption attitude ($p < .05$), thus, supporting H9a-b. However, negative affect did not have a significant relation with anti-consumption attitude, thus H9c was not supported.

As predicted, satisfaction with life had a highly significant negative relationship with materialistic attitude, while a highly significant positive correlation was evident between negative affect and materialistic attitude ($p < .01$), thus, supporting H9d and H9f. However, the correlation between positive affect and materialistic attitude was not significant, thus not supporting H9e. In summary, partial support was provided for H9.

6.2.1.4. Correlation between authenticity and the two attitudes

This sub-section discusses the results for Hypothesis 11 that looks at the relationship of the three components of authenticity with the two attitudes under study. From the results of the correlation between the three components of authenticity and anti-consumption attitude, as presented in table 6.2, a highly significant positive correlation was evident between authentic living and anti-consumption attitude ($p < .01$), thus supporting H11b. The correlation of the other two components of authenticity - self-alienation and external influence- with anti-consumption attitude, though in the direction predicted, was not significant, thus not supporting H11a and H11c.

Also, as predicted, materialistic attitude had a highly significant positive relationship with self-alienation and external influence ($p < .01$), and a significant negative relationship with authentic living ($p < .05$). Thus, supporting H11d-f.

6.2.2. Opposing values and inverse level of environmental consciousness as predictors of the two opposing attitudes

This section aims, firstly, to determine how well the two psychographic variables – value orientations and environmental consciousness - (independent variables) being examined, collectively explain the variance in each of the two attitudes (dependent variables), and secondly to determine the relative importance of each component of these two independent variable in the prediction of each of the two attitudes (dependent variable). The hypotheses related to this section are H1, H2, H4, H5 and H7. The aim is to show that

opposing value orientations and inverse level of environmental consciousness act as antecedents of the two attitudes, thus showing their opposing nature. One model was built for each of the dependent variable (attitudes) to assess the relationship of the independent variables with these attitudes. In both the models two value - conformity and tradition - were not included thus H5a, H5b, H5d and H5e were not tested further. This decision was based on the guidance provided by Schwartz (2009). Schwartz (2009) emphasized that minimum three and maximum eight values should be used in a single regression model. The reason for not using more than eight values in one model is the possibility of “inaccurate and uninterpretable results “due to multicollinearity” (Schwartz, 2008, p.3). Using all of the ten values together is not recommended, in fact it is indicated that doing so would yield false results. The two values to be dropped from the regression models were selected on the basis of correlation analysis discussed in the previous section. Conformity and tradition were the only two motivational values that did not have any significant relation with both anti-consumption attitude as well as materialistic attitude. Therefore, these two motivational values were not included in the first two regression models. Multiple regression analysis was used to explore the relationship between one continuous dependent variable (attitude) and predictors (independent variables). The aim was to test if opposite values and inverse level of environmental consciousness act as antecedents of the two opposing attitudes. Additionally, four more models were tested. The first two, of these four models had conformity, tradition, security, stimulation and self-direction (openness to change/conservation) values as the independent variables, and the two attitudes as the dependent

variables. While, the next two models has universalism, benevolence, power, achievement and hedonism (self-transcendence/self-enhancement) as independent variables with the two attitudes as dependent variables.

Multiple regression is employed in this study because it not only determines the ability of a set of variables to predict a particular outcome, but also indicates which variable from amongst the set of variables is the best predictor of that outcome (Pallant, 2007).

There are three types of multiple regression analysis that could be employed in any study. First is standard multiple regression, in which all the independent variables are entered into the regression equation concurrently. Second is the hierarchical multiple regression analysis. In this type of regression analysis, the researcher specifies the importance of each variable, based on theoretical grounds, which order is then used to enter all the independent variables into the equation. Finally, the third type of multiple regression analysis is the stepwise multiple regression. In this type of regression analysis, the investigator gives SPSS a list of independent variables. The program then, based on a set of statistical criteria, selects not only which variables to enter but also determines the order in which they go into the equation.

From amongst the three types, standard multiple regression analysis is said to be the most commonly used multiple regression analysis (Pallant, 2007). This particular study also opted to use standard multiple regression analysis to compute the multiple regression equation. The main drawback of hierarchical method is that the independent variables (predictors) are entered

into the regression model in the order specified by the investigator, therefore it should not be used if the researcher does not have a solid reason to assign different level of importance to each variable (Brace et al., 2006). Stepwise multiple regression has its basis well established within the statistical literature (Whittingham et al., 2006). Its shortcomings include the inconsistent result among model selection algorithms (backward elimination, forwards selection or stepwise) making it difficult to infer the superiority of the selected model. Although, the method relies on one best model, other models that are ignored may have an equally good fit (Whittingham et al., 2006). Thus, stepwise method puts inappropriate focus on one model. Another problem faced in stepwise regression is the bias in parameter approximation that is carried out on the same data set, which can cause biases in parameters, incorrect significance tests and over fitting.

Before proceeding to performing multiple regression, it is important to check if the sample size is appropriate for carrying out the regression. Also, multicollinearity needs to be checked before conducting regression. Different guidelines regarding the size of data for multiple regression are available. Stevens suggested that “For social science research, about 15 subjects per predictor are needed for a reliable equation” (Stevens, 1996, cited in Pallant, 2007, p. 148). Tabachnick and Fidell (2007) had given a formula to calculate sample size whereby “ $N > 50 + 8m$, with m being the number of independent variables” (Tabachnick and Fidell, 2007, cited in Pallant, 2007, p. 148). The current research has eight values, and two variables of environmental consciousness as the independent variables. So in total the current research has ten independent variables; therefore, following Stevens’ suggestion N

should be more than 150 ($10 \times 15 = 150$), while according to the formula given by Tabachnick and Fidell (2007) N should be more than 130 cases ($50 + 8(10) = 130$). Given that the current sample size (288) meets both of the suggested minimum numbers, it can be safely concluded that the sample size requirements for multiple regression analysis are not violated.

The next check that needs to be made before conducting regression analysis is to assess multicollinearity. Multicollinearity represents the presence of high correlations among independent variables. The common way to check for multicollinearity is by reviewing a correlation matrix between independent variables. Table 6.3 presents the correlation matrix for all the variables studied. Findings from Tables 6.3 show that all the variables (conformity and tradition not included) show some relationship. However, none of the variables show a too high ($r < 0.7$) correlation with any other variable. Additionally, to check for collinearity that may not be evident in the correlation matrix SPSS was used to perform “collinearity diagnostic”. The findings from table 6.4 and 6.5 indicate that in both the regression models no tolerance value falls below 0.1 and no VIF (Variance Inflation Factor) exceeds 10. Thus, the two regression models have not violated the multicollinearity assumption.

Table 6.3: Examination of Multicollinearity through Pearson Correlation Matrix for all the Variables in the Study (N=288, two-tail in all cases)

			2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Materialistic attitude	r sig	-.320** .000	.009 .873	-.199** .001	-.121* .040	.225** .000	-.413** .000	.583** .000	.218** .000	-.412** .000	-.006 .922	.207** .000	-.141* .016	-.260** .000	-.179** .002	-.120* .042	.252** .000	.236** .000
2	Anti-consumptional attitude	r sig	1	-.141* .017	.204** .000	.097 .102	-.183** .002	.136* .021	-.400** .000	-.153** .009	.489** .000	.107* .046	.053 .373	.113 .055	.634** .000	.586** .000	.200** .001	-.080 .178	-.063 .284
3	Security	r sig		1	-.293** .000	-.285** .000	-.133* .024	.025 .671	-.001 .986	-.167** .005	-.216** .000	-.145* .14	-.121* .040	.068 .249	-.133* .024	-.079 .183	-.073 .218	-.072 .225	-.102 .084
4	Self-direction	r sig			1	.046 .442	.037 .532	-.134* .023	-.222** .000	.303 .617	.262** .000	.062 .297	.028 .640	-.047 .426	.248** .000	.124* .036	.129* .028	-.117* .046	-.011 .848
5	Stimulation	r sig				1	.258** .000	-.258** .000	.039 .508	.181** .002	-.169** .004	.168** .004	-.020 .737	-.048 .419	-.067 .255	-.098 .097	-.011 .848	.150* .011	-.030 .607
6	Hedonism	r sig					1	-.215** .000	.174** .003	.076 .200	-.305** .000	.019 .745	-.023 .694	-.115 .052	-.046 .442	-.108 .068	.011 .855	-.002 .967	.009 .876
7	Benevolence	r sig						1	-.458** .000	-.139* .018	.093 .116	.081 .171	-.060 .308	.152** .010	.119* .044	.064 .282	.066 .222	-.173** .003	-.088 .138
8	Power	r sig							1	.197** .001	-.561** .000	-.054 .360	.119* .004	-.136* .021	-.362** .000	-.263** .000	-.186** .001	.199** .001	.248** .000
9	Achievement	r sig								1	-.371** .000	.142* .016	.040 .498	.498 .070	-.096 .106	-.094 .112	.043 .471	.105 .076	.077 .192
10	Universalism	r sig									1	.015 .798	-.017 .779	.061 .300	.410** .000	.401** .000	.114 .053	-.130* .027	-.050 .398
11	Positive affect	r sig										1	-.031 .595	.334** .000	.188** .001	.193** .001	.220** .000	-.216** .000	-.068 .253
12	Negative affect	r sig											1	-.255** .000	-.013 .831	.049 .411	-.132* .025	.435** .000	.338** .000
13	Satisfaction with life	r sig												1	.108 .067	.122* .039	.115 .051	-.291** .000	-.121* .040
14	Awareness of consequences	r sig													1	.509** .000	.152** .010	-.146* .013	-.060 .311
15	Environmental concern	r sig														1	.143* .015	-.105 .076	.053 .373
16	Authentic living	r sig															1	-.247** .000	-.283** .000
17	Self-alienation	r sig																1	.490** .000
18	External influence	r sig																	1

**** Correlation is significant at .001**

***Correlation is significant at 0.05**

The first regression model determined the ability of all the independent variables (except for conformity and tradition) in determining anti-consumption attitude, while the second regression model determined the ability of these independent variables in determining materialistic attitude. In both the models, all the independent variables were executed using the standard multiple regression analysis. The standard regression coefficient also known as beta coefficient (β) shows how strongly each predictor variable influences the dependent variable. Adjusted R^2 indicates the percentage of the variance of the dependent (attitude) variables that is explained by the independent (psychographic) variables and is calculated by taking into account the number of independent (predictor) variables in the model and the number of observations that the model is based on (Brace et al., 2006).

Tables 6.5 and 6.6 show the results of standard multiple regression analyses for anti-consumption attitude and materialistic attitude respectively.

Table 6.4: Results of Multiple Regression Analysis for Anti-Consumption Attitude as the Dependent Variable							
Model	F _{10,277}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	95.25	.000	.58				
Universalism				.322	.000	.363	2.758
Benevolence				.093	.041	.565	1.771
Power				-.188	.017	.412	2.428
Achievement				-.037	.425	.753	1.327
Hedonism				-.161	.043	.785	1.275
Self-direction				.112	.031	.772	1.296
Stimulation				.015	.554	.725	1.380
Security				-.069	.174	.648	1.544
Environmental concern				.306	.000	.692	1.446
Awareness of consequences				.384	.000	.648	1.543

Table 6.5: Results Of Multiple Regression Analysis For Materialistic Attitude As The Dependent Variable							
Model	F _{10,277}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	98.743	.000	.44				
Universalism				-.148	.050	.363	2.758
Benevolence				-.142	.023	.565	1.771
Power				.332	.000	.412	2.428
Achievement				.041	.047	.753	1.327
Hedonism				.273	.034	.785	1.275
Self-direction				-.106	.044	.772	1.296
Stimulation				-.008	.585	.725	1.380
Security				.029	.615	.648	1.544
Environmental concern				-.190	.040	.692	1.446
Awareness of consequences				-.235	.020	.648	1.543

The eight values and the two components of environmental consciousness collectively explain 58% of the variance in anti-consumption attitude and 44% of variance in materialistic attitude. These percentages are highly significant ($p < 0.001$). Overall, awareness of consequences has the largest and strongest β value when explaining anti-consumption attitude. Whereas, power has the largest and strongest β value when looking at model explaining materialistic attitude.

For model one, although achievement, stimulation and security were in the predicted direction, they did not make a significantly unique contribution to the prediction of anti-consumption attitude ($p > 0.05$). Likewise, for model two, security and stimulation values, although in the same direction as predicted, do not make a significantly unique contribution to the prediction of materialistic attitude ($p > 0.05$). This may be due to the overlap with other independent variables in the model. In conclusion, the two models from the standard multiple regression analysis provides support to the understanding that values acting as antecedents of anti-consumption attitude are opposite to values that act as antecedents of materialistic attitude. Specifically,

universalism and benevolence which make up self-transcendence, were significant positive predictors of anti-consumption attitude and significant negative predictor of materialistic attitude, thus supporting H1 with all the sub-hypotheses related to H1 (H1a-d). Among the three values making up self-enhancement, power and hedonism were significant negative predictors of anti-consumption attitude and significant positive predictors of materialistic attitude, thus supporting sub-hypotheses H2a, c, d and f. however, achievement which was the third value making up self-enhancement, was not a significant negative predictor of anti-consumption attitude but was a significant positive predictor of materialistic attitude. Thus sub-hypotheses H2b was not supported, while, H2e was supported.

From conformity, tradition and security making up conservation and self-direction and stimulation making up openness to change, only self-direction was a significant positive predictor of anti-consumption attitude and a significant negative predictor of materialistic attitude. One reason for this weak link could be the fact that the two regression models discussed above did not include conformity and tradition. Thus from H5a-f only H5c and H5f were tested. Results show that from H4a-d, H5c and H5f, only H4a and H4c were supported while H4b, H4d, H5c and H5f were not supported.

Lastly, the hypothesis related to the two components of environmental consciousness as predictor of anti-consumption attitude and materialistic attitude was supported. Both awareness of consequences and environmental concern were significant positive predictors of anti-consumption attitude and

significant negative predictors of materialistic attitude. Thus supporting H7a-H7d.

Furthermore, as two values, namely: conformity and tradition, were not used in the two regression models discussed above, it was considered reasonable to test the predicting ability of these values on the two attitudes. In order to do so, the next subsection examines the ability of the five values (conformity, tradition, security, stimulation and self-direction) making up openness to change/conservation dimension, in predicting the two opposing attitudes, namely anti-consumption and materialistic. Later the sub-section also examines the ability of self-transcendence and self-enhancement in predicting anti-consumption and materialistic attitudes.

6.2.2.1. Predicting power of openness to change vs conservation

Table 6.6 and 6.7 shows the results of standard multiple regressions for anti-consumption attitude and materialistic attitude respectively. The predictor values in both regression models presented in table 6.6 and table 6.7 are the five values that make up openness to change/conservation higher order values, namely self-direction, stimulation, conformity, tradition and security.

Table 6.6: Results of Multiple Regression Analysis for Anti-Consumption Attitude as the Dependent Variable and openness to change/conservation as independent variables							
Model	F _{5,282}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	5.25	.001	.182				
Self-direction				.134	.028	.657	1.521
Stimulation				.111	.021	.761	1.268
Conformity				.098	.996	.781	1.280
Tradition				.027	.687	.747	1.339
Security				-.122	.035	.733	1.258

The five values collectively explain 18% of the variance in anti-consumption attitude and 15% of variance in materialistic attitude. These percentages are highly significant ($p < 0.001$). Overall, self-direction has the largest and strongest β value when explaining anti-consumption attitude. Whereas, self-direction was the only value that had a significant β value when looking at model explaining materialistic attitude.

Table 6.7: Results of Multiple Regression Analysis for Materialistic Attitude as the Dependent Variable and openness to change/conservation as independent variables

Model	F _{5,282}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	4.25	.001	.154				
Self-direction				-.278	.000	.657	1.521
Stimulation				-.087	.177	.761	1.268
Conformity				-.081	.212	.781	1.280
Tradition				-.084	.208	.747	1.339
Security				.015	.814	.733	1.258

From table 6.6 and table 6.7 it is clear that self-direction is a positive predictor of anti-consumption attitude and a negative predictor of materialistic attitude. Thus supporting H4a and H4c. Stimulation is also a positive predictor of anti-consumption attitude, however, it is not a significant predictor of materialistic attitude, thus supporting H4b but not supporting H4d.

In terms of conformity, tradition and security, making up conservation, only security was a significant negative predictor of anti-consumption attitude, but it did not have a significant relationship with materialistic attitude, thus supporting H5c but not supporting H5f. Conformity and tradition were not significant predictors of either of the two attitude. Thus, H5a, H5b, H5d and H5e were not supported.

Next predicting power of the values making up self-enhancement/self-transcendence as predictors of anti-consumption attitude and materialistic attitude was examined.

6.2.2.2. Predicting power of self-transcendence vs self-enhancement

Table 6.8 and 6.9 shows the results of standard multiple regressions for anti-consumption attitude and materialistic attitude respectively. The predictor values in these two regression models were the five values that make up self-transcendence/self-enhancement higher order values, namely universalism, benevolence, power, achievement and hedonism.

Table 6.8: Results of Multiple Regression Analysis for Anti-Consumption Attitude as the Dependent Variable and self-enhancement/self-transcendence as independent variables							
Model	F _{5,282}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	55.25	.000	.281				
Universalism				.321	.000	.463	1.771
Benevolence				.093	.021	.542	1.410
Power				-.167	.014	.541	1.849
Achievement				-.013	.311	.711	1.188
Hedonism				-.081	.035	.731	1.134

The five values collectively explain 28% of the variance in anti-consumption attitude and 37% of variance in materialistic attitude. These percentages are highly significant ($p < 0.001$). Overall, universalism has the largest and strongest β value when explaining anti-consumption attitude. Whereas, power has the largest and strongest β value when looking at the model explaining materialistic attitude.

Table 6.9: Results of Multiple Regression Analysis for Materialistic Attitude as the Dependent Variable and self-enhancement/self-transcendence as independent variables

Model	F _{5,282}	Sig.	Adjusted R ²	β	Sig.	T	VIF
	47.51	.000	.365				
Universalism				-.208	.001	.463	1.771
Benevolence				-.121	.031	.542	1.410
Power				.391	.000	.541	1.849
Achievement				.028	.579	.711	1.188
Hedonism				.057	.038	.731	1.134

From table 6.8 and table 6.9 it is clear that both universalism and benevolence are significant positive predictors of anti-consumption attitude and significant negative predictors of materialistic attitude. Thus, further supporting H1a-d. Power and hedonism are also significant negative predictors of anti-consumption attitude and significant positive predictors of materialistic attitude. Thus, supporting H2a, H2c, H2d and H2f. However, even though H2b and H2e were supported in previous regression analysis, represented in table 6.4 and table 6.5, the relationship was not supported when only self-enhancement/self-transcendence values were used as predictors of the two attitudes. Thus, this second regression analysis did not provide support for H2b and H2e.

In summary, from the results of correlation and regression it is supported that anti-consumption attitude is opposite to materialistic attitude, as the two not only have an inverse relationship with the psychographic variables under study, but also have opposing value orientations and inverse levels of environmental consciousness acting as antecedents.

Next section uses the two opposing attitudes – anti-consumption and materialism – to construct a typology of consumers, which is then followed by section 6.4 that attempts to validate the typology based on the difference among the clusters of typology in terms of the four psychographic variables under examination, i.e. values, wellbeing, environmental consciousness and authenticity.

6.3. Development of a typology of consumers

This section aims firstly to test if consumers could be classified/segmented on the basis of the balance they hold for their anti-consumption and materialistic attitudes. And secondly, to test if in these segments there exist two distinct clusters, one of anti-consumers and one of materialistic consumers.

Classification as defined by Platts (1980) is the ordering or arrangement of objects into sets or groups on the basis of their similarities or relationships. Classification can be seen as grouping individuals on the basis of their similarities or relationships, so as to simplify a complex structure, while retaining important and meaningful information about the data. The commonly used method for segmentation and typology development is cluster analysis (Ketchen & Shook 1996; Lockshin et al., 1997; Michaelidou 2012; Orth et al., 2004; Roddy et al., 1996).

Cluster analysis is an exploratory tool that uses distinctive characteristics of cases to classify them into groups (Rapkin & Luke, 1993; Lorr, 1983).

Tryon (1939) was the first to use the term cluster analysis. Since then, several fields like zoology, biology, archaeology, marketing, economics, agriculture, geology, education, political sciences, genetics, marketing research, psychology, medicine, pattern recognition and data mining have utilized cluster analysis (Everitt et al., 2001). Through determining K clusters, cluster analysis classifies cases in a way that the groups formed are dissimilar to other groups whereas cases of the same group are similar to each other (Bacher, 2002). Mirkin (1996) defined cluster analysis as a mathematical technique intended for illuminating classification structures in the data gathered in the real world phenomenon. Whereas Gordon (1999) added that, clustering aims to reveal the classification structure of the data. With over 1000 publications per year (Seber, 2004), cluster analysis is a popular technique used in different areas with varied purposes. These purposes could be reducing the data objectively from larger samples to smaller meaningful subgroups, or to develop hypotheses or examine already developed hypotheses (Hair et al., 1995). Similarly, the cluster analysis can be used for model fitting, group based predictions, data explorations and discovering true typology (Everitt, 1974).

Like every multivariate data analysis technique, cluster analysis also has some caveats. According to Aldenderfer and Blashfield (1984) these caveats are;

- 1) Most of the cluster analysis methods are not supported by statistical reasoning as these are relatively simple procedures.

- 2) Cluster analysis evolved from several disciplines, and thus is affected by the preferences of these disciplines.
- 3) Given that clustering methods evolved from different sources with diverse rules for grouping, distinctive solutions for the same data set can be produced through different clustering methods.
- 4) The policy of cluster analysis is structure pursuing though its procedure is structure - imposing.

Moreover, Hair et al., (1998) specified that cluster analysis solution is determined by the variables used as the basis for similarity measure. Consequently, the changes in these variables trigger massive alterations in the product of the cluster analysis, and with no tests available to determine the accuracy of the outcomes, all of the results of the analysis are verified by the judgment of the investigators. In spite of all this, cluster analysis is considered the best way for examining configurations (Ketchen and Shook 1996). There are also a number of ways to validate the results of cluster analysis (Hair et al., 2008; Malhotra et al., 2012). Section 6.3.2 discusses in detail the validation techniques used in this study.

As cluster analysis only requires specification of variables and cases used, therefore cluster techniques could be used for confirmatory as well as exploratory purposes. When following the exploratory approach the number of clusters is determined through the outputs of the analysis. Although cluster analysis could be advantageous in confirmatory approach, yet the technique is rarely used for confirmatory purposes. Given that this thesis aims to explore the clusters that might exist in current consumer culture, the present study

uses cluster analysis solely for exploratory purposes. Table 6.10 gives the differences between cluster analysis when used for confirmatory and exploratory purposes.

Table 6.10: Differences between Confirmatory and Exploratory Cluster Analysis	
Exploratory cluster analysis	Confirmatory cluster analysis
1. The number of clusters is unknown before analysis.	1. The number of clusters is known prior to analysis.
2. Clusters have to be interpreted. Finding a substantive interpretation can be difficult.	2. Clusters already have a substantive interpretation.
3. The fit to data is maximized	3. The fit to data may be poor.

Source: Bacher. 2002

Hierarchical, iterative partitioning and two-step cluster analysis are the three widely used methods of cluster analysis. Hierarchical clustering algorithms function by grouping cases into a tree of clusters. Hierarchical clustering can be divided into two main approaches namely:

- 1) Divisive hierarchical techniques
- 2) Agglomerative hierarchical techniques

Hierarchical divisive method starts by placing all the cases in one cluster and then at each subsequent step most dissimilar cases are split off into smaller clusters. This continues until a stopping criterion is met. Whereas hierarchical agglomerative algorithms start inversely, i.e. by assigning each case to its own cluster and then at every subsequent step combining the sets of cluster for creating a new cluster on the basis of the similarities between the clusters. This continues until one cluster with all of the cases is obtained or a certain stopping criterion is achieved. Hierarchical cluster methods are considered conceptually simple and easy to understand (Groth, 1998). The algorithm of the hierarchical cluster method is the simplest among the

algorithms of other clustering methods. These clustering methods produce non-overlapping clusters, therefore the clusters obtained at the end of application of these methods are nested. Different graphical formats are used to represent the results of divisive and agglomerative cluster methods, Dendrogram (tree diagram) being the most widely used representation method. In a hierarchical clustering method a similarity or a distance matrix between all pairs of objects in the data should be established, which can result in an enormous matrix (Norusis, 2004). Conversely, a non-hierarchical cluster analysis does not require calculating all possible distances.

The non-hierarchical method starts with an initial partitioning of data into a specified number of clusters. Then centroids of each cluster are computed. Each data point is allocated to the cluster with the nearest centroid. A new centroid of the formed cluster is calculated and clusters are updated once the algorithm has made a complete pass through of the data. This is repeated until no data point changes clusters (Aldenderfer and Blashfield, 1984). K-means clustering is the most commonly used non-hierarchical clustering method (Malhotra et al., 2012). Developed in the 70s by Forgy, K-means method is one of the most well-known clustering methods (Bacher, 2002). The data set is portioned into specified number of clusters and the centroid of the cluster is calculated. Once portioned, similarity of each case to the K clusters is calculated and the case is assigned to the most similar cluster. Once an entire pass through of the data is done the centroid of clusters is recalculated. This results in the initial K clusters. Once this is done, the cases are reassigned to clusters on the basis of distance between recalculated centroids of the clusters. The process of assigning cases to clusters and recalculating centroids is

repeated until convergence of cluster centre is reached. K-mean cluster can handle large data sets and can work well for hyper-spherical and compact clusters. However, K-mean clustering does have certain drawbacks. K-mean algorithm, due to its iterative process, suffers from initial partitioning. Additionally, the results may depend on the order of observations in the data, thus making the results dependent on how the centres are selected. Nevertheless, non-hierarchical clustering is faster than hierarchical method and is better at handling large amounts of data. Additionally, non-hierarchical methods are less impacted by outlier as it allows data points to change cluster membership. The main drawback of non-hierarchical method is that it requires the number of the clusters to be known before the analysis is done (Malathora et al., 2012). Two-step cluster analysis, on the other hand, automatically establishes the ideal number of clusters by comparing the values of model-choice criteria through different clustering solutions (Malhotra et al., 2012).

Chiu et al. (2001) developed the two-step cluster method for investigation of large data sets. Both continuous and categorical variables could be used in this method. Two-step cluster method uses a two-step clustering approach similar to BIRCH (Zhang et al. 1996). The two-step cluster method can rapidly analyse large amounts of data by building a cluster features (CF) tree that summarizes the records. Although not widely used in social sciences, two-step clustering technique is better than both K-mean and hierarchical clustering techniques (Bacher et al., 2004). One of the main advantages of the two-step cluster analysis over other clustering techniques is the automatic determination of the ideal number of clusters, while in the other two clustering

techniques this is a major drawback (Bacher et al., 2004). As the name implies Two-step cluster analysis consists of two steps (Chiu et al. 2001, SPSS 2004)

1. Pre-clustering
2. Clustering

The purpose of pre-clustering is to reduce the size of distance matrix between all possible sets of objects so as to compute a new data matrix with lesser cases for the succeeding step (Bacher et al., 2004). Pre-clusters are identical to the clusters of the original objects that are utilized in hierarchical clustering in place of the raw data (Norusis, 2004). This step starts by scanning the cases one by one so as to merge it into existing clusters or form a new cluster. The process is applied by creating a revised CF tree. The CF tree contains levels of nodes, while each node covers a number of entries. A leaf entry characterizes an ultimate sub-cluster. New accounts are positioned into the right leaf nodes consistent with the non-leaf nodes and their entries. CF symbolizes each entry according to the entry's mean, number of records and totals of each category of each categorical variable and variance of each continuous variable. An initial threshold value is used to start this procedure, which then leads to identification of appropriate leaf for each case through choosing the nearest child node conversing to a close distance matrix while descending the CF-tree. Each object upon getting a leaf node is engrossed into the leaf entry. The CF of that leaf entry is then revised according to the threshold distance of the nearest leaf entry. However, the object starts its own leaf entry if it is not within the threshold distance. When there is no space in the leaf node to make a new leaf entry, it divides into two for generating more

space for new objects. In case the CF tree out grows the maximum allowed size, it is reconstructed based on the current CF-tree by raising the threshold distance criterion. This procedure lasts until a thorough data pass is done. BIRCH by Zhang et al. (1996) provides detailed information about the two-step algorithm. Once the pre-cluster process is completed, all records falling in the same category are represented by the entry's CF. Now instead of the number of cases it is the number of pre-clusters that determines the size of the distance matrix. If, at this point a new record is added, the new CF is calculated from the old CF without knowledge of the single records in the entry.

The sub-clusters from the previous step are taken as input for the second step and a model based hierarchical technique is applied as the pre-clusters are merged stepwise until one cluster is obtained with all clusters in it (Bacher et al., 2004). While doing so, the analysis automatically determines the ideal number of the clusters on the basis of the Akaike Information Criterion (AIC) or the Bayesian Information Criterion (BIC). Fraley and Raftery (1998) proposed BIC, according to which EM (expectation maximization) algorithm is used as the basis for determining appropriate number of clusters. For each potential number of clusters the clustering criterion is computed. Lesser values of AIC and BIC signify better models, with the smallest BIC and AIC for the best cluster solution. The number of clusters increase the BIC, and AIC continue to decrease, however, this in turn also increases the complexity of the cluster model. When this happens, the changes in distance measure and change in BIC are assessed to decide the best cluster solution. A reasonably

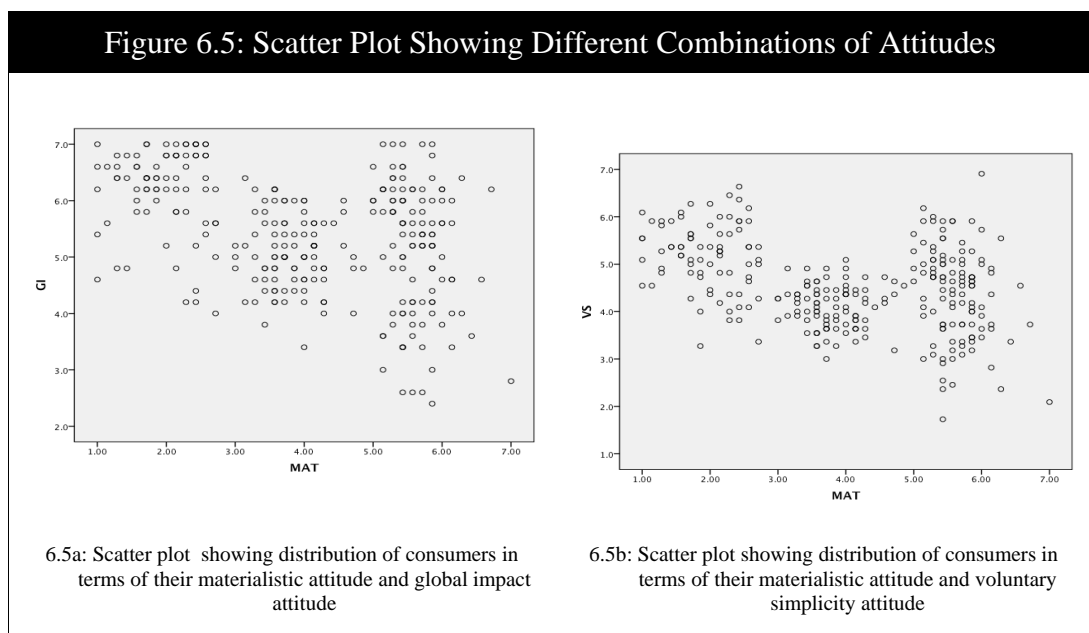
large “Ratio of Distance Measures” and a large “Ratio of BIC Changes” represents the best cluster solution (Chiu et al. 2001).

Two-step cluster analysis could use both Euclidean and log-likelihood distances. The log-likelihood distance measure can handle both categorical and continuous variables. While computing log-likelihood, multinomial distributions for categorical variables, and normal distributions for continuous variables are assumed. Furthermore, it is supposed that the variables are independent of each other. If all the variables are continuous only then the Euclidean distance can be applied. In such a case, the distance between two clusters is defined in terms of Euclidean distance between the centres of the clusters.

As the aim of this present study is to identify ideal number of clusters, the exact number of clusters is not known to the researcher and thus two-step cluster analysis, with its ability to automatically determine ideal number of clusters, is considered most suitable for this particular study. The cluster solution obtained through two-step clustering technique would then be validated by hierarchical clustering along with split sampling technique as recommended by Hair et al., (2008) and Malhotra et al., (2012).

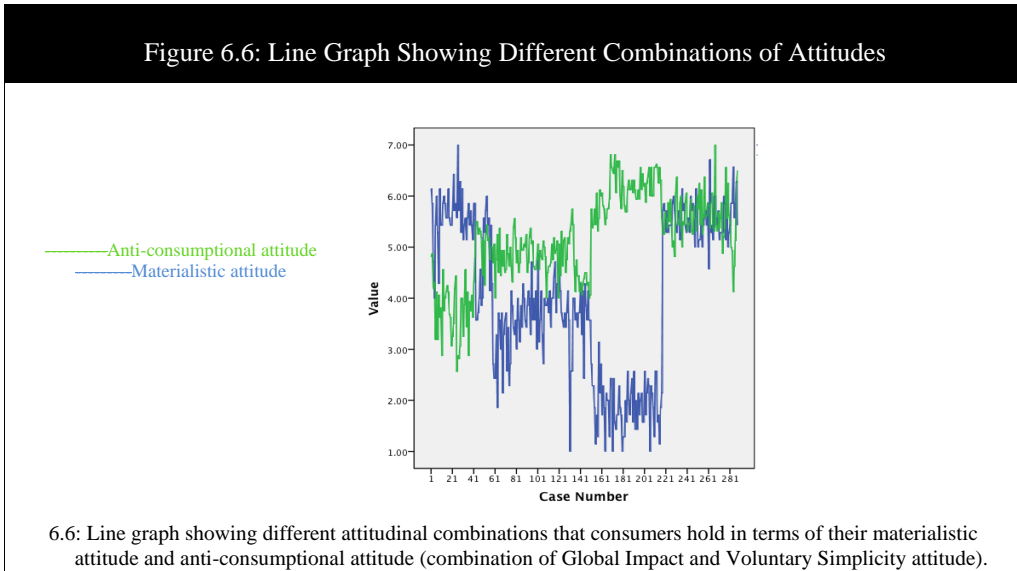
Factors that can affect cluster analysis are scale difference in variables used, missing data and multi-collinearity between variables. Therefore, the data should be checked for these factors at the commencement of the analysis, so as to obtain optimum solutions. Accordingly, the data was checked for these conditions before conducting the analysis. Chapter 5, section 5.6 discussed these factors in detail for the present study.

Preliminary analysis for the cluster analyses were conducted using scatterplot in order to see the distribution of participants with respect to their materialistic attitude and anti-consumption attitude so as to see if there were indications of distinct clusters. Scatter plots were obtained with materialistic attitude on the x-axis and global impact on the y-axis in first plot, and materialistic attitude on the x-axis and voluntary simplicity attitude on the y-axis in the second plot. The two plots are presented in figure 6.5. From figure 6.5a four clusters are identifiable, while figure 6.5b clearly shows three clusters.



Next, a line graph was obtained with materialistic attitude and anti-consumption attitude [Global Impact (GI) +Voluntary Simplicity (VS)] as shown in figure 6.6. This graph indicated four combinations of materialistic attitude and anti-consumption attitude. Therefore, it is expected that cluster analysis will give either three or four cluster solutions. However, as two-step cluster analysis has the quality of automatically determining ideal number of

clusters (Bacher et al., 2004), therefore the data was run for two-step cluster analysis without specifying a fixed number of cluster solution.



The study proceeded with cluster analysis and the following two steps were followed

- 1) The first step was to use two-step cluster analysis to determine the ideal number of clusters.
- 2) The second step used hierarchical procedure and split sampling technique to “fine-tune” and validate the final cluster solution. The two-step and hierarchical procedure from SPSS version 20 were used in this analyses.

6.3.1. Step 1: two-step cluster analysis to determine ideal number of clusters

As mentioned above the first step was to apply two-step cluster analysis. The clustering variables - materialistic attitude, global impact attitude and voluntary simplicity attitude - were used in the two-step method with Bayesian Information Criterion (BIC) and log-likelihood distances. From

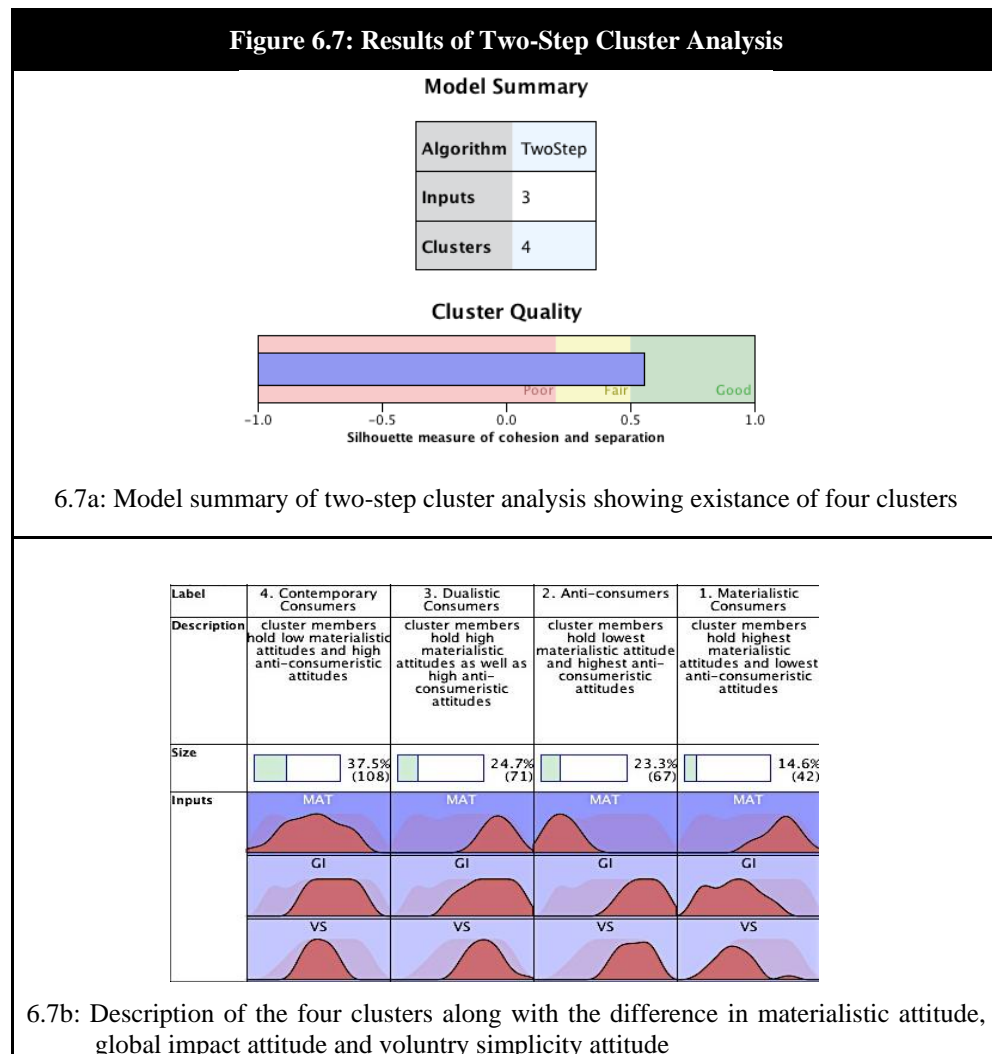
the analysis, a four-cluster solution emerged. The popular evaluation criteria used in two-step cluster analysis is the silhouette coefficient. The silhouette coefficient is an “estimate of the degree of cohesion within groups and separation between them”, and is used to determine “the robustness of a solution” (Hodgson, 2014). Calculation of Silhouette coefficient is a three-step process:

- a. The average distance from all other objects in the cluster is calculated for the i^{th} object. It is given the name a_i
- b. The case’s average distance to all the cases in the given cluster for the i^{th} case and any cluster not containing the case is calculated. Smallest of such value regarding all clusters is found and is called b_i
- c. Finally for the i^{th} object the Silhouette Coefficient is calculated as $s_i = (b_i - a_i) / \max(a_i, b_i)$

Silhouette Coefficient can have values between 1 and -1. A negative value represents the case where a_i is greater than b_i , thus making it undesirable. An average Silhouette coefficient is used as an overall measure of the robustness of clustering (Hodgson, 2014). Table 6.11 presents the evaluation of Silhouette coefficient values.

Table 6.11: Goodness of Cluster on the Basis of Silhouette Coefficient	
0.51-1.00	A strong structure is found.
0.26-0.50	A reasonable structure is found.
< 0.25	No substantial structure or a weak and artificial structure is found.

It is worth mentioning that SPSS has improved the output for two-step cluster method significantly compared to hierarchical and k-mean clustering methods (Bacher et al., 2004). Figure 6.7 shows the graphical model obtained through two-step cluster method. As could be seen in figure 6.7, a good result, with four-cluster solution was obtained through the two-step cluster method.

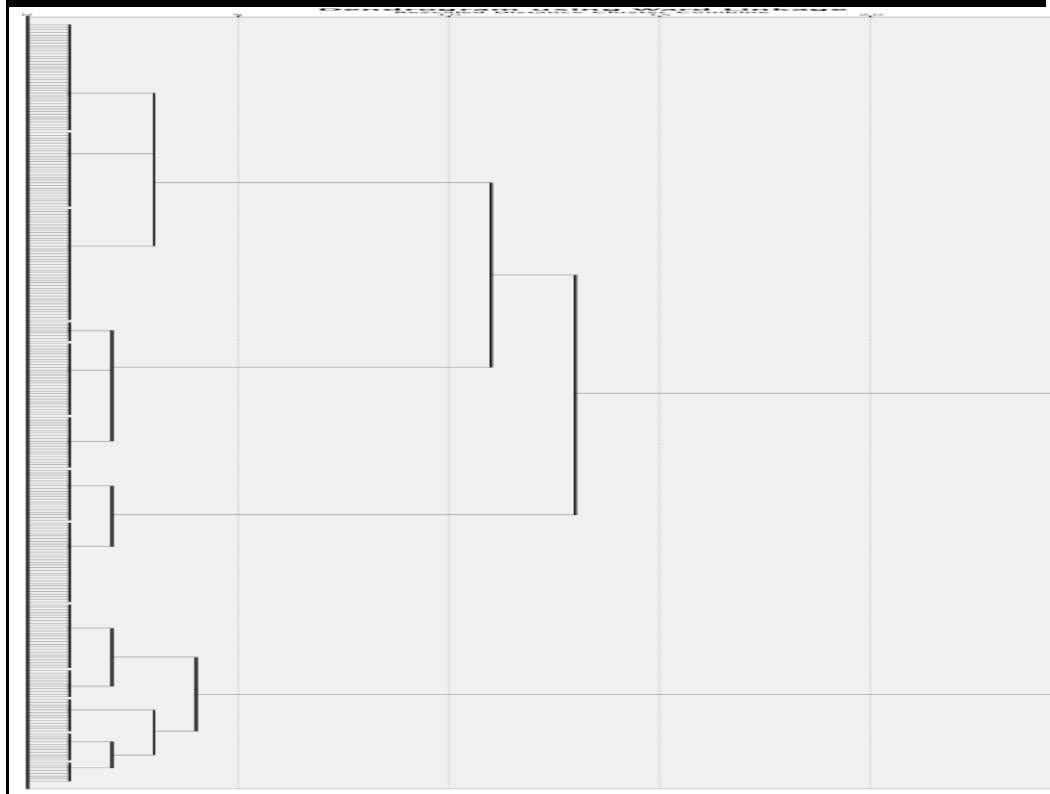


6.3.2. Step 2: validating the cluster solution thorough hierarchical procedure and split sampling technique

The second step was to validate the cluster solution obtained through two-step method in the first step. In order to validate the results one of the

ways recommended is to use other clustering methods for the same data (Hair et al., 2008; Malhotra et al., 2012). Hierarchical cluster analysis with Ward's method (Dibb, 1998; Lockshin et al., 1997; Rohm & Swaminathan, 2004; Singh, 1990) was used to validate the results obtained from the two-step clustering method. The optimal number of clusters in hierarchal method was determined by observing the dendrogram. Figure 6.8 gives the dendrogram obtained through hierarchal clustering method. From the dendrogram it could be seen that a four-cluster solution is suitable.

Figure 6.8: Dendrogram Obtained From Hierarchal Cluster Analysis



To further validate the results of the cluster analysis split sampling technique was employed (Malhotra et al., 2012). The sample was selected through random selection in SPSS version 20, and was run for two-step cluster analysis. The results provided validity to the cluster solution obtained

using the whole sample as it generated four clusters and the cluster membership was the same that had appeared in the main analysis. Memberships from the two-step cluster analysis were then compared with memberships of the hierarchical cluster analysis. The degree of agreement between the hierarchical cluster membership assignment and the results of the two-step cluster analysis indicated the stability of the solution (Punj & Steward, 1983). The four-cluster solution was selected as the most suitable solution in terms of reproducibility and stability. The final four-cluster solution, and their difference in terms of the three attitudes (materialistic attitude [MAT], global impact attitude [GI] and voluntary simplicity attitude [VS]) are presented in table 6.12 and are discussed next.

Table 6.12: Four Clusters with Different Combination of Anti-Consumption and Materialistic Attitudes

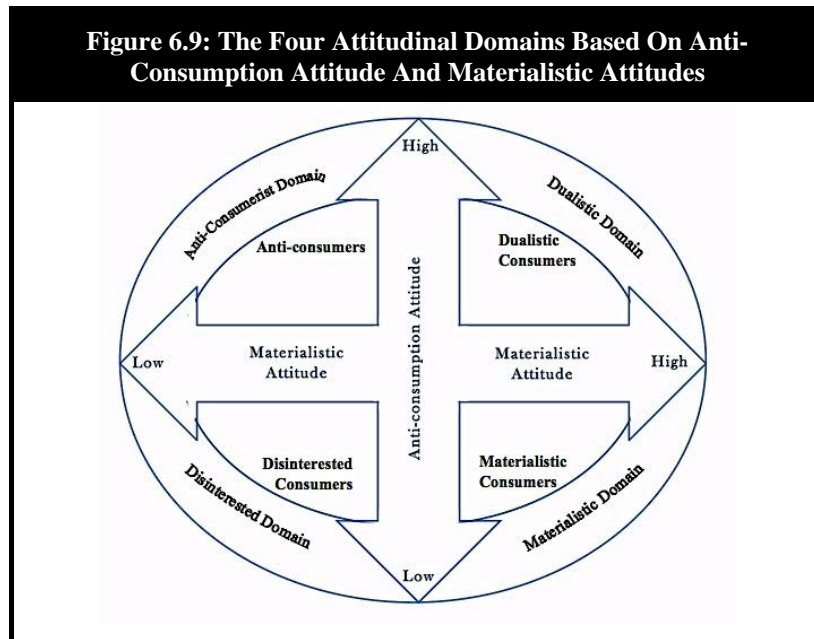
	<u>Clusters</u>				ANOVA [F]	P
	1	2	3	4		
MAT	5.62	1.90	5.57	3.74	538.140	.000
GI	3.83	6.41	5.83	5.11	170.363	.000
VS	3.47	5.38	4.98	4.07	135.986	.000
%	14.6	23.3	24.7	37.5		

Cluster descriptors are based on overall scores. Scores range from 1 to 7 (low-high level).

6.3.3. Clusters in the typology

Figure 6.10 gives an overview of anti-consumption attitude and materialistic attitude for each cluster. In chapter 3 four attitudinal domains were proposed (for a detailed discussion of each domain see chapter 3 section 3.3). These four dimensions with an expected cluster in each domain are represented in figure 6.9. The level of anti-consumption attitudes and

materialistic attitudes are used to describe and name the clusters below, while reference is also made to the four attitudinal domains.

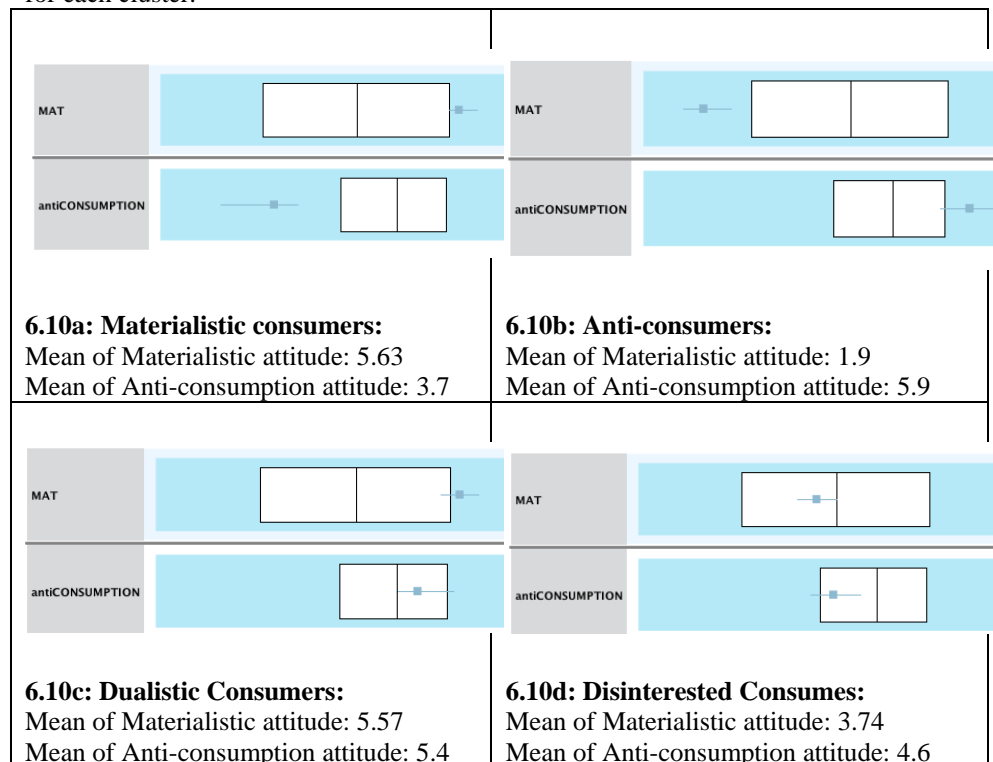


6.3.3.1. *Materialistic Consumers (Cluster 1)*

The first cluster was made up of only 14.6% of sample ($N = 42$). This cluster, compared to the other three clusters, had the lowest score for anti-consumption attitude (mean = 3.7, $SD = .735$) and the highest score for materialistic attitude (mean = 5.63, $SD = .524$). This cluster was named materialistic consumers as they reflected high materialism and low anti-consumption, thus falling in the materialistic domain. This group is thought to find happiness through possessions. They are the ones who follow consumerism and believe that possession, consumption and materialism is the

best source of happiness (Sklair, 2010 in Pires et al., 2012). Figure 6.10a shows the attitudinal balance of this cluster.

Figure 6.10: Description of the four clusters based on differing combination of anti-consumption and materialistic attitudes
the attitudes are determined on value ranging from 1-7 (low to high) with:
High: value more than 4
Medium: value equal to 4
Low: value less than 4
Anti-consumption attitude is calculated by taking average of GI attitude and VS attitude for each cluster.



6.3.3.2. Anti-Consumers (Cluster 2)

The second cluster encompassed 23% of the sample (N = 67). This cluster, compared to the remaining three clusters, scored highest for anti-consumption attitudes (mean = 5.9, SD = .554) and lowest for materialistic

attitude (mean= 1.9, SD = .49). This cluster was named anti-consumers as it falls in the anti-consumerist domain. Figure 6.10b represents the attitudinal balance of this cluster. This cluster represents individuals who are not materialists but rather they are anti-consumers who adopt a lifestyle where they reduce consumption and materialism from their lives for social and personal reasons.

6.3.3.3. Dualistic Consumers (Cluster 3)

The third cluster that appeared through the analysis included 25% of the participants (N=71). As expected, this cluster was very unique and different from the rest of the three clusters as it scored high on both anti-consumption attitude (mean=5.4 SD=.574) as well as materialistic attitude (mean=5.57, SD=.378). Represented in figure 6.10c, this cluster reflects a class of individuals who hold a high level of both anti-consumption as well as materialistic attitudes alongside each other. The late 1980's saw a wave of green and ethical consumption and with the outburst of technology, the trend got stronger giving rise to alternative consumption and becoming the motivation for anti-consumption (Pires & Cayolla, 2010). In this way anti-consumption has become "a major trend in the overall market" (Choi, 2011, p. 117). Nevertheless, Dermody et al., (2015) argued that though most consumers are aware and concerned about environmental problems and wish to attain sustainability, they are not willing to dramatically change their consumption behaviour (Kilbourne & Pickett, 2008; Prothero et al., 2011; Rettie et al., 2012). The existence of this cluster reflects how many in the society are struggling to find a balance between both the trends of

consumerism as well as anti-consumption. The individuals in this cluster show high level of both the attitudes, thus falling in dualistic domain and therefore they are named dualistic consumers. This segment represents individuals who are trying to satisfy both of the trends and while doing so are in a state of conflict.

6.3.3.4. Disinterested Consumer (Cluster 4)

The fourth cluster was the largest (size=37.5%, N=108). Respondents making up this cluster had low level of materialistic attitude (mean = 3.74, SD =.78) and low level of anti-consumption attitudes (mean = 4.6, SD = .534). Figure 6.10d shows the attitudinal combination of this cluster. From figure 6.10d it could be seen that the attitudinal balance of this cluster allows it to be placed in the fourth attitudinal domains i.e. the disinterested domain, therefore, this cluster is named disinterested consumers. It seems like most consumers of current era are adopting this attitudinal balance to cope with the current situation. This is evident from this cluster being the biggest in size. However, it is evident from figure 6.10d that this cluster's anti-consumption attitude is higher than that of materialistic consumers, and is more towards the upper end of moderate level. While, the materialistic attitude of this cluster is lower than both materialistic consumers and dualistic consumers.

It appears that with anti-consumption “becoming a major trend in the overall market” (Choi, 2011, p. 117), disinterested consumers have developed anti-consumption attitude, yet they are not the ones who would dramatically change their lives unlike many anti-consumers (Dermody et al., 2015; Kilbourne & Pickett, 2008; Prothero et al., 2011; Rettie, Burchell, &

Riley, 2012). Instead, these individuals adopt anti-consumerist acts that fit in their lifestyles, thus keeping slightly higher materialistic attitudes compared to anti-consumers. However, the individuals in this cluster do not believe that materialism and possessions are the only and the main source of happiness, thus keeping lower materialistic attitude than materialistic consumers. This class reflects the thought that one cannot ignore consumption completely (Black and Cherrier, 2010), yet a fair balance can be attained.

In summary, as proposed in chapter three, the analysis of this section shows the existence of four unique clusters of consumers - Materialistic Consumers, Anti-consumers, Dualistic Consumers and Disinterested Consumers - on the basis of the unique combination of their anti-consumption attitude and materialistic attitude. Among these four clusters, one cluster represents individuals who are very materialistic (cluster 1) while another cluster represents individuals who are very anti-consumerist (cluster 2). The next section attempts to validate this typology of consumers.

6.4. Validation of the typology

This section deals with establishing external validity of the typology obtained through cluster analysis in the previous section (section 6.3). Four psychographic variables (well-being, values, environmental consciousness and authenticity), not used in the cluster development, were used to assess the validity of cluster solution. The hypotheses that are involved in testing the differences in the four clusters in terms of the four psychographic variables are H3, H6, H8, H10 and H12.

This section is divided into two sub-sections. The first subsection, section 6.4.1, discusses the results of one-way ANOVA, while the second subsection, section 6.4.2, presents the results of discriminant function analysis.

6.4.1. Analysis of variance between the four clusters

Following previous researchers (for example Ketchen & Shook 1996; Lockshin et al., 1997; Michaelidou 2012; Orth et al., 2004; Roddy et al., 1996) this thesis used one-way Analysis of Variance (ANOVA) on non-clustering variables to validate the clusters. In a particular study, non-clustering variables are the variables that are not used in cluster analysis for generation of clusters. Value orientations, wellbeing, environmental consciousness and authenticity are the four non-clustering variables for this particular study. Tukey's HSD is also used to further analyse the differences among the clusters in terms of these four non-clustering psychographic variables being tested.

The one-way analysis of variance (ANOVA) is a statistical technique used to test if there are any significant differences between three or more unrelated and/or independent groups through comparison of means between the groups (Iversen and Norpoth, 1976). This thesis utilized ANOVA instead of t-tests, as t-test can only compare two groups while ANOVA can compare more than two groups (Hair et al., 2008). In addition, ANOVA as compared to t-tests protects against a Type 1 and Type 2 error (Field, 2000). A Type 1 error occurs when a true null hypothesis is rejected (Pallant, 2007), while a

Type 2 error occurs when a false null hypotheses is retained. One-way ANOVA tests the null hypothesis:

$$H_0: \mu_1 = \mu_2 = \mu_3 = \dots = \mu_k$$

μ = Group mean

k = number of groups.

If the results of one-way ANOVA are significant then the null hypothesis (H_0) is rejected and the alternative hypothesis (H_a) is accepted. Where the alternative hypothesis (H_a) states that there exists a statistically significant difference between at least 2 group means. An F ratio is computed by dividing the variance between the groups by the variance within the groups. A large F ratio is an indication of more variability between the groups than within groups. A significant F test implies that the null-hypotheses can be rejected.

However, ANOVA only indicates overall difference between the groups, it does not provide specific information about which group differs from which other group (Hair et al., 1998, Field, 2000). The post hoc tests were designed to find the pair of groups that significantly differ from each other and the direction of the difference with respect to different variables. This also helps protect against a Type 1 error. The chief post hoc tests are Tukey's Honestly Significant Difference (HSD), Bonferroni, and the Games-Howell procedure. The Bonferroni is only appropriate to use if there are only a few comparisons; whereas the Games-Howell procedure is only suitable when variance differs (Burns and Burns, 2008). Tukey's HSD is more powerful when there are numerous comparisons with groups that are not much different in size. Additionally, "if there are eight or more means to compare, this test (HSD) is

the best procedure for controlling error rate” (Howell, 1987, cited in Yani-de-Soriano, 2000, p. 127).

Therefore, this study utilizes Tukey’s HSD so as to determine the differences in means amongst the clusters in the typology for each of the psychographic variable as well as to examine the pattern of these variables. In order to do this the table of multiple comparisons is used. This table identifies which clusters are significantly higher than the others. The asterisks (*) beside a value listed specify that the two clusters being compared are significantly different from each other.

To determine the effect size of the post hoc results the Eta Squared is used. Although SPSS does not automatically calculate Eta Squared, it can be calculated by dividing the sum of squares between groups by the total sum of squares. Table 6.13 represents interpretation of different Eta values with their effect size.

Table 6.13: Interpretation of Eta Squared	
Eta value	Effect Size
0.01	Small effect
0.06	Medium effect
0.14	Large effect

Adapted from Cohen, (1998)

This section is divided into four sub-sections according to the component breakdown of hypotheses related to the typology. The first subsection will discuss the results of one-way ANOVA and post-hoc test for the ten values thus testing H3 and H6. Second subsection will discuss the results of these tests for the two components of environmental consciousness,

thus relating to H8. Third subsection will discuss results of these tests for the three components relating to wellbeing, thus relating to H10. The fourth subsection will discuss the results of these tests for the three components of authenticity, thus involving H12.

6.4.1.1. Value differences between the clusters

According to Hypothesis 3 and Hypothesis 6, the segments with different combination of anti-consumption attitude and materialistic attitude would vary in terms of their value orientations. In chapter 3 it was also proposed that anti-consumers and dualistic consumers would give more importance to self-transcendence (universalism and benevolence) compared to materialistic consumers, whereas materialistic consumers and dualistic consumers would place more importance on self-enhancement (power, achievement and hedonism) compared to anti-consumers. In addition, it was proposed that anti-consumers and dualistic consumers would place more importance on openness to change (self-direction and stimulation) than materialistic consumers, while materialistic consumers and dualistic consumers will place more importance on conservation (conformity, tradition and security) than anti-consumers. Lastly, it was proposed that disinterested consumers would place low importance on all the four higher order values – self-enhancement, self-transcendence, openness to change and conservation. Figure 6.11 presents the relation of the four higher order values with the four clusters.

Figure 6.11: Value orientations of the four clusters

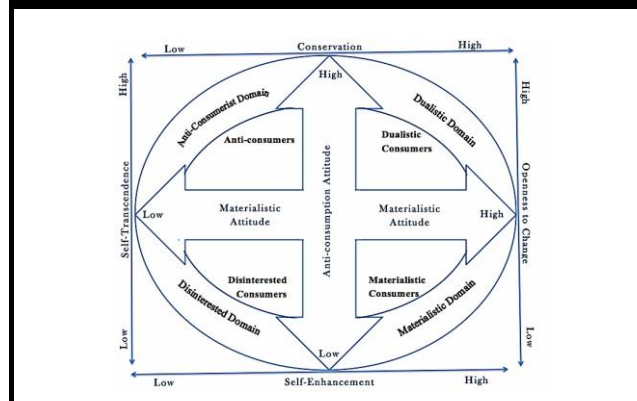


Table 6.14 shows the results for one-way ANOVA for the ten values. Findings indicate that the clusters differ significantly with respect to Achievement [$F(3,284)=3.448$, $p=0.017$], Power [$F(3,284)=42.396$, $p=0.000$], Hedonism [$F(3,284)=4.353$, $p=0.005$], Benevolence [$F(3,284)=9.122$, $p=0.000$], Universalism [$F(3,284)=37.103$, $p=0.000$], self-direction [$F(3,284)=6.279$, $p=0.000$] and security [$F(3,284)=2.598$, $p=.05$]. However, there are no significant differences between the clusters with respect to conformity, tradition and stimulation.

Table 6.14: Analysis of Variance of the Ten Values for the Four Clusters

Variables	F value	Sig.
Achievement	3.45*	.017
Power	42.40**	.000
Hedonism	4.35*	.005
Benevolence	9.12**	.000
Universalism	37.10**	.000
Self-direction	6.28**	.000
Stimulation	.65	.581
Tradition	.63	.598
Conformity	.16	.920
Security	2.60*	.050

** Significant at the 0.01 level

*Significant at the 0.05 level

Table 6.15 shows the significant pairwise differences identified between clusters in terms of their value orientations. The values that significantly differentiate clusters from one another are discussed next.

Table 6.15: Multiple Comparison for Values			
Clusters	Mean	Standard Error	Sig.
Universalism			
Anti-consumers > Materialistic consumers	1.130**	.111	.000
Anti-consumers > Dualistic consumers	.631**	.096	.000
Anti-consumers > Disinterested consumers	.622**	.09	.000
Disinterested consumers > Materialistic consumers	.508**	.103	.000
Dualistic consumers > Materialistic consumers	.499**	.12	.000
Benevolence			
Anti-consumers > Dualistic consumers	.431**	.095	.000
Anti-consumers > Materialistic consumers	.393*	.11	.002
Disinterested consumers > Dualistic consumers	.301*	.085	.003
Disinterested consumers > Materialistic consumers	.264*	.101	.048
Power			
Materialistic consumers > Anti-consumers	1.445**	.15	.000
Dualistic consumers > Anti-consumers	1.203**	.13	.000
Disinterested consumers > Anti-consumers	.860**	.12	.000
Materialistic consumers > Disinterested consumers	.585**	.14	.000
Dualistic consumers > Disinterested consumers	.343*	.12	.016
Achievement			
Materialistic consumers > Anti-consumers	.384**	.13	.014
Materialistic consumers > Disinterested consumers	.279*	.12	.050
Hedonism			
Materialistic consumers > Anti-consumers	.595*	.17	.002
Materialistic consumers > Dualistic consumers	.434*	.16	.044
Materialistic consumers > Disinterested consumers	.416*	.15	.037
Self-direction			
Anti-consumers > Materialistic consumers	.372*	.11	.005
Anti-consumers > disinterested consumers	.339*	.09	.001
Anti-consumers > Disinterested consumers	.329*	.10	.004
Security			
Disinterested consumers > Anti-consumers	.217*	.09	.047

**Significant at the 0.01 level

*Significant at the 0.05 level

6.4.1.1.1. Universalism

As proposed, both anti-consumers (mean = .861, SD = .525) and dualistic consumers (mean = .230, SD = .577) rated universalism higher than materialistic consumers (mean = -.269, SD = .561). Disinterested consumers

(mean = .240, SD = .579) differ from materialistic consumers in terms of universalism, with disinterested consumers placing more importance on universalism than materialistic consumers. Anti-consumers had significantly stronger positive relationship with universalism compared to not only materialistic consumers but also disinterested and dualistic consumers. The difference in universalism's mean scores of the four clusters was large. This was evident from the large effect size obtained (eta squared = 0.2).

6.4.1.1.2. Benevolence

As proposed, anti-consumers (mean = .767, SD = .613) had a higher mean for benevolence than materialistic consumers (mean = -.269, SD = .561). However, dualistic consumers (mean = .336, SD = .529) did not differ significantly from materialistic consumers. Additionally, anti-consumers differ significantly from dualistic consumers, with anti-consumers having stronger relation with benevolence compared to dualistic consumers. Disinterested consumers (mean = .240, SD = .579) differ in terms of benevolence from dualistic consumers (mean = .336, SD = .529) and materialistic consumers (mean = -.269, SD = .561), with disinterested consumers having significantly stronger positive relationship with benevolence compared to both materialistic consumers and dualistic consumers. Overall, the difference in benevolence's mean scores of the four clusters was moderate. This was evident from the medium effect size obtained (eta squared=0.08).

6.4.1.1.3. Power

All of the four clusters had a negative relationship with power. As proposed, both materialistic consumers (mean = $-.698$, SD = $.883$) and dualistic consumers (mean = $-.940$, SD = $.749$) differ in terms of power from anti-consumers (mean = -2.143 , SD = $.740$) and disinterested consumers (mean = -1.283 , SD = $.708$), with materialistic consumers and dualistic consumers having significantly stronger less-negative relationship with power compared to anti-consumers and disinterested consumers. Additionally, disinterested consumers differ from anti-consumers in terms of power, with disinterested consumers having stronger less-negative relationship with power compared to anti-consumption. Overall, the difference in mean scores of the four clusters for power was very large. This was evident from the large effect size obtained (eta squared = 0.3).

6.4.1.1.4. Achievement

As proposed, materialistic consumers (mean = $.290$, SD = $.736$) differ from anti-consumers (mean = $-.0933$, SD = $.720$) and disinterested consumers (mean = $.011$, SD = $.605$) in terms of the importance they give to achievement, with materialistic consumers having a significant positive relation with achievement compared to both disinterested consumers and anti-consumers. However, dualistic consumers (mean = $.114$, SD = $.551$) did not have a significant difference in terms of achievement compared to anti-consumers. Overall, the difference in the mean scores of the four clusters for achievement was low. This was evident from the small effect size obtained (eta squared = 0.03).

6.4.1.1.5. Hedonism

In terms of hedonism, materialistic consumers (mean = .501, SD = .794) differ from the remaining three clusters, with materialistic consumers exhibiting highest level of hedonism compared to disinterested consumers (mean = .084, SD = .854), dualistic consumers (mean = .067, SD = .813) and anti-consumers (mean = -.094, SD = .905), all three of which had a negative relationship with hedonism. However, dualistic consumers did not have a significant difference compared to anti-consumers. Overall, the difference in mean scores of the four clusters for achievement was low. This was evident from the small effect size obtained (eta squared = 0.04).

6.4.1.1.6. Self-direction

In the case of self-direction significant differences were found between anti-consumers (mean = .722, SD = .633) and the remaining three clusters, with anti-consumers tending to be more self-directed than dualistic consumers (mean = .392, SD = .465), disinterested consumers (mean = .384, SD = .578) and materialistic consumers (mean = .350, SD = .590). However, dualistic consumers did not have a significant difference compared to materialistic consumers in terms of self-direction. Overall, the difference in mean scores of the four clusters for self-direction was moderate. This was evident from the medium effect size obtained (eta squared=0.06).

6.4.1.1.7. Security

No significant difference existed between materialistic consumers (mean = .279, SD = .558) and anti-consumers (mean = .086, SD = .688), similarly no

significant difference existed between dualistic consumers (mean = .128, SD = .533) and anti-consumers with respect to security. Disinterested consumers (mean = .299, SD = .548) differ from anti-consumers in terms of security, with disinterested consumers exhibiting significant importance for security compared to anti-consumers. No other significant group differences were obtained in terms of security. Overall, the difference in mean scores of the four clusters for security was low. This was evident from the small effect size obtained (eta squared = 0.02).

In conclusion, the one-way ANOVA and Tukey's HSD analysis results show that the four clusters have different value orientations according to the specific combination of anti-consumption and materialistic attitudes that they exhibit, thus supporting both H3 and H6.

6.4.1.2. Differing levels of environmental consciousness between the clusters

This section aims to identify significant differences between the clusters in terms of their environmental consciousness, and examines H8. In chapter 3, section 3.4, the thesis discussed the expected difference in environmental consciousness between the proposed clusters. It was proposed that anti-consumers will have more environmental consciousness (environmental concerns and awareness of consequences) than materialistic consumers. To test this proposition and to gain an understanding of the difference between the clusters in terms of their environmental consciousness this section used one-way ANOVA and Tukey post-hoc tests. Table 6.16

displays the results of the one-way ANOVA for awareness of consequences (AOC) and environmental concern (EC).

Table 6.16: Results of ANOVA for the Two Components of Environmental Consciousness Among the Four Clusters		
Variables	F value	Sig.
Environmental Concerns	37.36*	.000
Awareness Of Consequences	42.39*	.000

*Significant at the 0.01

Results indicate that significant differences existed between at least two clusters in terms of both environmental concerns [$F(3,284) = 37.36, p = .000$] and awareness of consequences [$F(3,284) = 42.39, p = .000$]. Multiple comparisons were also calculated to understand the group differences. Table 6.17 shows the significant pairwise differences identified between the four clusters in terms of their environmental consciousness.

Table 6.17: Multiple Comparison for Environmental Concerns and Awareness of Consequences			
Clusters	M	SE	Sig.
Environmental concerns			
Disinterested consumers > Materialistic consumers	.491**	.102	.000
Anti-consumers > Materialistic consumers	1.086**	.110	.000
Anti-consumers > Disinterested consumers	.595**	.087	.000
Anti-consumers > Dualistic consumers	.274*	.095	.022
Dualistic consumers > Materialistic consumers	.811**	.108	.000
Dualistic consumers > Disinterested consumers	.320*	.085	.001
Awareness Of Consequences			
Disinterested consumers > Materialistic consumers	.713**	.150	.000
Anti-consumers > Materialistic consumers	1.750**	.162	.000
Anti-consumers > Disinterested consumers	1.033**	.128	.000
Anti-consumers > Dualistic consumers	.758**	.140	.000
Dualistic consumers > Materialistic consumers	.988**	.160	.000

** Significant at the 0.01 level

* Significant at the 0.05 level

6.4.1.2.1. Environmental Concern

As expected, with respect to environmental concern, anti-consumers (mean = 4.496, SD = .514) differed significantly from the remaining three clusters. With anti-consumers having stronger relationship with environmental concerns as compared to dualistic consumers (mean = 4.222, SD = .543), disinterested consumers (mean = 3.902, SD = .526) and materialistic consumers (mean = 3.411, SD = .7153). Additionally, dualistic consumers had a significantly stronger relationship with environmental concerns compared to both materialistic consumers and disinterested consumers. disinterested consumers had a significantly stronger relationship with environmental concerns compared to materialistic consumers. Thus, as predicted materialistic consumers reflected the least environmental concern compared to the remaining three clusters, while anti-consumers were the most concerned about the environment compared to the remaining three clusters. Overall, the difference in mean scores of the four clusters for environmental concern was huge. This was evident from the large effect size obtained (eta squared=0.3).

6.4.1.2.2. Awareness of consequences

As in the case of awareness of consequences, significant differences existed between anti-consumers (mean = 6.16, SD = .739) and the remaining three clusters, with anti-consumers being the most aware of consequences of their carbon footprint on earth compared to dualistic consumers (mean = 5.397, SD = .774), disinterested consumers (mean = 5.122, SD = .853) and materialistic consumers (mean = 4.410, SD = .945). Also, both dualistic consumers and disinterested consumers differed significantly from

materialistic consumers, with both dualistic and disinterested consumers being more aware of consequences compared to materialistic consumers, thereby lending support to the understanding that materialistic consumer are the least conscious about the environment. Overall, the difference in mean scores of the four clusters for awareness of consequences was huge. This was evident from the large effect size obtained ($\eta^2=0.3$).

In conclusion, the cluster of anti-consumers was the most environmentally conscious cluster among the four clusters, while the cluster of materialistic consumers was the least environmentally conscious. Support for H8 was obtained as the four clusters differed in terms of environmental consciousness.

6.4.1.3. Differing levels of well-being between the clusters

This section aims to understand the difference between clusters in terms of subjective wellbeing, thus relating to hypothesis 10. In chapter 3, section 3.4.2, the thesis discussed the expected difference in wellbeing between the proposed clusters. It was proposed that anti-consumers would experience higher wellbeing compared to materialistic consumers, while dualistic consumers would experience lowest wellbeing as compared to remaining three clusters. To examine these relations a one-way ANOVA for the three components of subjective wellbeing was conducted. Table 6.18 shows the results for one-way ANOVA for the components of subjective wellbeing. Findings indicate that the clusters do not differ significantly with regards to satisfaction with life (SWL), however significant differences were

found for negative affect (NA) [$F(3,284) = 4.81, p = 0.003$] and positive affect (PA) [$F(3,284) = 2.74, p = 0.043$] between the clusters.

Table 6.18: Analysis of Variance for Well-Being Among the Four Clusters		
Variables	F value	Sig.
Satisfaction With Life	1.32	.269
Positive Affect	2.75*	.043
Negative Affect	6.73**	.000

** Significant at the 0.01 level

* Significant at the 0.05 level

Multiple comparisons were also calculated to understand the group differences. Table 6.19 shows the significant pairwise differences identified between clusters in terms of their wellbeing.

Table 6.19: Multiple Comparison for Wellbeing			
Clusters	M	SE	Sig.
Positive Affect			
Anti-consumers > Disinterested consumers	.265*	.100	.041
Negative Affect			
Dualistic consumers > Anti-consumers	.556**	.131	.000
Dualistic consumers > Disinterested consumers	.410*	.118	.003
Dualistic consumers > Materialistic consumers	.385*	.150	.050

** Significant at the 0.01 level

* Significant at the 0.05 level

6.4.1.3.1. Positive affect

No significant difference existed between anti-consumers (mean = 3.78, SD = .705) and materialistic consumers (mean = 3.73, SD = .620), or between dualistic consumers (mean = 3.61, SD = .643) and remaining three clusters. However a significant difference existed between anti-consumers and disinterested consumers (mean = 3.51, SD = .606) in terms of positive affect, with anti-consumers having higher positive affect in their lives as compared to disinterested consumers. Overall, the difference in mean scores of the four

clusters for positive affect was low. This was evident from the small effect size obtained ($\eta^2=0.02$).

6.4.1.3.2. Negative affect

The last factor making up subjective wellbeing is negative affect. In terms of negative affect no significant difference existed between anti-consumers and materialistic consumers. However, as expected, significant differences did exist between dualistic consumers (mean = 2.78, SD = .772) and the remaining three clusters, with dualistic consumers experiencing significantly greater negative affect compared to materialistic consumers (mean = 2.4, SD = .833), disinterested consumers (mean = 2.38, SD = .757) and anti-consumers (mean = 2.23, SD = .742). Overall, the difference in mean scores of the four clusters for negative affect was moderate. This was evident from the medium effect size obtained ($\eta^2 = 0.06$).

In summary, the results of one-way ANOVA show the different levels of wellbeing experienced by the four clusters, thus, supporting H10. From the results, it can be seen that there are some differences between the clusters with respect to subjective wellbeing, with dualistic consumers experiencing highest negative affect, hence experiencing lowest subjective well-being compared to the remaining three clusters. However, it is worth mentioning that the majority of people seemed to have high wellbeing and were satisfied with their life, which is in line with past research (Cummins, 2010)

6.4.1.4. Differing levels of authenticity between the clusters

This section aims to test H12 to see if the four clusters differed in terms of authenticity. In chapter 3, section 3.4.4, the thesis talked about the relation of the clusters with authenticity. It was proposed that anti-consumers will experience greater authenticity [high authentic living (AL), low self-alienated (SA) and will have lower level of external influence (EI)] than materialist consumers and dualistic consumers.

To test these proposed relationships and to gain an understanding of the differences between the clusters in terms of authenticity a one-way analysis of variance was conducted with all the three components of authenticity for the four clusters. The results are presented in table 6.20.

Table 6.20: Results Of ANOVA For the Three Components of Authenticity Among the Four Clusters		
Variables	F value	Sig.
Authentic Living	6.387**	.000
Self-alienation	8.974**	.000
External Influence	7.865**	.000

*Significant at the 0.01

The findings suggest that significant differences exist between the clusters with respect to all of the three dimensions of authenticity [authentic living $F(3,284) = 6.387, p = .000$; self-alienation $F(3,284) = 8.974, p = .000$; external influence $F(3,284) = 7.865, p = .000$]. Multiple comparisons were also calculated to further understand the group differences. Table 6.21 shows the significant pairwise differences identified between clusters in terms of the three components of authenticity.

Table 6.21: Multiple Comparison for Authentic Living, Self-Alienation and External Influence			
Clusters	M	SE	Sig.
Authentic Living			
Anti-consumers > Disinterested consumers	.589**	.143	.000
Anti-consumers > Materialistic consumers	.574*	.181	.009
Anti-consumers > Dualistic consumers	.479*	.156	.013
Self-alienation			
Materialistic consumers > Anti-consumers	.799*	.264	.014
Dualistic consumers > Disinterested consumers	.768*	.205	.001
Dualistic consumers > Anti-consumers	1.087**	.229	.000
External Influence			
Dualistic consumers > Anti-consumers	.976**	.220	.000
Materialistic consumers > Anti-consumers	.741*	.254	.020
Dualistic consumers > Disinterested consumers	.678*	.197	.004

** Significant at the 0.01 level

* Significant at the 0.05 level

6.4.1.4.1. Authentic living

Significant differences existed between anti-consumers (mean = 5.99, SD = .788) and the remaining three clusters in terms of authentic living, with anti-consumers having the highest authentic living compared to disinterested consumers (mean = 5.41, SD = .992), dualistic consumers (mean = 5.52, SD = .902) and materialistic consumers (mean = 5.43, SD = .938). Overall, the difference in mean scores of the four clusters for authentic living was moderate. This was evident from the medium effect size obtained (eta squared = 0.06).

6.4.1.4.2. External influence

From table 6.21 it can be seen that materialistic consumers and anti-consumers differ significantly in terms of external influence, with materialistic consumers (mean = 3.54, SD = 1.592) having higher external influence as compared to anti-consumers (mean = 2.795, SD = 1.166). Additionally, external influence significantly differentiated dualistic consumers (mean =

3.77, SD = 1.21) from both disinterested consumers (mean = 3.093, SD = 1.28) and anti-consumers, with dualistic consumers experiencing greater external influence compared to both disinterested consumers and anti-consumers. Overall, the difference in mean scores of the four clusters for external influence was moderate. This was evident from the medium effect size obtained (eta squared = 0.07).

6.4.1.4.3. Self-alienation

As predicted, there was significant difference between materialistic consumers (mean = 3.13, SD = 1.60) and anti-consumers (mean = 2.332, SD = 1.21) in terms of self-alienation, with materialistic consumers feeling more self-alienated than anti-consumers. Additionally, like in the case of external influence, dualistic consumers (mean = 3.419, SD = 1.40) differed significantly from both disinterested consumers (mean = 2.65, SD = 1.27) and anti-consumers in terms of self-alienation, with dualistic consumers feeling more self-alienated than both disinterested consumers and anti-consumers. Overall, the difference in mean scores of the four clusters for external influence was moderate. This was evident from the medium effect size obtained (eta squared = 0.08).

In conclusion, the four clusters differed in terms of authenticity and therefore, H12 was supported. Additionally, as predicted, anti-consumers experienced greater authenticity than did materialistic consumers. Overall, the four clusters – anti-consumers, materialistic consumers, dualistic consumers and disinterested consumers – have different profiles with respect to value orientations, wellbeing, environmental consciousness and authenticity, thus,

providing support for H3, H6, H8, H10 and H12. The next section uses Discriminant Function Analysis to test the hypotheses further.

6.4.2. The discriminant power of the psychographic variables

This section aims to test whether the four clusters – anti-consumers, materialistic consumers, dualistic consumers and disinterested consumers – firstly, differ significantly in terms of the four psychographic variables – value orientations, wellbeing, environmental consciousness and authenticity – and secondly, which variables are the strongest discriminator between each cluster when compared to every other cluster. Based on the bipartite aims of this section, this section is divided into two sub-sections.

The first sub-section tests all the psychographic variables together to see if the four clusters differentiate in terms of these variables. This is done to validate the cluster solution obtained earlier in this chapter. Discriminant function analysis is used to “evaluate the accuracy of classification” (Malhotra et al., 2012, pp. 739) and thus is suitable for this sub-section.

The second sub-sections will examine the discriminating power of variables between pairwise clusters. That is to say, the sub-section will look at the discriminating power of the four psychographic variables between anti-consumers and materialistic consumers, anti-consumers and dualistic consumers, anti-consumers and disinterested consumers, materialistic consumers and dualistic consumers, materialistic consumers and disinterested consumers, and dualistic consumers and disinterested consumers.

Discriminant analysis not only allows the investigator to examine which attributes contribute most to the group separation (Coakes and Steed, 1999, Kinnear and Gray, 1999) and to validate cluster solution (Malhotra et al., 2012; Hire et al., 2010), but it could also be used to investigate the differences between two or more clusters with respect to several variables simultaneously (Klecka, 1980). Thereby making Discriminant Function Analysis suitable for the second sub-section, which tests the discriminative power of the psychographic variables (values, wellbeing, environmental consciousness and authenticity), and identifies the strongest discriminating variables for each pair of clusters.

The basic assumptions associated with discriminant analysis are that firstly the observations are a random sample and secondly that each predictor variable is distributed normally (Klecka, 1980). These two assumptions are discussed in chapter 5, section 5.6.

Discriminant analysis (DA) is used when the dependent variable is categorical in nature whereas the independent variables are interval in nature. The analysis is called two-group discriminant analysis if there are two groups and multiple discriminant analysis (MDA) if there are more than two groups.

MDA and multiple regression analysis or logistic regressions are similar to each other. However, MDA is the better choice as it has greater statistical power than logistic regression and thus greater capability of avoiding the Type 2 errors (Garson, 2008). Additionally regression is suitable when the dependent variable is metric in nature, while DA is appropriate when the dependent variable is categorical in nature (Hair et al., 2008). MDA is also

allied to the analytical technique of MANOVA, yet the two are used for different purposes. While MANOVA highlights differences between groups on the basis of membership related to mean differences, MDA allows investigators to understand what predictor variables discriminates between two or more groups (Coakes and Steed, 1999, Kinnear and Gray, 1999). Additionally MDA and MANOVA could be seen as opposite to each other in the sense that the dependent variable in MANOVA is metric and the independent variable is categorical, while the opposite is true in MDA (Hair et al., 1998).

The current study used MDA as a multivariate technique, which is applicable when examining differences between the clusters with respect to the psychographic variables, and examining which attribute contributes most to group separation.

Conducting MDA is a five-step process (Malhotra et al., 2012). The first step is determining predictor variables. The data at this point is divided into two parts, the analysis sample and the holdout sample. Discriminant analysis on the analysis sample is validated through running the DA on holdout sample. However, as the aim of using DA in this thesis is to validate results of cluster analysis obtained in section 6.3.1 through identifying overall differences and then identifying which of the variable discriminates most between groups, the step of dividing the data into two sets is not required and thus is not done. The second step is estimation. This step involves building a linear combination of the discriminant function (predictors) with the aim of differentiating between the groups as much as possible on these predictor

variables. Checking the statistical significance is the third step of the process, which involves testing the null hypothesis, i.e. the means of all the discriminant functions for all the groups in the population are equal. The results are meaningful only if the null hypothesis is rejected. Step four is the interpretation of discriminant coefficients and weights. This is similar to what is done in multiple regression. An examination of the absolute magnitude of the standardised discriminant function coefficients along with an examination of discriminant loadings or structural correlations helps obtain an idea of discriminating power of variables between groups. The simple correlation between every predictor and discriminant function reflects the variance that the predictor shares with the discriminant function. Lastly, step five consists of determining the percentage of the correctly classified cases (Malhotra et al., 2012).

Finally when interpreting, in order to check if the function reliably discriminates among the groups or not, Wilk's lambda is used. When the value of Wilk's lambda is very close to 1 it indicates that the differences are not significant (Brace et al., 2006). With a very complex sampling distribution of lambda it is more convenient to determine its significance from a chi-square value (Kinnear and Gray, 2000). If $p < 0.05$, chi-square is considered statistically significant. Discriminant loadings are utilized to determine the linear correlation between every variable. The discriminating power of the variables is interpreted through the discriminant function, with a substantive cut off point of 0.3 and above (Hair et al., 1998). The uni-variate F Ratio demonstrates whether there is substantial influence for every category of each of the predictor variables. Greater F values signify larger discriminatory

power (Brace et al., 2006). Examining the eigenvalue is also advised as it determines how well the discriminant function discriminates between the categories, i.e. the bigger the value, the better the discrimination. Next are discussed the results of DA conducted in this study.

6.4.2.1. Overall differences between the four clusters

Through DA on the four psychographic variables for the four clusters, this section aims to validate the cluster solution by showing that the clusters differ in terms of the non-clustering variables (Malhotra et al., 2012), so as to provide validation for the proposed typology.

The prior probabilities for anti-consumers, materialistic consumers, disinterested consumers and dualistic consumers were .23, .15, .38, and .25, respectively, echoing the random probability of classing participants rightly. For the discriminant analysis to be significant, the canonical discriminant functions must accurately classify participants better than the chance probabilities.

As there are four groups, the number of discriminant functions obtained is three ($N-1$, where N is the number of groups). From the three possible discriminant functions, the first two were statistically significant at $p < .05$. The first function accounted for 82.4% of the intergroup variability and had a canonical correlation of .703, Wilks's $\lambda = .416$, $X^2(18, N = 288) = 247.62$, $p < .000$. The second function accounted for 14.8% of the variance and had a canonical correlation of .39, Wilks's $\lambda = .823$, $X^2(10, N = 288) = 55$, $p < .00$. The third function accounted for only 2.8% of variance and had a canonical

correlation of .181, Wilk's $\lambda = .967$, $X^2(4, N = 288) = 9.34$, $p > .00$. Thus, in combination, the first two functions accounted for 97.2% of the inter-groups variability.

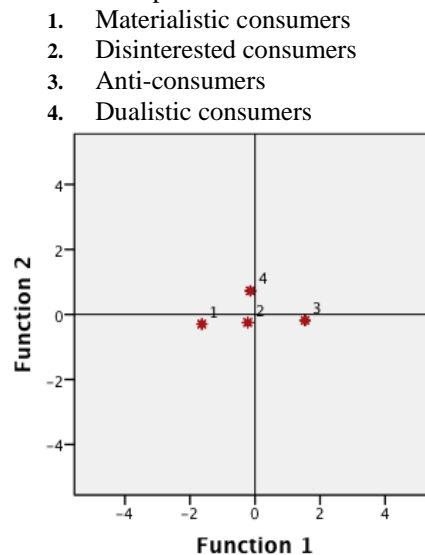
The linear correlation between each of the variable and the discriminant function is determined by the discriminant loadings. These discriminant loadings are used to interpret the discriminant power of variables. The variables exhibiting a loading of 0.30 or higher are considered substantive. During interpretation all of the variables with loading higher than 0.30 should be considered, even if some of them are excluded in the step-wise solution. Reason being that not being included in the stepwise solution does not imply that they do not have a substantial effect (Hair et al., 1998, p. 294). Table 6.22 displays the discriminant loadings of the variables on the first two functions.

Table 6.22: Results for Discriminant Function Analysis for the Four Clusters

	Function	
	1	2
Awareness Of Consequences	.667	.249
Power	-.632	.559
Universalism	.632	-.066
Environmental Concerns	.591	.545
Self-Alienation	-.197	.560
External Influence ^b	-.029	.416
Benovelence ^b	.170	-.287
Negative Affect ^b	-.010	.280
Achievement ^b	-.194	.079
Self-direction ^b	.187	-.058
Hedonism ^b	-.084	.041
Authentic Living ^b	.070	-.149
Conformity ^b	.008	-.131
Tradition ^b	-.076	-.126
Positive Affect	.064	-.026
Stimulation ^b	-.120	.021
Satisfaction With Life ^b	.099	-.154
Security ^b	-.042	-.099
Wilk's Lambda	.416	.823
Chi Square	247.615	55.1

The positive loadings of awareness of consequences, universalism and environmental concern, as well as the negative loading of power defined the first function. Figure 6.12 indicates that the first function separated materialists (1) from anti-consumers (3), as well as separating these two groups from the remaining two groups: dualistic consumers (4) and disinterested consumers (2).

Figure 6.12: Group centroids from discriminant function analysis



The positive loadings of power, environmental concern, self-alienation, external influence, and negative affect, as well as the negative loading of benevolence defined the second function. As can be seen from figure 6.12, the second function separated dualistic consumers (4) from the remaining three groups. Taken together, the two functions correctly classified 52.4% of materialistic consumers, 65.7% of disinterested consumers, 65.7% of anti-consumers, and 47.9% of dualistic consumers. The overall correct

classification rate was 59.4%. The two discriminant functions classified individuals better than expected based on the prior probabilities. Thus, validating the cluster solution and supporting the understanding that contemporary consumer can be classified into four unique clusters on the basis of the specific combination of anti-consumption attitude and materialistic attitude that they exhibit. The classification results are shown in Table 6.23.

Table 6.23: Classification Table For Consumer Typology

Actual group membership	Predicted Group Membership							
	Materialistic consumers		Disinterested consumers		Anti-consumers		Dualistic consumers	
	%	n	%	n	%	n	%	n
Materialistic consumers	52.4	22	38.1	16	.0	0	9.5	4
Disinterested consumers	6.5	7	65.7	71	11.1	12	16.7	18
Anti-consumers	.0	0	22.4	15	65.7	44	11.9	8
Dualistic consumers	4.2	3	36.6	26	11.3	8	47.9	34

59.4% of original grouped cases correctly classified.

6.4.2.2. Pairwise differences

This section aims to investigate which of the attributes contribute most to group separation, thus relating to hypotheses 3, 6, 8, 10 and 12. To test discriminating power of the four psychographic variables – value orientations, wellbeing, environmental consciousness and authenticity - between pairwise clusters the section will discuss results of DA between:

1. Anti-consumers and Materialistic consumers
2. Anti-consumers and Dualistic consumers
3. Anti-consumers and Disinterested consumers
4. Materialistic consumers and Dualistic consumers
5. Materialistic consumers and Disinterested consumers
6. Dualistic consumers and Disinterested consumers

6.4.2.2.1. Anti-consumers and materialistic consumers

Table 6.24 shows the results of discriminant analysis when comparing anti-consumers and materialistic consumers.

Table 6.24: Factors Discriminating Between Anti-Consumers and Materialistic Consumer		
Wilk's lambda: .305**		Chi square: 124.24**
Variable	Discriminant Loadings	Univariate F Ratio
Awareness of consequences	.688	115.79**
Universalism	.681	113.27**
Power	-.589	84.818**
Environmental concerns	.589	84.74**
Benevolence	.308	11.526*
Hedonism ^a	-.300	12.26*
Achievement ^a	-.186	7.208*
Satisfaction with life ^a	.151	2.014
Positive affect ^a	.133	.129
Conformity ^a	.131	.243
Tradition ^a	-.102	.051
Authentic living ^a	.085	11.806*
Negative affect ^a	.081	1.257
Stimulation ^a	-.073	1.94
Self-direction ^a	.067	9.41*
Self-alienation ^a	-.047	8.74*
Security ^a	-.042	2.46
External Influence ^a	.023	7.83*

a. This variable not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

Among the values, universalism, benevolence, power and hedonism were significant discriminators between the two clusters. Whereas both the components of environmental consciousness - awareness of consequences and environmental concern- were significant discriminators between anti-

consumers and materialistic consumers. Awareness of consequences was the highest discriminator, followed by universalism. The eigenvalue for this pair of clusters was 2.284.

6.4.2.2.2. *Anti-consumers and dualistic consumers*

Table 6.25 shows the results of discriminant analysis when analysing the discriminating power of the psychographic variables between anti-consumers and dualistic consumers.

Table 6.25: Factors Discriminating Between Anti-Consumers and Dualistic Consumer		
Wilk's lambda: .532**		Chi square: 84.84**
Variable	Discriminant Loadings	Univariate F Ratio
Power	.868	90.014**
Awareness of consequences	-.537	34.526**
Universalism	-.474	44.964**
External influence	.441	23.250**
Self-alienation ^a	.288	23.819**
Positive affect ^a	-.268	2.064
Benevolence ^a	-.238	19.630**
Negative affect ^a	.210	18.578**
Self-direction ^a	-.201	12.285*
Authentic living ^a	-.194	10.977*
Environmental concerns ^a	-.178	9.275*
Achievement ^a	.154	3.616
Conformity ^a	-.139	.242
Stimulation ^a	-.122	.581
Satisfaction with life ^a	-.107	3.098
Security ^a	.081	.203
Tradition ^a	.007	1.040
Hedonism ^a	-.004	1.214

a. This variable was not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

Power, awareness of consequences, universalism and external influence were the significant discriminators between anti-consumers and dualistic consumers, with power being the highest discriminator. The eigenvalue for this comparison was 0.879.

6.4.2.2.3. Anti-consumers and disinterested consumers

Table 6.26 presents the results of discriminant analysis when looking at anti-consumers and disinterested consumers.

Table 6.26: Factors Discriminating Between Anti-Consumers and Disinterested Consumer		
Wilk's lambda: .531**		Chi square: 107.852
Variable	Discriminant Loadings	Univariate F Ratio
Awareness of consequences	.663	67.021**
Power	-.622	59**
Environmental concern	.594	53.78**
Universalism	.578	51**
Authentic living	.333	16.97**
Self-direction ^a	.300	13.204**
Positive Affect ^a	.242	6.96*
Satisfaction with life ^a	.186	2.42
Achievement ^a	-.185	1.06
Self-alienation ^a	-.181	2.686
Benovelence ^a	.167	2.12
Tradition ^a	-.107	.031
Security ^a	-.090	5.368*
Hedonism ^a	-.085	1.734
Conformity ^a	-.083	.359
External influence ^a	-.037	2.38
Stimulation ^a	-.014	.713
Negative Affect ^a	.011	1.57

a. This variable was not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

Awareness of consequences, power, environmental concerns, universalism, authentic living and self-direction were the significant discriminators between anti-consumers and disinterested consumers. Awareness was the strongest positive discriminators, while power was the highest negative discriminators between the two clusters. The eigenvalue for this analysis was 0.882.

6.4.2.2.4. Materialistic consumers and dualistic consumers

Table 6.27 presents the results of the discriminant analysis when highlighting differences between materialistic consumers and dualistic consumers.

Table 6.27: Factors Discriminating Between Materialistic Consumer and Dualistic Consumers		
Wilk's lambda: .558**		Chi square: 63.6**
Variable	Discriminant Loadings	Univariate F Ratio
Environmental concerns	.726	46.316**
Awareness of consequences	.643	36.355**
Universalism ^a	.367	20.141**
Hedonism	-.300	7.659*
Stimulation ^a	-.187	.575
External Influence ^a	.166	.786
Conformity ^a	.136	.013
Power ^a	-.126	2.414
Positive affect	-.101	.903
Benevolence ^a	.096	.131
Achievement ^a	-.066	2.112
Tradition ^a	-.064	1.38
Authentic living ^a	-.043	.284
Negative affect ^a	.042	6.168*
Security ^a	.034	2.045
Self-direction ^a	-.029	.179
Satisfaction with life ^a	.018	.004
Self-alienation ^a	-.015	1.005

a. This variable was not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

Environmental concern, awareness of consequences, universalism and hedonism were the significant discriminators between materialistic consumers and dualistic consumers. Environmental concern was the highest discriminator between these two clusters. The eigenvalue of this test was .792.

6.4.2.2.5. Materialistic consumers and disinterested consumers

Table 6.28 shows the results of the discriminant analysis between materialistic consumers and disinterested consumers.

Table 6.28 Factors Discriminating Between Materialistic Consumer and Disinterested Consumers		
Wilk's lambda .690**		Chi square 54.27**
Variable	Discriminant Loadings	Univariate F Ratio
Universalism	.596	23.68**
Environmental concern	.566	21.327**
Power ^a	-.505	17.93**
Awareness of consequences	.345	19.86**
Benevolence	.325	7.045**
Achievement ^a	-.30	5.70*
Stimulation ^a	-.249	.577
External influence	-.217	3.1
Self-alienation ^a	-.179	3.7
Hedonism ^a	-.175	7.47*
Authentic living ^a	.097	.007
Satisfaction with life ^a	.080	.090
Self-direction ^a	-.053	.102
Tradition ^a	.046	.188
Security ^a	.013	.040
Conformity ^a	-.010	.000
Negative Affect ^a	-.010	.031
Positive Affect ^a	-.005	3.84

a. This variable was not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

Among all the psychographic variables, universalism, environmental concern, power, awareness of consequences, benevolence and achievement were significant discriminators between the two clusters. Universalism was the highest discriminator. The eigenvalue for this test was 0.450.

6.4.2.2.6. Dualistic consumers and disinterested consumers

Table 6.29 presents the results of the discriminant analysis when looking at discriminating power of the psychographic variables so as to discriminate dualistic consumers and disinterested consumers.

Table 6.29: Factors Discriminating Between Dualistic Consumers and Disinterested Consumers		
Wilk's lambda: .787**		Chi square:42.025**
Variable	Discriminant Loadings	Univariate F Ratio
Environmental concerns	.569	15.479**
Self-alienation	.549	14.443**
Benevolence	-.529	13.384**
External Influence ^a	.334	12.516*
Negative affect ^a	.300	12.332*
Universalism ^a	.178	.011
Awareness of consequences ^a	.152	4.786*
Power ^a	.151	9.630*
Self-direction ^a	.130	.011
Stimulation ^a	.128	.000
Security ^a	-.124	4.265*
Satisfaction with life ^a	-.122	.196
Conformity ^a	-.108	.012
Tradition ^a	-.094	1.146
Achievement ^a	.084	1.320
Hedonism ^a	.064	.019
Authentic living ^a	-.061	.568
Positive affect ^a	.012	1.114

a. This variable not used in the analysis

**Significant at the 0.01 level

*Significant at the 0.05 level

From all the psychographic variables, environmental concern, self-alienation, benevolence, external influence and negative affect were significant discriminators between dualistic consumers and disinterested consumers. Environmental concern was the strongest discriminator. The eigenvalue for this test was .271.

In conclusion, the results show that the four clusters differ from each other in terms of the four psychographic variables. Thus providing support for H3, H6, H8, H10 and H12.

6.5. Demographic profiling of clusters

Demographic variables are commonly used in segmentation studies to validate the cluster solutions (Michaelidou 2012). Isenhour (2012) showed that green consumers in many countries including Sweden, Hungary and America adopt anti-consumption to attain sustainable societies, and that these individuals are highly educated and are mostly middle-class citizens (Isenhour, 2012).

In this thesis age, education, income, gender and occupation are used to profile each cluster in the typology in terms of their socio-demographics. In order to identify statistical differences between the four clusters and to do profiling of each cluster in term of the five non-metric demographic variables – age, income, education, gender and occupation – this thesis used χ^2 statistic. As displayed in Table 6.30, both age and education showed significant differences ($p < 0.05$) between the segments as the majority of materialistic consumers (74%) are aged below 35 years, while most of anti-consumers (58%) are 35 years or above. This result supports the notion that materialism declines after middle age (Belk, 1985). The findings also support that anti-consumers are highly educated citizens (Isenhour, 2012) as 67% of anti-consumers are university graduates, while materialistic consumers are the

least educated, with only 43% holding a university degree, compared to the remaining clusters.

Therefore, the findings of the present study support previous research, which showed that education and age influence attitude and behavioural intention in regards to sustainable consumption (Roberts, 1996; Carrigan and Attalla, 2001; Maignan and Ferrel, 2001; Vermeir And Verbeke, 2006; Huneke, 2005). However, the groups in the typology do not differ significantly in terms of income, gender and occupation. The majority (more than 50%) of all segments were employed and had an income of less than 46,000£. Though, it can be seen from table 6.30 that more females (70%) were anti-consumers, this was not the case for materialistic consumers as they had equal balance of males and females. These results, in line with past research (Ozanne and Ballantine, 2010) did not show any significant differences in terms of gender between anti-consumers and non- anti-consumers.

Table 6.30: Chi² Analysis of Demographic Variables

	Materialistic consumers	Disinterested consumers	Dualistic consumers	Anti-consumers	P value	Chi ²	Df
Age							
18 – 35	74%	57%	56%	42%	.012	10.86	3
36- above	26%	43%	44%	58%			
Education							
Not university graduate	57%	40%	51%	33%	.039	8.38	3
University graduate	43%	60%	49%	67%			
Income							
£0- £25,000	48%	48%	61%	57%	.495	5.39	6
£25,001- £45,000	26%	28%	27%	24%			
£45,001- above £100	26%	24%	13%	20%			
Occupation							
Unemployed/retired	36%	39%	55%	48%	.107	6.11	3
Employed	64%	61%	45%	52%			
Gender							
Female	50%	67%	72%	70%	.093	6.42	3
Male	50%	33%	28%	30%			

6.6. Summary

This chapter presented the results of testing the 12 hypotheses proposed in chapter 3. A variety of analyses were conducted to test these hypotheses. The result provided full or partial support for all hypotheses. This chapter provides empirical support to the understanding that anti-consumption attitude is opposite to materialistic attitude. More importantly, this chapter attempts to produce and validate a typology of consumers with respect to the balance that they exhibit between their anti-consumption attitude and materialistic attitude.

This chapter first provided support for the notion that anti-consumption and materialism, at least as attitudes, are opposite to each other. This is achieved by examining attitudinal domains of anti-consumption and materialism to show, through the use of correlation analysis, that anti-consumption attitude and materialistic attitude have an inverse relationship with values, environmental consciousness, wellbeing and authenticity, and secondly, through the use of simple multiple regression, to shown that opposing values and inverse level of environmental consciousness act as antecedents of the two opposing attitudes.

Next, the chapter used these opposing attitudes to produce a typology of consumers with four distinct clusters. Two-step cluster analysis was used for the purpose of producing the typology. The cluster solution obtained through two-step cluster analysis was validated through the use of Hierarchical clustering and split sampling technique. External validity of the produced typology was then obtained by examining the difference between the clusters in terms of value orientations, environmental consciousness, wellbeing and

authenticity. One-way ANOVA, post-hoc and discriminant function analysis were used for this purpose. In this way four distinct and unique clusters were obtained. Table 6.31 presents the results of the 12 hypotheses tested in this thesis.

A summary of the main findings and contributions, along with research limitation and direction for future studies will be discussed in the last chapter of the thesis.

Table 6.31: Results Summary		
H1	This study expects a significant positive relationship between self-transcendence and anti-consumption attitude and a significant negative relationship between self-transcendence and materialistic attitude such that:	Supported
	H1a: universalism + anti-consumption attitude	Supported
	H1b: benevolence + anti-consumption attitude	Supported
	H1c: universalism - materialistic attitude	Supported
	H1d: benevolence - materialistic attitude	Supported
H2	This study expects a significant negative relationship between self-enhancement and anti-consumption attitude and a significant positive relationship between self-enhancement and materialistic attitude such that:	Supported
	H2a: power - anti-consumption attitude	Supported
	H2b: achievement - anti-consumption attitude	Supported
	H2c: hedonism - anti-consumption attitude	Supported
	H2d: power + materialistic attitude	Supported
	H2e: achievement + materialistic attitude	Supported
	H2f: hedonism + materialistic attitude	
H3	The four segments in the proposed typology vary in terms of self-transcendence/self-enhancement values.	Supported
H4	This study expects a significant positive relationship between openness to change and anti-consumption attitude and a significant negative relationship between openness to change and materialistic attitude such that:	Partially supported
	H4a: self-direction + anti-consumption attitude	Supported
	H4b: stimulation + anti-consumption attitude	Not- Supported
	H4c: self-direction - materialistic attitude	Supported
	H4d: stimulation - materialistic attitude	Supported
H5	This study expects a significant negative relationship between conservation and anti-consumption attitude and a significant positive relationship between conservation and materialistic attitude such that:	Partially supported
	H5a: conformity - anti-consumption attitude	Not- Supported
	H5b: tradition - anti-consumption attitude	Not- Supported
	H5c: security - anti-consumption attitude	Supported
	H5d: conformity + materialistic attitude	Not- Supported
	H5e: tradition + materialistic attitude	Not- Supported
	H5f: security + materialistic attitude	Not- Supported

H6	The four segments in the typology vary in terms of self-transcendence/self-enhancement values	Supported
H7	This study expects a significant positive relationship between environmental consciousness and anti-consumption attitude and a significant negative relationship between environmental consciousness and materialistic attitude such that:	Supported
	H7a: awareness of consequences + anti-consumption attitude.	Supported
	H7b: environmental concerns + anti-consumption attitude.	Supported
	H7c: awareness of consequences - materialist attitude.	Supported
	H7d: environmental concerns - materialist attitude.	Supported
H8	The four segments in the typology vary in terms of environmental consciousness.	Supported
H9	This study expects a significant positive relationship between well-being and anti-consumption attitude and a significant negative relationship between well-being and materialistic attitude such that:	Partially supported
	H9a: satisfaction with life + anti-consumption attitude	Supported
	H9b: positive affect + anti-consumption attitude	Supported
	H9c: negative affect - anti-consumption attitude	Not- Supported
	H9d: satisfaction with life - materialistic attitude	Supported
	H9e: positive affect - materialistic attitude	Not- Supported
	H9f: negative affect + materialistic attitude	Supported
H10	The four segments in the typology vary in terms of wellbeing.	Supported
H11	This study expects a significant positive relationship between authenticity and anti-consumption attitude and a significant negative relationship between authenticity and materialistic attitude such that:	Partially supported
	H11a: self-alienation - anti-consumption attitude.	Not- Supported
	H11b: authentic living + anti-consumption attitude	Supported
	H11c: accepting external influence - anti-consumption attitude	Not- Supported
	H11d: self-alienation + materialistic attitude	Supported
	H11e: authentic living - materialistic attitude	Supported
	H11f: accepting external influence + materialistic attitude.	Supported
H12	The four clusters in the proposed typology vary with respect to authenticity.	Supported

Chapter 7

DISCUSSION, IMPLICATIONS AND CONCLUSIONS

7.1 Introduction

The main aims of the present study were to explore empirically the notion that anti-consumption attitude and materialistic attitude are opposite to each other (Lee and Ahn, 2016), and whether a classification of consumers could be developed in terms of the balance they acquire between their anti-consumption attitude and materialistic attitude. To achieve these aims the following research questions were formulated:

- Q1. In what ways anti-consumption and materialism are opposite to each other. And can the inverse relation between the two attitudes be assessed empirically?
- Q2. Can a classification system/a typology of consumers based on different combinations of anti-consumption attitude and materialistic attitude be developed; and if so, can it be appropriately validated?

In order to answer these questions, first a systematic literature review was conducted. Chapter 1, discussed the contemporary culture, highlighting the coexistence and importance of materialism and anti-consumption attitudes in the 21st century. It was also proposed that though materialism is contradictory to anti-consumption (Kaynak and Eksi, 2011; Lee and Ahn,

2016), both are prevalent, thus the contemporary consumers would hold both anti-consumption attitude and materialistic attitude. Chapter 2 went on to examine existing literature on materialism and anti-consumption so as to give an understanding of materialism and to clarify the acts that come under the umbrella of anti-consumption and the possible motives for such actions. It was also discussed how anti-consumption and materialism are argued to be opposite to each other. A distinction between anti-consumption and similar behaviours was also made so as to highlight the uniqueness and importance of studying anti-consumption.

Chapter 3 discussed the literature in relation to consumers' attitudes. Specifically, anti-consumption and materialistic attitudes were discussed, which were then used to propose a typology of consumers so as to understand how anti-consumption attitude and materialistic attitude together shape consumers' behaviour. The chapter then discussed literature on value orientations, environmental consciousness, wellbeing and authenticity with an aim to (1) empirically explore the idea that anti-consumption and materialism as attitudes are opposite to each other and (2) validate the typology by using these concepts as the basis for the characterisation and understanding of the consumer segments. From these discussions, 12 hypotheses were developed and tested. Out of these 12, eight hypotheses were fully supported while four was partially supported.

Chapter 4 positioned the current study within the critical realism paradigm and presented the methodology of this thesis. In chapter 5 the

demographic profile of the sample and a descriptive analysis of the survey responses was discussed.

Finally, in chapter 6 the hypotheses were tested through cluster analysis, correlation analysis, regression analysis, one-way ANOVA, post-hoc test and discriminant analysis. Also, Chi² analysis was done to profile the clusters in terms of demographics.

The last chapter - discusses the findings from Chapter 6 and points out their implications for theory, practice and policy making. In addition to this, a meaningful guidance for future research along with the limitations of the research are looked at with the chapter ending with the study's conclusion.

7.2. Implications for theory

7.2.1. Identification of antecedents of anti-consumption attitude

Anti-consumption is proposed to be a means of reflecting one's personal values (Kozinets and Handelman, 2001), but there has been more focus on understanding what anti-consumption is and not on the values that drive the phenomenon (Johnston and Burton, 2003; Ozanne and Ballantine, 2010). This thesis is the first to indicate the values that act as antecedents of anti-consumption attitude. Through the use of value theory (Schwartz, 1992) it is shown that self-transcendence is a positive predictor of anti-consumption attitude while self-enhancement is a negative predictor of anti-consumption attitude. Self-direction is also a positive predictor of anti-consumption attitude. Additionally, this research shows that environmental consciousness is another positive predictor of anti-consumption attitude.

This knowledge is important as it puts anti-consumption in line with environmentally conscious and socially conscious consumer behaviour. Thus, empirically proving that environmental concern plays a major role in determining if individuals will or will not engage in sustainable behaviour through both consumption (Dermody et al., 2015; Hartmann and Apaolaza-Ibáñez, 2012; Kilbourne and Pickett, 2008) and anti-consumption. These findings indicate that individuals who are socially or environmentally conscious would reflect their concerns in not only their consumption behaviour, but would also reflect them in their anti-consumption behaviour.

7.2.2. Identification of antecedents of materialistic attitude

Past literature looking at materialism and self-transcendence/self-enhancement had mixed findings. Richins and Dawson (1992) found a positive relationship between materialism and self-enhancement and a negative relationship between materialism and self-transcendence, whereas, Karabati and Cemalcilar (2010) only found the relationship between self-enhancement and materialism, and not between self-transcendence and materialism. Kilbourne, Grünhagen, and Foley (2005) found that self-enhancement values are the best predictors of materialism. The present study empirically shows a positive relationship between materialistic attitude and self-enhancement and a negative relationship between materialism and self-enhancement. It also shows that both self-transcendence and self-enhancement are predictors of materialistic attitude; self-enhancement being the positive predictor and self-transcendence being the negative predictor. Additionally, environmental consciousness is a negative predictor of materialistic attitude,

thus, providing empirical support to past research (Maio et al., 2009; Kilbourne and Pickett, 2008).

7.2.3. Empirical validation of anti-consumption attitude and materialistic attitude as opposite to each other

Lee and Ahn (2016) while exploring anti-consumption and materialism through qualitative research found that the two are opposite to each other. However they called for empirical research in this regard. This thesis provides empirical support to the understanding that anti-consumption and materialism are opposite to each other.

7.2.3.1. From values perspective

The opposite nature of anti-consumption attitude and materialistic attitude was visible through the relationship of these attitudes with self-enhancement/self-transcendence dimension of Schwartz value (1992). As predicted, results indicated that self-transcendence (universalism and benevolence) had a positive relationship with and was a positive predictor of anti-consumption attitude, as opposed to materialistic attitude. That is to say, self-transcendence (universalism and benevolence) had a negative relationship with and were a negative predictor of materialistic attitude. Self-enhancement which is opposite to self-transcendence had a positive relationship with and was a positive predictor of materialistic attitude. However, though all the three motivational values in self-enhancement – power, achievement and hedonism – had a negative relationship with anti-consumption attitude, only two

motivational values – power and hedonism – were significant negative predictor of anti-consumption attitude.

In terms of openness to change/conservation dimension of values, the relationship between this dimension and the two attitudes was weak. As predicted, from the two motivational values – self-direction and stimulation – making up openness-to-change, self-direction had a positive relationship with and was a positive predictor of anti-consumption attitude, while it had a negative relationship with and was a negative predictor of materialistic attitude. Although, stimulation had a negative relationship with materialistic attitude and a positive relationship with anti-consumption attitude, the latter was not statistically significant. Additionally, stimulation was not a significant predictor of either of the two attitudes. Lastly, conservation (conformity, tradition and security) had a weak relationship with both anti-consumption attitude and materialistic attitude. Although, the relationship of the three motivational values – conformity, tradition and security- making up conservation with the two attitudes – anti-consumption and materialism – was in the direction predicted, only a negative relationship between security and anti-consumption was statically significant. No other relationship between conformity and the two attitudes was statistically significant.

7.2.3.2. From environmental consciousness perspective

Findings show that both environmental concern and awareness of consequences had a positive relationship with and were positive predictors of anti-consumption attitude, while they had a negative relationship with and were negative predictors of materialistic attitude.

7.2.3.3. From wellbeing perspective

Findings indicated that anti-consumption attitude had a positive relationship with satisfaction with life while materialistic attitude had a negative relationship with satisfaction with life. In addition, while anti-consumption attitude was positively related to positive affect, materialistic attitude was positively related to negative affect. Thus, echoing the opposite nature of anti-consumption attitude and materialistic attitude.

7.2.3.4. From Authenticity Perspective

As predicted, from the three components – authentic living, self-alienation and external influence – making up authenticity, authentic living had a positive relationship with anti-consumption attitude and a negative relationship with materialistic attitude. Furthermore, as predicted, materialistic attitude was positively related to both self-alienation and external influence. Although, as predicted, anti-consumption attitude was negatively related to both self-alienation and external influence, this relationship was not statistically significant.

Through the analysis of data it is shown that self-transcendence, self-direction and environmental consciousness are positive predictor of anti-consumption attitude, and self-enhancement is a negative predictor of anti-consumption attitude, while the inverse is true for materialistic attitude.

This thesis also shows that anti-consumption attitude is positively related to satisfaction with life and positive affect, thus supporting a positive link between anti-consumption and wellbeing (Shaw and Moraes, 2009). In addition, it empirically shows that anti-consumption is positively related to

authentic living, thus supporting a positive link between anti-consumption and authenticity (Zavestoski's 2001; Zavestoski's 2002).

This thesis also provides support to the understanding that materialism has a negative relationship with satisfaction with life and a positive relationship with negative affect, thus supporting past research by showing a negative relationship of materialism with one's subjective wellbeing (Richins and Dawson, 1992).

Forgas, Williams and Laham (2004) suggested that current culture filled with materialism provides limited means to attain authenticity. This thesis empirically shows that materialistic attitude has a negative relationship with authenticity, as it is negatively related to authentic living but is positively related to both self-alienation and accepting external influence, thus, providing support to Forgas et al's (2004) argument. In summary, this thesis empirically demonstrates that materialism results in lower level of wellbeing and lower level of authenticity, while, anti-consumption has the opposite result. Thus, anti-consumption could help increase wellbeing, while materialism could lower it (Lee and Ahn, 2016).

In summary, this study provides empirical support to the understanding that anti-consumption is opposite to materialism (Kaynak and Eksi, 2011; Lee and Ahn, 2016). This understanding is important and makes the basis for this study. These findings provide support to the notion that anti-consumption attitude and materialistic attitude are opposite, yet prevalent in the contemporary culture. The next step was to examine if consumers can be classified in terms of the specific combination of these two attitudes that they hold.

7.2.4. A typology of consumers in the 21st century

The second aim of this thesis was to explore if the contemporary consumers can be classified on the basis of the balance they acquire between their anti-consumption and materialistic attitudes. The findings showed that consumers can be classified into four distinct clusters.

Among these clusters, one cluster represents anti-consumers, characterised by those individuals who hold high anti-consumption attitude and low materialistic attitude. A second cluster is that of materialistic consumers, that is, those individuals who hold high materialistic attitude and low anti-consumption attitude. The third cluster consists of consumers who hold high anti-consumption attitude and high materialistic attitudes and thus are named dualistic consumers. The fourth and the last cluster consists of individuals who hold low levels of both anti-consumption and materialistic attitudes (with slightly higher anti-consumption attitude compared to materialistic attitude). The consumers making up this segment are termed as disinterested consumers.

As proposed, these four clusters are significantly different from each other in terms of their specific combination of anti-consumption attitude and materialistic attitude. This finding supports the proposition that contemporary consumers are faced with the challenge of finding a balance between the two contradictory, yet prevalent, attitudes - anti-consumption and materialism - and that the balance these consumers acquire can be used to classify them into four clusters. The typology developed in this study not only helps to systematically classify contemporary consumers, but also highlights the complexity of consumer behaviour.

1. Materialistic consumers

Cluster 1

15% of sample (smallest cluster)

Individuals in this cluster hold highest materialistic attitudes and lowest anti-consumption attitude

- Demographically this group is characterised by younger, less educated individuals.
- Value profile: This cluster held higher level of self-enhancement values compared to both anti-consumers and disinterested consumers, and valued hedonism more than dualistic consumers. Thus, this cluster represents individuals for whom values like power, hedonism and achievement are important.

They had lowest level of universalism as compared to the remaining three clusters and had lower level of benevolence compared to anti-consumers and disinterested consumers.

Lastly, the individuals in this cluster were less self-directed as compared to their counterpart anti-consumers.

- Environmental consciousness level: These materialistic consumers also hold lowest level of awareness of consequences of environmental problems and are least concerned about the environment. Thus echoing the fact that materialistic consumers do not care about the environment.
- Wellbeing Experienced: The individuals in this cluster experience lower negative affect compared to dualistic consumers. Though, results from this study show that materialism is related positively to negative affects and negatively to positive affects, the cluster of

materialistic consumers did not show much difference in terms of wellbeing when compared with other clusters.

- **Authenticity Profile:** Materialistic consumers are more self-alienated and are more prone to external influence compared to anti-consumers. Additionally, they experience lower level of authentic living as compared to anti-consumers.

2. Anti-consumers

Cluster 2

23% of sample (Second smallest)

Individuals in this cluster hold highest anti-consumption attitudes and lowest materialistic attitude

- Demographically this segment consists of individuals who are more mature and educated than the remaining three clusters and women seem to make a greater portion of this segment than men
- Value Profile: This cluster valued universalism more than the remaining three clusters. The individuals in this segment also value benevolence more than both materialistic consumers and dualistic consumers. Thus, showing significance of self-transcendence for these consumers.

Anti-consumers scored lowest in terms of power as compared to remaining three clusters. While they valued achievement and hedonism less than materialistic consumers.

Additionally, the individuals in this cluster were most self-directed as compared to the remaining three clusters. Lastly, they valued security less than disinterested consumers.

- Environmental Consciousness Level: Anti-consumers were more concerned about the environment as compared to the remaining three clusters in the typology. They were also most aware of consequences of environmental problems and thus were highly environmentally conscious.
- Wellbeing Experienced: Anti-consumers experienced higher positive affect and lower negative affect as compared to disinterested

consumers. Though, results from this study shows that anti-consumption is related positively to positive affects and negatively to negative affects, the cluster of anti-consumers did not show much difference in terms of wellbeing when compared with other clusters.

- **Authenticity Profile:** Anti-consumers experience highest authentic living as compared to the remaining three clusters. Individuals in this segment are less self-alienated as compared to materialistic consumers and dualistic consumers. Anti-consumers also take less external influence as compared to materialist consumers and dualistic consumers.

3. Dualistic Consumers

Cluster 3

25% of the sample (2nd largest cluster)

Individuals in this cluster hold high anti-consumption attitudes and high materialistic attitude

- Demographically this segment consists of younger, less educated individuals who are mostly unemployed and usually earn less than £25,000 per year. Females make a greater portion of this segment than male.
- Value Profile: This cluster valued universalism more than materialistic consumers but valued universalism less than anti-consumers. Benevolence was less important for them as compared to anti-consumers and disinterested consumers. Dualistic consumers also had a greater preference for power as compared to anti-consumers and disinterested consumers. However, they were less hedonistic than materialistic consumers. Thus, echoing a conflicting value position that this cluster exhibits.
- Environmental Consciousness Level: Dualistic consumers were more concerned about the environment compared to both materialistic consumers and disinterested consumers. However, they were less concerned about the environment when compared to anti-consumers. They were more aware of consequences of environmental problems when compared with materialistic consumers, but were less aware than anti-consumers.
- Wellbeing Experienced: Dualistic consumers experienced higher negative affect than the remaining three clusters in the typology. The

consumers in this segment hold conflicting nature of the values. This might be the reason why the consumers in this segment experience highest level of negative affect, placing them lowest in terms of wellbeing.

- **Authenticity Profile:** Dualistic consumers live a less authentic life than anti-consumers. They experience higher self-alienation and higher external influence than both anti-consumers and disinterested consumers, thus reflecting low authentic life.

4. Disinterested Consumers

Cluster 4 38% of the sample (largest cluster)

Individuals in this cluster hold low anti-consumption attitudes and low materialistic attitude

- Demographically this segment consists of younger, well-educated individuals who are mostly female.
- Value Profile: This cluster holds higher level of universalism when compared to materialistic consumers, but lower level when compared to anti-consumers. In terms of benevolence, disinterested consumers hold higher benevolence than both materialistic consumers and dualistic consumers.

In terms of significance of power, disinterested consumers value power more than anti-consumers but hold lower level of power than both dualistic consumers and materialistic consumers. These disinterested consumers also score lower on achievement and hedonism as compared to materialistic consumers. Additionally, they are less self-directed than anti-consumers. Lastly, they exhibit higher concern for security than anti-consumers.

- Environmental Consciousness Level: Disinterested consumers were more concerned about the environment as compared to materialistic consumers. However, they were less concerned about the environment when the compared to both anti-consumers and dualistic consumers. They were more aware of consequences of environmental problems as compared to materialistic consumers, but were less aware than anti-consumers.

- Wellbeing Experienced: Disinterested consumers experienced lower positive affect as compared to anti-consumers. They also experienced lower negative affect than dualistic consumers.
- Authenticity Profile: Disinterested consumers live a less authentic life than anti-consumers. They experience lower self-alienation and lower external influence than dualistic consumers.

7.2.4.1. Significance of the typology:

The typology discussed above is vital as it brings new understanding to existing consumer behaviour theory. For instance, an examination of the typology reveals that though most of the consumers in the current era hold moderate to high anti-consumption attitude, all of them cannot be considered the same. For example both anti-consumers and dualistic consumers in the typology hold high anti-consumption attitudes (mean= 5.9 and 5.4 respectively) yet the two are significantly different as anti-consumers hold low materialistic attitude while this is not the case for dualistic consumers (mean=1.9 and 5.57 respectively). Researchers examining only consumers' anti-consumption would look at these two clusters as one. However, this thesis shows that anti-consumers not only value universalism and benevolence more than dualistic consumers do, they also are more concerned about the environment as compared to dualistic consumers. It could therefore be argued that though anti-consumers would make consumption sacrifices, the same cannot be said for dualistic consumers.

Similarly, a researcher only looking at consumers with respect to materialism would consider materialistic consumers and dualistic consumers

the same, as both of them hold high materialistic attitude (mean=5.63 and 5.57 respectively). However, through this research it is shown that the two are significantly different from each other as materialistic consumers carry low anti-consumption attitude (mean=3.7), while dualistic consumers carry high anti-consumption attitude (mean= 5.57). Given that dualistic consumers value universalism more than materialistic consumers and are more environmentally conscious compared to materialistic consumers, it could be argued that dualistic consumers would be more willing to make consumption sacrifices than materialistic consumers would. However, this understanding cannot be achieved if one examines either anti-consumption or materialism in isolation. Therefore, a novel contribution of this thesis is the examination of these attitudes in tandem, as it provides a more comprehensive view of consumption attitudes.

The existence of these four clusters might be a possible explanation of why, despite holding concerns towards the environment, consumers are not willing to make dramatic change to their consumption behaviour (Dermody et al., 2015; Kilbourne and Pickett, 2008; Prothero et al., 2011; Rettie et al., 2012). The findings from this thesis suggest that consumers belonging to different segment would have different level of motivation towards sustainable behaviour, as they hold different levels of anti-consumption and materialistic attitudes. Thus, though two segments might be concerned about the environment, for example anti-consumers and dualistic consumers, yet the level of sacrifice they will be willing to make will be different from each other. This is because these two segments also carry different level of

materialistic attitude, and thus, their behaviour will be affected by the combination of both anti-consumption and materialistic attitudes.

Furthermore, the differences in size of the clusters also give an important insight into contemporary consumer behaviour. Given that the cluster of disinterested consumers was the largest in size (38%), it can be argued that most of the contemporary consumers have adopted this approach rather than an extreme one (as in the case of anti-consumers or materialistic consumers). Moreover, the cluster of materialistic consumers being smallest in size (15%) reflects that the majority of individuals, excluding these materialistic consumers, are starting to realize the importance of overconsumption and are moving towards sustainable consumption. The presence of a cluster of dualistic consumers as the second largest segment (25%) shows that many individuals are still struggling to find the right balance between anti-consumption and materialism, thus, presenting an opportunity for policy makers who are striving to achieve sustainability, to incline these consumers more towards anti-consumption so as to make them more sustainability oriented. Lastly, the cluster of anti-consumers being second smallest in size (23%), after the cluster of materialistic consumers, supports the argument that though a vast majority of consumers - all but materialistic consumers – hold concerns towards the environment, only a few are truly “willing to dramatically change their consumption behaviour to help resolve these problems” (Dermody et al., 2015, pp. 174; Kilbourne and Pickett, 2008; Prothero et al., 2011; Rettie et al., 2012).

In conclusion, the literature indicates that anti-consumption is an under-researched area (Lee, et al., 2009; Fernandez, et al., 2009; Iyer and

Muncy, 2009; Lee et al., 2010) with a lack of empirical work (Lee and Ahn, 2016; Lee, Fernandez and Hyman, 2009). This thesis, attempts to answer the call for empirical research to examine relation of anti-consumption and materialism (Lee and Ahn, 2016). This study shows that the attitudinal aspect of anti-consumption and materialism are opposite to each other, thus providing empirical support to Lee and Ahn's (2016) work. Additionally, this thesis shows that the contemporary consumers can be classified, in terms of the balance they acquire between these two opposing attitudes, into four distinct and unique clusters. These clusters not only have different combinations of attitudinal balance, but also vary in terms of value orientations, wellbeing, environmental consciousness and authenticity.

A final contribution of the thesis is that the sample is from British consumers. Most of anti-consumption literature is based on North-American samples (Nepomuceno, 2012), thus this study expands the context where anti-consumption has been mainly studied.

7.3. Managerial implications

Lee and Fernandez (2006) argue that a doctor needs to understand both illness and wellness of a person, similarly a complete understanding of consumer behaviour calls for an understanding of not only consumption, but also anti-consumption. Companies without knowing why individuals become anti-consumers could not make much improvement (Lee and Fernandez 2006; Fernandez et. al., 2009). Prevalence of anti-consumption also highlights the fact that marketing strategies need a review (Lee et al., 2009; Fernandez, et al., 2009). However, as businesses are interested in consumption, for this

reason much research could be found on consumption, but not on anti-consumption, as little empirical work is available in this area of research (Lee et al., 2009; Fernandez et al., 2009). Knowing not only what consumers want but also what they do not want is vital for success of companies as well as for a complete understanding of consumers (Banister and Hogg, 2004; Ogilvie, 1987; Patrick, MacInnis, and Folkes, 2002; Wilk, 199; Lee et al., 2009). Marketers can benefit from understanding the different segments of the typology of contemporary consumers, developed in this thesis, so as to cater to their needs and make improvements.

The study of attitudes is paramount to understanding consumer behaviour. This thesis is the first to analyse and compare values, wellbeing, environmental consciousness and authenticity in the context of anti-consumption and materialism. This new knowledge could inform policy makers, marketers and academics as the different groups developed from this research would help understand what drives their attitudes and thus actual behaviour.

The most significant implication of this study for marketers is recognizing the existence of four distinct clusters. Marketers, in order to make strategies for each cluster, could use an understanding of these four clusters and how they differ in terms of value orientations, environmental consciousness and authenticity. Given that these clusters are different from each other, a single strategy would not work for them all. For example, anti-consumers might reject consumption of all products/services but those of ecologically and socially conscious companies and they might be willing to pay a higher price for the products of these socially and ecologically

conscious companies. Dualistic consumers, however, might reject products/services of companies that have been linked to environmental or social degradation, although they might not essentially purchase from environmentally and socially responsible companies. The marketers need to know which segment in the typology they are aiming to satisfy. If they want to develop strategies for dualistic consumers they must make sure that, they are not among the badly reputed companies in term of environmental and social aspects. Additionally they need to make sure that their product/service has high symbolic meanings so as to satisfy the materialistic desires of these dualistic consumers. Similarly, marketers when aiming to satisfy disinterested consumers should focus on highlighting both materialistic and societal/environmental aspect of product/service, while emphasising on the societal/environmental aspect slightly more than the materialistic aspect.

Acknowledging the fact that consumers can be divided into four clusters with respect to the combination of the contradictory attitudes means that marketers need to make sure that they develop their marketing mix while keeping all the segments, or at least the target segments, in mind. For example, when looking at the first P of marketing mix, the product, it is important that when the target audience is anti-consumers, the product be made with high societal/environmental aspects. When the target audience is dualistic consumers the company should make sure that their product also has high symbolic meaning along with socio/environmental aspect. Additionally, if the product is aimed at materialistic consumers then the main focus should be on symbolic aspects, as materialistic consumers do not care about the environment. Lastly, for disinterested consumers the product should highlight

utilitarian aspects, as these consumers would not care about symbolic or environmental aspects of the product.

With respect to price, the second P of marketing mix, marketers also need to understand the difference in price their particular target segment is willing to pay. That is to say, while anti-consumers would probably be willing to pay higher price for products with a positive ecological profile, while other segments would probably be unwilling to pay as high a price. Materialistic consumers would be willing to pay a higher price for symbolic value of the product, while the same might be true for dualistic consumers. However, anti-consumers and disinterested consumers would not be interested in the symbolic value of the product and thus, would be unwilling to pay a high price.

While developing strategies for promotion, the third P of marketing mix, it is again important to understand the difference and uniqueness of the four segments developed in this thesis. For example, the advertisements aimed at materialistic consumer should be focused on highlighting the symbolic meanings attached to the products. Whereas, when the advertisements are aimed at anti-consumers the focus should be to make a comparison of the product/company with those that are not socially or environmentally conscious. Advertisements for attracting dualistic consumers need to not only emphasise the social/environmental aspect of product/company, but should also highlight a high symbolic meaning attached to the product/company.

Lastly, in terms of place, if the product is aimed at anti-consumers then the product should be promoted at places that are considered more socially/environmentally friendly (like farmers' market). Whereas, if the

target audience is materialistic consumers then the place of promoting should be places that have social status attached to them.

In this way marketers can immensely benefit from knowing which of the segments from the typology are prevalent in their target markets to tailor strategies accordingly. This knowledge is equally important for service industry. Along with the 4P discussed above, there are 3 more P when considering service industry. These are people, process and physical evidence. Marketers should also consider the four segments when developing their strategy regarding these 3 P of service marketing. For example, if the company/business's main customer are anti-consumers then the business should highlight that the people employed in it are well taken care of and that they should be people who care for environment and society. On the other hand, if the company targets materialistic consumers then the people of the company interacting with these customers should represent the status that company stands for. Thus, an understanding of the typology of consumers developed in this thesis could help companies to develop strategies to satisfy customers.

7.4. Implications for policy-makers

This study also has significant implications for research in sustainable consumer behaviour. The variation in consumer behaviour in spite of them being concerned about the environment has started puzzling researchers (Dermody et al., 2015). The present research helps to find answers to questions such as why some individuals are more willing to make sacrifices compared to others?, why despite being environmentally conscious, many are

not willing to dramatically change their consumption behaviour? (Dermody et al., 2015). The findings from this thesis suggest that it is not one attitude that a consumer holds, rather he/she holds conflicting attitudes. The balance of these conflicting attitudes together determines which of the clusters the consumer may belong to, which will then help to understand his/her consumption behaviour. This implies that attitudinal differences among customers are important in understanding why they make different choices about the (anti)consumption behaviour. This understanding is important, as there are several benefits of promoting anti-consumption, including the following:

7.4.1. Anti-consumption for macro-economic and sustainability reasons

One of the key determinants of macroeconomic success of a country is the efficient use of scarce resources, and often a tight approach to these resources is very functional (Nepomuceno, 2012). As consumption increases, the use of scarce resources also increases. For example, consider the use of natural gas. Natural gas serves a variety of functions. It is used in cooking, refrigeration, heating, power generation and as a motor fuel, to name a few. For any country, a resourceful usage of this or any other scarce resource could allow the country to commercialize its exceeding production, and the funds gained could be invested in important projects. Promoting anti-consumption can be a strategy to reduce the use of scarce resources like natural gas, as less consumption of goods/products would indirectly decrease the consumption of natural gas (Nepomuceno, 2012). For example, if consumption of goods is reduced, the consumption of gas would be reduced as fewer goods would need to be stored and transported, and with the decreased transportation gas usage

for this transportation will be decreased as well. Thus by motivating anti-consumption a country could have strategic advantage over other competing countries, as reducing consumption could result in reducing the pressure over scarce resources.

Promotion of anti-consumption is important not only because of strategic or economic reasons, but also because of sustainability. Research indicates that anti-consumption is one of the means to attain sustainability (Sedlacko et al., 2014; Agarwal, 2012). This is a simple relation. If consumers resist consuming, and buy more responsibly, it will result in reducing the strains over the environment with less use of resources like metals, energy, minerals and the like, resulting in reduction of our footprint on the environment. Key to sustainability is responsible use of resources (Solow 1993). Human development should happen while reducing ecological footprints (Wackernagel and Rees 1996). Existing human activities put extraordinary pressure on prevailing ecosystems, and this is risking the long-term sustainability of present population levels (Chapagain et al. 2006; Jorgenson 2003; Living Planet Report 2008; Parmesan and Yohe 2003; Turner 2008). The pace of development of our many activities is perhaps too fast for the environment to cope with. Policy makers concerned with sustainability, and influence of human activity on environment could have substantial benefit from studying and promoting anti-consumption, as promoting anti-consumption will result in developing a sustainable society.

Given that this study identifies the antecedents of anti-consumption attitude, this knowledge can be used by policy makers to identify which values to promote in order to increase anti-consumption and leading to

sustainability. Additionally, the values that act as antecedents of materialistic attitudes could be discouraged to decrease materialism among the public. The knowledge of the antecedents of the two opposing attitudes provides practitioners with a set of values that they should promote to attain and promote sustainable behaviour among consumers.

This understanding could help policymakers who care for sustainability, as they could promote the values that lead toward anti-consumption. In certain countries like United States of America, the pursuit of happiness is assured by the constitution. This thesis affirms a negative relationship of well-being with materialism (Belk 1984; Burroughs and Rindfleisch 2002; Kashdan and Breen 2007; Kasser 2002; Swinyard, Kau and Phua 2001; Wright and Larsen 1993), and a positive relationship with anti-consumption. This information is beneficial for policy makers who strive to achieve well-being.

The existence of disinterested consumers and dualistic consumers indicates that though individuals seem to be concerned about sustainability, they are still dazzled by materialism and its accompanying charm. This finding has important implications for policy makers, as they should not only focus on educating individuals about sustainability as the need of the time, they should also focus on educating people about how materialism could decrease their wellbeing. This knowledge could help individuals falling in dualistic cluster to choose to move to the path of anti-consumers and thus could help in attaining sustainability. Thus a strong sustainable consumption could be achieved which is much required for long-term sustainability (Dermody et al., 2015; Lorek and Fuchs, 2013).

7.5. Limitations

Like any other consumer behaviour study, this research is not without its limitations. Firstly, the data for the present study was collected from consumers in the city of Cardiff and therefore should be interpreted as explaining the behaviour of Cardiff consumers. However, it is suggested that the findings may be generalisable to British consumers as Cardiff is a multicultural city and the capital of Wales. Additionally, the data was matched with the UK census 2011 and for this reason can be considered suitable for generalisation to British consumers and to other economically developed countries.

Secondly, the measures for all of the variables of the study were collected simultaneously via the same questionnaire, so there is a possibility for common method variance (Straub et al. 1995). However, the common method of identifying this variance is the lack of discriminant validity among the principal constructs, which was not evident.

Thirdly, this study was focused on the examination of attitudes through verbal response. Therefore, it cannot be said that the verbal response reflects actual behaviour. However, as attitudes are shown to direct behaviours (Ajzen and Fishbein, 1980; Ajzen, 1989), the same is expected in this study. Additionally, this thesis only explores values and environmental consciousness as antecedents of the two attitudes and it does not explore differences in consequences of the two attitudes. Though, an understanding of differences in antecedents of anti-consumption attitude and materialistic attitude brings new insight to the existing body of literature, an exploration of consequences could

make the difference between anti-consumption attitude and materialistic attitude even clearer.

Also, as discussed in detail in chapter 4, all items except for the ones measuring positive affect, negative affect and environmental concern were measured on a 7 point scale, while the items for these three variables were measured on a 5 point scale. Although the use of different points could be problematic, Daws (2008) states that 5 and 7-point scales produce similar results.

Another limitation of this thesis is limited collection of qualitative data as focus groups were only aimed at understanding anti-consumption. Although, in chapter 4, section 4.3 and 4.5 it is clarified that the purpose of the two focus groups carried out for this thesis was to gain an understanding about how common anti-consumption is. Yet, more qualitative data regarding both anti-consumption and materialism could have brought even better understanding. Future research can thus focus on both qualitative and quantitative aspects of anti-consumption and materialism, and their interaction.

7.6. Future research

One of the avenues for future studies is to replicate the findings of the present research. The present findings show that anti-consumption and materialism are opposite to each other in terms of their relationship with value orientations, wellbeing, environmental consciousness and authenticity. Not only will it be fruitful to see the relationship between these variables in other developed countries but also in developing or emerging countries like China and

Pakistan as these countries are seen to be more materialistic than UK (Dermody et al., 2015). Additionally, research on customers of other developed countries could be done to see if similar typology exists.

It would also be interesting to explore if the opposite nature of anti-consumption attitude and materialistic attitude could be supported in developing countries, as such countries are considered more materialistic than the developed countries. Additionally, future research could focus on exploring how the consumers of developed countries find the balance between their anti-consumption attitude and materialistic attitude. That is to say, future research could explore if consumers of developing countries could be classified into similar typology when explored in terms of the balance between the contradictory attitudes of anti-consumption and materialism.

Additionally, future research can be to test and reassess the typology developed in this thesis, for example, by exploring how behavioural intentions are formed by perceived behavioural control and subjective norms with each attitudinal balance for each segment in the typology. Researchers can also examine how the clusters differ by measuring their actual behaviour so as to get a better understanding of how the conflicting attitudes direct the behaviour and to see if the four segments in the typology differ in terms of the behaviour.

Also, future researchers could attempt to examine how factors like family structure, number of children, affect of media, to name a few, can affect consumers belonging to different segments in the typology.

7.7. Conclusions

The first aim of this study was to empirically explore the inverse relationship between anti-consumption attitude and materialistic attitude. The empirical results suggest that anti-consumption attitude and materialistic attitude are opposite to each other as:

1. Self-transcendence has a positive relationship with and is a positive predictor of anti-consumption attitude, while the inverse is true for materialistic attitude.
2. Self-enhancement has a negative relationship with and is a negative predictor of anti-consumption attitude, while the inverse is true for materialistic attitude.
3. Openness to change has a positive relationship with and is a positive predictor of anti-consumption attitude while the inverse is true for materialistic attitude
4. Environmental consciousness has a positive relationship with and is a positive predictor of anti-consumption attitude, while the inverse is true for materialistic attitude.
5. Wellbeing has a positive relationship with anti-consumption attitude and a negative relationship with materialistic attitude
6. Authenticity has a positive relationship with anti-consumption attitude and a negative relationship with materialistic attitude

The second aim of this thesis was to explore if consumers can be classified in terms of the attitudinal balance they acquire, and if so can the produced typology be validated. The results suggest that:

1. Contemporary consumers can be classified into four distinct clusters in terms of the specific combination of anti-consumption and materialistic attitudes they exhibit. The four clusters making up the typology of consumers of the 21st century are:
 - a. Materialistic consumers
 - b. Anti-consumers
 - c. Dualistic consumers
 - d. Disinterested consumers
2. These four clusters are not only different from each other in terms of the anti-consumption and the materialistic attitudes that they hold, but are also different in terms of their value orientations, wellbeing, environmental consciousness and authenticity. In addition, the groups differ in demographic characteristics, such as materialistic consumers are least educated and are least mature than the remaining three clusters, while anti-consumers are highly educated and are more mature than the remaining three clusters.
3. The variation in value orientations, wellbeing, environmental consciousness and authenticity among the clusters is dependent on the specific attitudinal combination.

Essentially the central purpose of this thesis is to bring more understanding and knowledge to the existing body of knowledge in anti-

consumption literature, materialism literature and consumer behaviour literature in general. The findings show that anti-consumption and materialistic are opposite to each other. It is also evident that, though being opposite, both the attitudes are prevalent in the society of developed economies and consumers, in such societies, in the 21st century are faced with conflicting attitudes and can fruitfully be classified into four distinct and unique segments.

APPENDICES

ONE

1. Moderator's Discussion Guide for Focus Group
2. Consent Form

I- Warm-up

- Introduction
- Explain the purpose of Focus Group
- No correct answers-only your opinion. You are speaking for many other decision-makers like yourself.
- Need to hear from everyone, so please speak freely.
- Video tapes and note taking-because I don't want to miss out any important point.
- Please-only one person speaks at a time. No side discussions- I'm afraid I'll miss some important points.
- Don't ask me questions because what I know and what I think are not important- it's what you think and how you feel are important. That's why we are here.
- Don't feel bad if you don't know much about some of the things we will be talking about, that is perfectly OK and important for us to know. If your views are different from that of others from the group that's important for me to know. Don't be afraid to be different. I am not looking for everyone to agree on something unless they really do.
- Any questions?

II- WHAT: what do you understand by the term anti-consumption?

Opposite of consumption
Against corporations

Against consumption

III- WHEN: in what activities of life do you follow anti-consumption?

Daily activates

Energy consumption

Work (to live simple)

Shopping

IV- HOW: how do you follow anti-consumption in your life? What are the acts that you do so as to display your anti-consumption?

Material simplicity: reduce complexity, avoid clutter, reduce possessions, limit possessions, reduce activities/pace, and reduce superfluous pursuits

Spend less:

Live simple:

Anti-consumption **by preference:** consume one object over another object

Anti-consumption **by rejection:** not consuming

V- WHY: what are the reasons or motives behind your act?

Ecological responsibility

Fragile by nature or upbringing

Social responsibility

Simple living (define) consistent with **values**

Community

Achieve actual or desired self,

Maintaining a **spiritual** life,

Be happier (define happiness)

Religious reasons

Have more balance in life (define balance)

Eliminate stress from life

Be at peace (define)

Sustainability:

What are the measures that should be taken and at what level so that people would avoid excessive consumption.

Values, learning and knowledge motivate anti-consumption practices.

- Public health
- Environmental protection
- Accident prevention/road safety
- Alcohol
- Obesity
- Drugs
- Gambling
- Smoking/tobacco

GIVE THEM OPPORTUNITY FOR FINAL QUESTION & COMMENTS

Thanks for your time and Co-operation-Let's proceed for a cup of tea

CONSENT FORM

I understand the purpose of the study and that my participation in this project will involve focus group with semi-structured questions about my understanding of anti-consumption and related experiences which will require approximately 1 hour to 3 hour of my time.

I understand that my participation in this particular study is entirely voluntary and that I can withdraw from the study at any time without giving a reason and without loss of any value.

I know that I am free to ask any questions during the study. If for any cause I experience anxiety during participation in this study, I am allowed to draw myself out of the study.

I understand that the information that I will provide will be kept anonymous. And it will be impossible to trace this information back to me individually.

I understand that under the Data Protection Act, this information may be reserved indefinitely.

I also understand that at the end of the study I will be provided with additional information and feedback about the study.

I, consent to participate in the study conducted by Ms. Sadia Yaqub Khan of Cardiff Business School, Cardiff University with the supervision of Dr Mirella Yani-de-Soriano

Signed:

Date:

APPENDIX

TWO

1. Final Questionnaire
2. Ethical Approval Form

EXPLORING THE VALUE-ORIENTATION AND WELL-BEING OF CONSUMERS' LIFESTYLES

This questionnaire is part of a PhD research project to study values, attitudes and consumption behaviour. This questionnaire is aimed at understanding how your values and beliefs guide your consumption behaviour. The completion of the questionnaire should take no more than 30 minutes of your time. Your valuable participation in this research is completely voluntary and you can withdraw at any time without giving us any reason. The anonymity and confidentiality of this questionnaire is fully guaranteed. You do not need to provide your name or your personal address. The data collected will only be used for academic purposes and if published it will not be identifiable as yours in any way.

The questionnaire consists of different questions each having a set of statements or options. For each statement, please select a number that best describes you, your feelings and/or opinions. Please answer all the information truthfully and as fully as possible. There is no right or wrong answers. All we are interested in is the number that best shows your views and behaviour. For each question, please make a separate and independent judgment.

As a token of our appreciation all participants will enter a draw to win any one of six Amazon gift vouchers worth £100, £75, £50, and 3 x £25, the results for which will be announced by 15th of January 2014.

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The following items measure your values-orientations. Using the scale below rate each item on the basis of how important they are for you and act as a “guiding principle” in your life.								
How important each value is as a guiding principle in your life?		<div> <div>Very important</div> <div>Not important</div> </div>						
1	EQUALITY (equal opportunity for all)	7	6	5	4	3	2	1
2	INNER HARMONY (at peace with myself)	7	6	5	4	3	2	1
3	SOCIAL POWER (control over others, dominance)	7	6	5	4	3	2	1
4	PLEASURE (gratification of desires)	7	6	5	4	3	2	1
5	FREEDOM (freedom of action and thought)	7	6	5	4	3	2	1
6	A SPIRITUAL LIFE (emphasis on spiritual not material matters)	7	6	5	4	3	2	1
7	SENSE OF BELONGING (feeling that others care about me)	7	6	5	4	3	2	1
8	SOCIAL ORDER (stability of society)	7	6	5	4	3	2	1
9	AN EXCITING LIFE (stimulating experiences)	7	6	5	4	3	2	1
10	MEANING IN LIFE (a purpose in life)	7	6	5	4	3	2	1
11	POLITENESS (courtesy, good manners)	7	6	5	4	3	2	1
12	WEALTH (material possessions, money)	7	6	5	4	3	2	1
13	NATIONAL SECURITY (protection of my nation from enemies)	7	6	5	4	3	2	1
14	SELF RESPECT (belief in one's own worth)	7	6	5	4	3	2	1
15	RECIPROCATION OF FAVOURS (avoidance of indebtedness)	7	6	5	4	3	2	1
16	CREATIVITY (uniqueness, imagination)	7	6	5	4	3	2	1
17	17 A WORLD AT PEACE (free of war and conflict)	7	6	5	4	3	2	1
18	RESPECT FOR TRADITION (preservation of time-honoured customs)	7	6	5	4	3	2	1
19	MATURE LOVE (deep emotional & spiritual intimacy)	7	6	5	4	3	2	1
20	SELF-DISCIPLINE (self-restraint, resistance to temptation)	7	6	5	4	3	2	1
21	PRIVACY (the right to have a private sphere)	7	6	5	4	3	2	1
22	FAMILY SECURITY (safety for loved ones)	7	6	5	4	3	2	1
23	SOCIAL RECOGNITION (respect, approval by others)	7	6	5	4	3	2	1
24	UNITY WITH NATURE (fitting into nature)	7	6	5	4	3	2	1
25	A VARIED LIFE (filled with challenge, novelty and change)	7	6	5	4	3	2	1
26	WISDOM (a mature understanding of life)	7	6	5	4	3	2	1
27	AUTHORITY (the right to lead or command)	7	6	5	4	3	2	1
28	TRUE FRIENDSHIP (close, supportive friends)	7	6	5	4	3	2	1
29	A WORLD OF BEAUTY (beauty of nature and the arts)	7	6	5	4	3	2	1
30	SOCIAL JUSTICE (correcting injustice, care for the weak)	7	6	5	4	3	2	1

CONTINUED...		<div> <div>Very important</div> <div>Not important</div> </div>						
31	INDEPENDENT (self-reliant, self-sufficient)	7	6	5	4	3	2	1
32	MODERATE (avoiding extremes of feeling & action)	7	6	5	4	3	2	1
33	LOYAL (faithful to my friends, group)	7	6	5	4	3	2	1
34	AMBITIOUS (hard-working, aspiring)	7	6	5	4	3	2	1
35	BROADMINDED (tolerant of different ideas and beliefs)	7	6	5	4	3	2	1
36	HUMBLE (modest, self-effacing)	7	6	5	4	3	2	1
37	DARING (seeking adventure, risk)	7	6	5	4	3	2	1
38	PROTECTING THE ENVIRONMENT (preserving nature)	7	6	5	4	3	2	1
39	INFLUENTIAL (having an impact on people and events)	7	6	5	4	3	2	1
40	HONOURING OF PARENTS AND ELDERS (showing respect)	7	6	5	4	3	2	1
41	CHOOSING OWN GOALS (selecting own purposes)	7	6	5	4	3	2	1
42	HEALTHY (not being sick physically or mentally)	7	6	5	4	3	2	1
43	CAPABLE (competent, effective, efficient)	7	6	5	4	3	2	1
44	ACCEPTING MY PORTION IN LIFE (submitting to life's circumstances)	7	6	5	4	3	2	1
45	HONEST (genuine, sincere)	7	6	5	4	3	2	1
46	PRESERVING MY PUBLIC IMAGE (protecting my "face")	7	6	5	4	3	2	1
47	OBEDIENT (dutiful, meeting obligations)	7	6	5	4	3	2	1
48	INTELLIGENT (logical, thinking)	7	6	5	4	3	2	1
49	HELPFUL (working for the welfare of others)	7	6	5	4	3	2	1
50	ENJOYING LIFE (enjoying food, sex, leisure, etc.)	7	6	5	4	3	2	1
51	DEVOUT (holding to religious faith & belief)	7	6	5	4	3	2	1
52	RESPONSIBLE (dependable, reliable)	7	6	5	4	3	2	1
53	CURIOUS (interested in everything, exploring)	7	6	5	4	3	2	1
54	FORGIVING (willing to pardon others)	7	6	5	4	3	2	1
55	SUCCESSFUL (achieving goals)	7	6	5	4	3	2	1
56	CLEAN (neat, tidy)	7	6	5	4	3	2	1
57	SELF-INDULGENT (doing pleasant things)	7	6	5	4	3	2	1
58	OBSERVING SOCIAL NORMS (to maintain face)	7	6	5	4	3	2	1
The following statements measure your attitude. Please indicate how much you agree or disagree with each statement		<div> <div>Strongly agree</div> <div>Strongly disagree</div> </div>						
1	It is true that money can buy happiness.	7	6	5	4	3	2	1

CONTINUED...		Strongly agree			Strongly disagree			
		←-----→						
2	My dream in life is to be able to own expensive things.	7	6	5	4	3	2	1
3	The things one own say a lot about how he/she is doing in life.	7	6	5	4	3	2	1
4	I buy some things that I secretly hope will impress other people	7	6	5	4	3	2	1
5	Money is the most important thing to consider in choosing a job.	7	6	5	4	3	2	1
6	Some of the most important achievements in life include acquiring material possessions	7	6	5	4	3	2	1
7	I think others judge me as a person by the kinds of products and brands I use	7	6	5	4	3	2	1
8	I am more concerned with personal growth and fulfilment than with material possessions	7	6	5	4	3	2	1
9	Given the choice, I would rather buy organic food.	7	6	5	4	3	2	1
10	I make specific efforts to buy products made out of recycled material.	7	6	5	4	3	2	1
11	“Waste not, Want not” is a philosophy I follow.	7	6	5	4	3	2	1
12	I try to recycle as much as I can.	7	6	5	4	3	2	1
13	We must all do our part to conserve the environment.	7	6	5	4	3	2	1
14	If we all consume less, the world would be a better place.	7	6	5	4	3	2	1
15	Most people buy way too many things that they really don't need	7	6	5	4	3	2	1
16	If humans continue to use up the world’s resources, the planet will not survive	7	6	5	4	3	2	1
17	The effects of pollution on public health are worse than we realise	7	6	5	4	3	2	1
18	Pollution generated in one country can harm people in other parts of the world.	7	6	5	4	3	2	1
19	The balance in nature is delicate and easily upset	7	6	5	4	3	2	1
20	Over the next several decades, thousands of species will become extinct.	7	6	5	4	3	2	1
21	Claims that current levels of pollution are changing the environment are exaggerated	7	6	5	4	3	2	1
22	In most ways my life is close to my ideal.	7	6	5	4	3	2	1
23	The conditions of my life are excellent.	7	6	5	4	3	2	1
24	I am satisfied with my life.	7	6	5	4	3	2	1
25	So far I have got the important things I want in life.	7	6	5	4	3	2	1
26	If I could live my life again, I would change almost nothing.	7	6	5	4	3	2	1
27	I think it is better to be yourself than to be popular.	7	6	5	4	3	2	1
28	I don’t know how I really feel inside.	7	6	5	4	3	2	1
29	I am strongly influenced by the opinions of others	7	6	5	4	3	2	1
30	I usually do what other people tell me to do.	7	6	5	4	3	2	1
31	I always feel I need to do what others expect me to do.	7	6	5	4	3	2	1
32	Other people influence me greatly.	7	6	5	4	3	2	1

CONTINUED...		Strongly agree			Strongly disagree			
								
33	I feel as if I don't know myself very well.	7	6	5	4	3	2	1
34	I always stand by what I believe in.	7	6	5	4	3	2	1
35	I am true to myself in most situations.	7	6	5	4	3	2	1
36	I feel out of touch with the 'real' me.	7	6	5	4	3	2	1
37	I live in accordance with my values and beliefs.	7	6	5	4	3	2	1
38	I feel alienated from myself.	7	6	5	4	3	2	1
Following are a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent YOU HAVE FELT THIS WAY DURING THE PAST FEW WEEKS				Frequently  Not at all				
1	INTERESTED			5	4	3	2	1
2	DISTRESSED			5	4	3	2	1
3	EXCITED			5	4	3	2	1
4	UPSET			5	4	3	2	1
5	STRONG			5	4	3	2	1
6	GUILTY			5	4	3	2	1
7	SCARED			5	4	3	2	1
8	HOSTILE			5	4	3	2	1
9	ENTHUSIASTIC			5	4	3	2	1
10	PROUD			5	4	3	2	1
11	IRRITABLE			5	4	3	2	1
12	ALERT			5	4	3	2	1
13	ASHAMED			5	4	3	2	1
14	INSPIRED			5	4	3	2	1
15	NERVOUS			5	4	3	2	1
16	DETERMINED			5	4	3	2	1
17	ATTENTIVE			5	4	3	2	1
18	JITTERY			5	4	3	2	1
19	ACTIVE			5	4	3	2	1
20	AFRAID			5	4	3	2	1
11. Indicate the degree to which you are concerned about harmful effects of environmental problems for								
		Very much concerned	Concerned	Neutral	Not concerned	Not concerned at all		
A	All people	5	4	3	2	1		
B	People of UK	5	4	3	2	1		
C	Children	5	4	3	2	1		
D	My children	5	4	3	2	1		
E	Plants	5	4	3	2	1		
F	Marine life	5	4	3	2	1		
G	Birds	5	4	3	2	1		
H	Animals	5	4	3	2	1		

DEMOGRAPHICS: please tick the answers that apply to you.

1. Do you believe in decreasing your general consumption on a daily basis?

- ☐ Yes ☐ No

2. You are?

- ☐ Male ☐ Female

3. What is your age?

- ☐ 18-25 ☐ 36-50 ☐ 66 or over
☐ 26-35 ☐ 51-65

4. What is the highest level of education you achieved?

- ☐ Primary education ☐ Secondary education
☐ A-levels/College ☐ Higher education (Degree)
☐ Postgraduate degree (e.g. master's, PhD)

5. What is your approximate household annual income in pounds?

- ☐ Less than £10,000 ☐ £35,001- £45,000
☐ £10,001 to £15,000 ☐ £45,001- £55,000
☐ £15,001-£20,000 ☐ £55,001- £70,000
☐ £20,001- £25,000 ☐ £70,001- £100,000
☐ £25,001- £35,000 ☐ above £100,000

6. What is your occupation?

- ☐ Student ☐ Unemployed
☐ Clerical Staff ☐ Technical Staff
☐ Self-employed ☐ Housewife/husband
☐ Retired/Pensioner ☐ Professional/senior management
☐ Others (please specify): _____

7. What is your ethnic origin?

- ☐ White ☐ Black or Black British
☐ Asian or Asian British ☐ Mixed
☐ Other (Please Specify) _____

For the purpose of draw PLEASE ENTER YOUR EMAIL ADDRESS BELOW. This will only be used for the draw and will not be linked to your responses.

THANK YOU!!!

Ethical Approval Form

APPENDIX

THREE

Appendix-III: Non-Respondents' Bias Test				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
MAT1	2445.000	5073.000	-.734	.463
MAT2	2305.000	4933.000	-1.294	.196
MAT3	2451.000	5079.000	-.710	.478
MAT4	2193.000	4894.000	-1.745	.081
MAT5	2473.000	5174.000	-.621	.535
MAT6	2620.000	5248.000	-.032	.974
MAT7	2504.500	5205.500	-.494	.621
GI1	2485.000	5186.000	-.599	.549
GI2	2409.000	5110.000	-.896	.370
GI3	2567.500	5268.500	-.254	.800
GI4	2434.000	5135.000	-.795	.426
VS1	2361.500	4989.500	-1.080	.280
VS2	2171.500	4799.500	-1.830	.067
VS3	2493.500	5194.500	-.542	.588
VS4	2298.500	4999.500	-1.334	.182
VS5	2566.000	5267.000	-.256	.798
AC1	2550.000	5178.000	-.316	.752
AC2	2524.500	5225.500	-.423	.672
AC3	2570.000	5271.000	-.236	.814
AC4	2399.500	5027.500	-.932	.352
AC5	2512.000	5140.000	-.467	.641
EC1	2480.000	5181.000	-.635	.526
EC2	2284.000	4985.000	-1.474	.140
EC3	2620.000	5321.000	-.035	.972
EC4	2224.500	4925.500	-1.802	.072
EC5	2484.000	5112.000	-.598	.550
EC6	2606.000	5234.000	-.092	.927
EC7	2509.500	5137.500	-.494	.621

<i>Appendix-III: Non-Respondents' Bias Test</i>				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
EC8	2592.000	5220.000	-.151	.880
SWL1	2561.500	5262.500	-.270	.787
SWL2	2276.000	4977.000	-1.427	.153
SWL3	2194.500	4895.500	-1.769	.077
SWL4	2562.500	5263.500	-.265	.791
SWL5	2589.000	5217.000	-.156	.876
PA1	2088.000	4789.000	-2.268	.023
PA2	2618.000	5319.000	-.041	.967
PA3	2266.000	4894.000	-1.492	.136
PA4	2402.000	5030.000	-.933	.351
PA5	2303.500	4931.500	-1.325	.185
PA6	2596.000	5224.000	-.132	.895
PA7	2353.500	4981.500	-1.126	.260
PA8	2604.500	5232.500	-.097	.923
PA9	2594.000	5222.000	-.141	.888
PA10	2491.000	5119.000	-.567	.571
NA1	2569.500	5197.500	-.237	.812
NA2	2624.500	5325.500	-.014	.989
NA3	2481.500	5182.500	-.608	.543
NA4	2352.500	4980.500	-1.148	.251
NA5	2556.000	5184.000	-.303	.762
NA6	2446.500	5074.500	-.739	.460
NA7	2289.500	4917.500	-1.539	.124
NA8	2355.500	5056.500	-1.107	.269
NA9	2431.000	5132.000	-.804	.422
NA10	2570.500	5198.500	-.238	.812
AUTL1	2297.500	4925.500	-1.373	.170
AUTL2	2252.000	4880.000	-1.530	.126
AUTL3	2292.000	4920.000	-1.375	.169
AUTL4	2609.500	5310.500	-.075	.940
AUTSA1	2371.500	4999.500	-1.028	.304

<i>Appendix-III: Non-Respondents' Bias Test</i>				
	Mann-Whitney U	Wilcoxon W	Z	Asymp. Sig. (2-tailed)
AUTSA2	2372.500	5000.500	-1.034	.301
AUTSA3	2571.000	5199.000	-.229	.819
AUTSA4	2519.000	5147.000	-.452	.651
AUTEX1	2429.500	5057.500	-.798	.425
AUTEX2	2394.500	5095.500	-.943	.346
AUTEX3	2489.000	5117.000	-.557	.578
AUTEX4	2140.500	4768.500	-1.957	.050
UNIVERSALISM	2398.500	5099.500	-0.907	.364
BENOVELONCE	2622.500	5250.500	-.022	.983
POWER	2319.000	5020.000	-1.222	.222
ACHEIVEMENT	2020.000	4648.000	-2.404	.016
HEDONISM	2458.000	5086.000	-.672	.501
SELF-DIRECTION	2045.500	4746.500	-2.304	.021
STIMULATION	2331.500	4959.500	-1.173	.241
CONFORMITY	2331.500	4959.500	-1.173	.241
TRADITION	2368.000	4996.000	-1.028	.304
SECURITY	2495.000	5196.000	-.526	.599

APPENDIX

FOUR

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
1.	5.74	.000
2.	0.13	.000
3.	8.26	.000
4.	3.02	.000
5.	4.31	.000
6.	7.37	.000
7.	6.19	.000
8.	4.00	.000
9.	1.12	.000
10.	8.18	.000
11.	1.84	.000
12.	1.39	.000
13.	2.52	.000
14.	1.52	.000
15.	6.87	.000
16.	3.37	.000
17.	4.02	.000
18.	0.47	.000
19.	1.68	.000
20.	5.48	.000
21.	0.64	.000
22.	0.70	.000
23.	1.26	.000
24.	0.05	.000
25.	2.25	.000
26.	2.71	.000
27.	4.80	.000
28.	1.58	.000
29.	2.67	.000
30.	2.25	.000
31.	3.30	.000
32.	2.30	.000
33.	4.28	.000
34.	0.75	.000
35.	1.22	.000
36.	0.19	.000
37.	2.78	.000
38.	0.22	.000
39.	1.06	.000
40.	0.37	.000
41.	1.79	.000
42.	2.13	.000
43.	4.05	.000
44.	1.21	.000
45.	0.08	.000

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
46.	1.76	.000
47.	1.11	.000
48.	1.36	.000
49.	7.20	.000
50.	2.46	.000
51.	6.14	.000
52.	2.04	.000
53.	3.47	.000
54.	4.50	.000
55.	7.29	.000
56.	0.79	.000
57.	4.91	.000
58.	0.85	.000
59.	4.51	.000
60.	0.60	.000
61.	0.66	.000
62.	6.74	.000
63.	1.51	.000
64.	0.25	.000
65.	0.68	.000
66.	0.24	.000
67.	4.12	.000
68.	4.67	.000
69.	3.49	.000
70.	2.12	.000
71.	0.26	.000
72.	1.56	.000
73.	2.70	.000
74.	4.95	.000
75.	2.03	.000
76.	0.94	.000
77.	2.50	.000
78.	1.15	.000
79.	0.27	.000
80.	0.54	.000
81.	3.75	.000
82.	4.25	.000
83.	4.48	.000
84.	1.62	.000
85.	1.21	.000
86.	4.75	.000
87.	6.53	.000
88.	6.53	.000
89.	4.73	.000
90.	4.88	.000
91.	2.45	.000
92.	1.58	.000
93.	5.38	.000
94.	2.99	.000
95.	0.19	.000
96.	2.83	.000
97.	1.06	.000
98.	1.63	.000

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
99.	0.78	.000
100.	3.94	.000
101.	1.15	.000
102.	3.50	.000
103.	4.68	.000
104.	0.91	.000
105.	1.04	.000
106.	2.36	.000
107.	4.28	.000
108.	0.38	.000
109.	2.64	.000
110.	1.23	.000
111.	4.34	.000
112.	0.11	.000
113.	1.40	.000
114.	3.51	.000
115.	1.15	.000
116.	1.29	.000
117.	26.14	.000
118.	1.48	.000
119.	0.21	.000
120.	1.90	.000
121.	3.30	.000
122.	2.30	.000
123.	1.88	.000
124.	1.43	.000
125.	3.24	.000
126.	1.98	.000
127.	5.26	.000
128.	2.68	.000
129.	0.74	.000
130.	4.04	.000
131.	0.58	.000
132.	0.37	.000
133.	2.83	.000
134.	0.74	.000
135.	0.60	.000
136.	2.42	.000
137.	4.77	.000
138.	3.26	.000
139.	1.72	.000
140.	0.44	.000
141.	3.44	.000
142.	2.35	.000
143.	1.11	.000
144.	4.21	.000
145.	0.89	.000
146.	2.54	.000
147.	2.05	.000
148.	2.70	.000
149.	2.58	.000
150.	2.29	.000
151.	3.68	.000

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
152.	2.83	.000
153.	4.27	.000
154.	4.87	.000
155.	0.76	.000
156.	3.20	.000
157.	2.21	.000
158.	4.46	.000
159.	2.71	.000
160.	1.51	.000
161.	11.09	.000
162.	4.38	.000
163.	2.99	.000
164.	3.56	.000
165.	5.13	.000
166.	8.43	.000
167.	0.45	.000
168.	1.94	.000
169.	1.25	.000
170.	2.14	.000
171.	7.18	.000
172.	4.77	.000
173.	2.28	.000
174.	2.44	.000
175.	4.37	.000
176.	1.35	.000
177.	2.36	.000
178.	1.32	.000
179.	4.03	.000
180.	11.38	.000
181.	1.15	.000
182.	3.12	.000
183.	2.42	.000
184.	6.15	.000
185.	7.00	.000
186.	0.55	.000
187.	4.83	.000
188.	3.33	.000
189.	3.46	.000
190.	0.56	.000
191.	3.35	.000
192.	2.03	.000
193.	9.30	.000
194.	0.57	.000
195.	12.88	.000
196.	2.69	.000
197.	1.26	.000
198.	1.49	.000
199.	0.72	.000
200.	3.44	.000
201.	1.32	.000
202.	17.71	.000
203.	1.74	.000
204.	2.13	.000

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
205.	0.27	.000
206.	1.06	.000
207.	8.52	.000
208.	5.91	.000
209.	0.36	.000
210.	2.38	.000
211.	1.38	.000
212.	1.06	.000
213.	1.22	.000
214.	1.33	.000
215.	3.05	.000
216.	3.12	.000
217.	3.20	.000
218.	2.79	.000
219.	3.91	.000
220.	1.81	.000
221.	4.60	.000
222.	6.91	.000
223.	11.66	.000
224.	3.71	.000
225.	4.99	.000
226.	2.77	.000
227.	4.18	.000
228.	0.42	.000
229.	5.20	.000
230.	4.45	.000
231.	3.44	.000
232.	1.41	.000
233.	8.91	.000
234.	0.98	.000
235.	0.90	.000
236.	4.15	.000
237.	1.98	.000
238.	2.19	.000
239.	2.94	.000
240.	3.59	.000
241.	2.26	.000
242.	4.76	.000
243.	1.75	.000
244.	0.29	.000
245.	2.12	.000
246.	0.56	.000
247.	4.74	.000
248.	0.54	.000
249.	1.72	.000
250.	1.06	.000
251.	2.89	.000
252.	1.33	.000
253.	6.70	.000
254.	0.87	.000
255.	0.59	.000
256.	3.14	.000
257.	3.68	.000

Appendix-IV: Mahalanobis-D² Distance for Outliers

Observation No	Mahalanobis D ² -Distance	p
258.	0.75	.000
259.	3.70	.000
260.	5.02	.000
261.	7.06	.000
262.	2.56	.000
263.	2.96	.000
264.	0.49	.000
265.	1.28	.000
266.	6.75	.000
267.	7.51	.000
268.	4.13	.000
269.	1.92	.000
270.	0.79	.000
271.	2.31	.000
272.	5.65	.000
273.	3.31	.000
274.	1.85	.000
275.	3.11	.000
276.	3.08	.000
277.	0.05	.000
278.	2.66	.000
279.	0.90	.000
280.	4.95	.000
281.	0.45	.000
282.	2.08	.000
283.	2.29	.000
284.	1.21	.000
285.	1.06	.000
286.	0.14	.000
287.	1.67	.000
288.	2.50	.000

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