

Anti-consumption: The lifestyles of the disciplined materialists

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ABSTRACT

Anti-consumption: The lifestyles of the disciplined materialists

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This thesis examines why some people row against the consumerism tide and adopt anti-consumption lifestyles. Reasons for understanding this resistance are twofold. First, companies should create value for consumers who normally resist consumption by identifying the needs of this segment. Second, policy makers concerned with sustainability might benefit from understanding the antecedents of anti-consumption lifestyles, because these lifestyles can be used to promote sustainability (Black, 2010).

Three anti-consumption lifestyles are considered: frugality (Lastovicka et al. 1999); tightwadism (Rick, Cryder and Loewenstein 2008); and voluntary simplicity (Iwata, 1997, 1999, 2006; Zavestoski 2002). All these lifestyles result in reducing consumption. However, they are adopted for different reasons. To understand these differences, this thesis tests the model in four countries. In addition, multiple methods and multiple studies were used, to avoid falling into undesirable biases.

The pre-test, Study 1 and Study 2 use experimental design in samples of Canadian students. It was found that frugality seems to be adopted by disciplined individuals to attend to materialistic motivations. On the other hand, tightwadism seems to be adopted by disciplined individuals who wish to answer to antimaterialistic motivations. Finally, the scores on voluntary simplicity are affected by materialism alone, and not by one's self-discipline.

Study 3 tests the generalizability of the results, using a survey method on non-student samples from four countries: Canada, Brazil, India and USA. In Brazil, undisciplined individuals who score high on materialism adopt the three anti-consumption lifestyles. However, if a person is disciplined, all lifestyles are used to answer to materialistic and antimaterialistic goals. With Canadians one's self-discipline increases the scores on all anti-consumption lifestyles to answer to materialistic and antimaterialistic ambitions. However, materialism influences all lifestyles negatively in Canada. In the US and India, materialism correlates strongly with all anti-consumption lifestyles. However, for Americans the scores on all lifestyles increase to attend to materialistic goals, though it seems that this same discipline is more often used to answer to antimaterialistic goals. In India, only tightwadism increases for highly disciplined and highly materialistic individuals.

Study 4, conducted with Brazilians, examines how demographic variables affect anti-consumption lifestyles, and what is the impact of these lifestyles on account balance and balance due. In short, income has a negative impact on frugality only. In addition, it was found that all lifestyles correlate negatively with number of children. Interestingly, no lifestyle affects account balance directly, but the interaction between the antecedents provided interesting insights. Finally, only voluntary simplicity correlates negatively with balance due, whereas frugality and tightwadism do not. Also interestingly, several interaction terms showed the profile of individuals who own high debt.

The contributions of the paper are discussed at the end of each chapter. Three notable contributions should be highlighted. First, policy makers can use the findings to guide their practices while promoting consumer resistance. Second, practitioners interested on consumers

who resist consumption can use the results to attract this audience. Third, this study improves current knowledge about anti-consumption, paving the way for future studies in the field.

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This thesis is dedicated to my family and the two women of my life:
my wife and my mother

"The only place success comes before work is in the dictionary"

Vince Lombardi

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Chapter 1 - INTRODUCTION

Despite living in a materialistic society, some consumers adopt lifestyles that result in reducing consumption. They row against the consumerist tide, adopting anti-consumption (AC) lifestyles. Insights into the antecedents of AC have important marketing implications, because adopting these lifestyles might improve sustainability (Black 2010), and because a significant percentage of the population scores high on AC lifestyles (Lastovicka et al. 1999). As it will be clarified further below, the current set of studies have important implications for practitioners, policy makers and theory development.

This thesis seeks to understand what makes consumers reduce consumption, by exploring the antecedents of anti-consumption (AC) lifestyles. Materialism has been an antecedent regularly examined, particularly in North America. It has been argued that individuals reduce consumption precisely because they are anti-materialistic. However, this thesis goes beyond the traditional direct relation between materialism and AC. It examines moderators to provide interesting insights into why one voluntarily reduces consumption. With multiple studies in four countries, it examines the roles played by materialism, self-control and long-term orientation. The key proposition is to test if self-control and long-term orientation moderate the relation between materialism and scores on AC lifestyles. Ultimately, the studies provide insights about the reasons consumers adopt these lifestyles, even when scoring high on materialism, which is a counterintuitive finding with interesting and applicable outcomes.

What is anti-consumption, anyway? AC is not financial proscription (Cherrier 2009). The idea that income determines AC is wrong. If a person does not buy something because he can't afford, this person is not adopting an AC lifestyle. Rather, the circumstances are merely

constraining this person. By definition, an AC lifestyle is voluntarily adopted by individuals who want to avoid consumption, by either buying less and/or simply efficiently using resources (Lee, Fernandez and Hyman 2009). AC is not the preference for green products. A consumer who adopts an AC lifestyle may indirectly adopt sustainable consumption, not because he wants, but because it is a by-product of adopting such lifestyle. Curiously, anti-consumerist rhetoric has been noted in the US since the colonial time (Witkowski 2010). Nonetheless, the literature has little information about the antecedents of AC lifestyles (Lastovicka et al. 1999). A frequent mistake is to understand AC lifestyles under a common definition of "tightwad" or "thrift" consumers, without careful consideration of the different motivations and antecedents behind each lifestyle. Recent studies showed that AC lifestyles are far more multifaceted than expected (Kozinets, Handelman and Lee 2010; Iyer and Muncy 2009; Tatzel 2002).

Three AC lifestyles are studied: frugality, tightwadism and voluntary simplicity. These lifestyles were chosen because they met the following criteria: they have been the focus of multiple studies; they are proven to be conceptually different; they result in similar behaviors (i.e. decrease of consumption), but for different motivations. Curiously, it has been shown that different goals, motivations and decision-making process might be responsible for a decline in consumption. For instance, voluntary simplifiers are individuals who voluntarily limit spending on consumer goods and services to cultivate non-materialistic values (Etzioni 1998; Gregg 1936; Shama 1981). On the other hand, one might adopt a frugal lifestyle to buy a house, a car or another expensive good; therefore, answering to materialistic goals. Finally, while voluntary simplifiers use fewer resources because they feel detached from materialistic goods and money, tightwads behave in the same way because they feel pain when spending (Rick, Cryder and Loewenstein 2008).

The next chapter will review the literature to set the stage for this study and its

hypotheses. On its first section, the focus will lay on the reasons for studying AC.

Chapter 2 - REVIEW OF THE LITERATURE

2.1 - Why care about anti-consumption?

On this section, the focus is to provide arguments for studying anti-consumption. One important advantage of the current thesis is that it tests the model in four different countries. This is important, because most of AC literature is based on North-American samples. By testing the model in other cultures, this thesis not only tests the model's generalizability, but also provides important insights for theory development. The theoretical implications of testing a model related to AC consumption will be further discussed in this paper. At this point, emphasis will be put on the implications of studying AC for policy makers and practitioners. To understand these impacts, one should first look at the impact of anti-consumption on macro-economy.

Anti-consumption and macroeconomics

The competition for and use of scarce resources is one of the key reasons determining the macro-economic success of countries. Often, a tight approach to scarce resources is very functional. As an example, consider natural gas. This commodity serves a variety of functions. To name a few, it is used in heating, refrigeration, cooking, as a motor fuel, and on power generation. A country that is not a self-sufficient producer of natural gas, and does not resourcefully use this resource has its development threatened by the mood of suppliers. Even if a country is self-sufficient on gas, an efficient usage of this resource allows the country to commercialize its exceeding production, and invest the funds on important projects. Curiously, promoting AC may be a relevant strategy to reduce the use of natural gas. That is because less consumption of goods and products might indirectly reduce the consumption of natural gas. For example, in a country where natural gas is used in transport, if individuals were to consume

fewer goods, the consumption of gas would be reduced simply because fewer goods would need to be transported. This would reduce the demand and/or the dependence of a given country. As this example shows, by motivating consumers to reduce consumption, one is actually reducing the pressure over scarce resources and having a strategic advantage over competing countries.

Another macroeconomical cause points favorably for the study and promotion of AC. An important macroeconomical pillar of a country is the debt its government and citizens hold (Dornbusch 1989). The premise that consumption is always good for the economy partially fuels the increase in debt (Ehrlich and Ehrlich 2008). The general belief is that if consumers buy, employment is created and well-being is promoted. That might be the case, if consumers 'buy local' (Bartik 1991). However, a boost in consumption fueled by excessive debt is risky, and a formula for crisis, as the recent economic meltdown has shown (Dornbusch 1989; Kregel 2008; Krinsman 2007; Wray 2007). Rising consumer and governmental debt risks creating bubbles that create dangerous economic crisis. Thus, policy makers should not only stimulate the economy with care, avoiding bubbles, but also promote AC in parts of the population susceptible to overconsumption (e.g. consumers with high levels of debt). If these individuals reduce their consumption levels, and adopt AC Lifestyles, the country's macroeconomic pillars would be reinforced, and the risk of bubbles would be reduced.

Anti-consumption and sustainability

Promoting AC is not important only because of economic or strategic reasons. In a recent editorial, Black (2010) argued that AC can be a helpful tool for improving sustainability. The rationale is simple. If individuals buy more responsibly, and resist consuming, the strains

over the environment would be reduced and less resources would be used. With less consumption of metals, minerals, energy, and the like, we would reduce our footprint and provoke less strains on the environment.

The key for achieving sustainability is to use resources with responsibility (Solow 1993). Scientists argue that human activities and development should occur while reducing ecological footprints (Wackernagel and Rees 1996). Our ancestors once lived a hunter-gatherer lifestyle, which supported not more than a few million individuals globally (Hassan 1978). With agriculture, we set the foundation for increasing our population to seven billion individuals (UNFPA 2011). This has created an undesired result. Current human activities put unprecedented pressure on existing ecosystems, risking the long-term sustainability of current population levels (Chapagain et al. 2006; Jorgenson 2003; Living Planet Report 2008; Parmesan and Yohe 2003; Pryde 1991; Smil 1994; Turner 2008). In other words, our many activities developed at a pace that is arguably too fast for the environment to cope.

Depending on how sustainability is defined, its achievement can be utopian (Brown et al. 1987), as life exists precisely because it exploits the environment to attend to its selfish needs. Therefore, under a strictly environmental perspective, sustainability is unachievable. This argument is widely accepted by environmentalists and scientists (Brown et al. 1987). Given that a utopian pursuit of sustainability is futile, scientists often adopt a more practical (and achievable) definition of sustainability. They agree that one is sustainable when one can guarantee the ability of future generations to live as well as we are today. Therefore, policy makers concerned with the impact of human activities on the environment have much to gain from studying and promoting AC. That is because promoting AC will indirectly result in a more sustainable society.

Anti-consumption and Well-being

Studies in marketing and psychology also provide arguments in favor of the study of AC. In Western countries, materialism is a route for happiness, as individuals believe that happiness is achieved by buying possessions (Richins 2004). Contrasting with this belief, studies have showed that possessions are not a path for happiness (Hetrick 1989). Similarly, materialism correlates negatively with happiness and well-being (Belk 1984; Burroughs and Rindfleisch 2002; Kashdan and Breen 2007; Kasser 2002; Swinyard, Kau and Phua 2001; Wright and Larsen 1993). Additionally, materialism and overconsumption reduce one's perception of quality of life (Kilbourne, McDonagh and Prothero 1997). This negative correlation between materialism and happiness probably occurs because materialistic individuals aspire for inflated standard of living, experiencing dissatisfaction for not achieving such goals (Sirgy et al. 1998). Given that policy makers are not responsible only for providing basic services or promoting health (Peattie and Peattie 2009), they should promote AC lifestyles to generate happiness. In fact, in some countries, like the USA, the pursuit of happiness is guaranteed by the constitution. Therefore, policies should be created having the pursuit of happiness as an important goal.

While an excessive concern with possessions associates with negative emotions and experiences, AC associates with the reverse. AC lifestyles allow for self-expression (Black and Cherrier 2009), a sense of authenticity (Zavestoski 2002), the experience of positive emotions and a sense of individuality (Cherrier 2009; Shaw and Moraes 2009). However, one has to keep in mind that being excessively tight with money might also lead to negative emotions (Tatzel 2003). Therefore, it seems that the balance lies in the middle. In other words, one should not be too tight, or too loose with money to have peace of mind.

Anti-consumption and Marketing Practices

The points raised this far are more applicable for policy makers. That is, the concern with the well-being of the population, and the sustainability and macroeconomical pillars of a country are normally more pressing for policy makers, because the general population demands these issues. However, the study of AC matches well with present-day marketing.

Marketing practices have come a long way. Gone are the days when mass marketing was the only strategy available for practitioners. With increased competition in the marketplace, the shift changed from the product sold to the unit of measure called the "consumers", who had needs and wants that marketers wanted to cater. Marketing segmentation emerged as an important evolutionary step in marketing science. In this period, market orientation became popular and authors suggested that firms should focus on the markets that they serve, rather than the products they sell (Kohli and Jaworski 1990; Narver and Slater 1990). Nonetheless, marketing did not stop at segmentation. When all companies turned to their customers, focusing on specific segments, it was only a matter of time until competing companies started to struggle within each customer group. A natural evolution was niche marketing (Sheth, Sisodia and Sharma 2000) in which companies focused on smaller and smaller segments.

Companies are becoming more aware that their customers have diverse goals, ambitions and motivations. Customers are more and more concerned with social responsibility (Mohr, Webb and Harris 2001; Sen and Bhattacharya 2001), the environment (Fuller 1999) and sustainability (Cohen, Comrov and Hoffner 2005; Hinton and Goodman 2009). Companies are now noticing that consumers not only want to buy the cheapest product. Firms are starting to listen to the customer's wants and provide creative solutions that answer to multiple goals and

needs (Vargo and Lusch 2004). Vanguard corporations are changing from the inside and becoming noticeably more customer oriented (Kanter 2009). Thus, these companies see AC lifestyles differently. Customer-oriented companies should not ignore AC, because to produce value for these niches (e.g. frugal customer, voluntarily simplifiers, tightwads) firms have to provide solutions to answer to the trends and evolution of customer thinking. This should happen even when it leads to less consumption. Companies that fail to listen to its customers risk losing space to competitors, who may create products and services that match to these lifestyles. Furthermore, when roughly 18% of the general population scores as high in frugality as subscribers of a book that promotes a thrift lifestyle (Lastovicka et al. 1999), it seems imprudent to ignore frugal consumers. In sum, the current marketing practices point out that AC should be studied, as these lifestyles represent a relevant segment in the marketplace.

Anti-consumption and Financial Institutions

A group of practitioners that should be interested on the study of AC lifestyles are those who work at financial institutions. Interestingly, the money saved by adopting an AC lifestyle must be kept somewhere. Naturally, individuals would put this money in financial institutions, by investing or simply leaving the money on their bank accounts. Customers who adopt an AC lifestyle might not be particularly profitable for financial institutions, as they are less prone to hold debt, but they are still important. That is because these customers provide credit that can be borrowed (with interest) to other customers.

A recurring mistake is to view all AC lifestyles as a single construct. Identifying differences between AC lifestyles is particularly important for financial institutions, as it guides them on how to attract consumers with different profiles. For instance, if self-control is an

important cause for frugality, but not for VS, then practitioners interested on attracting simplifiers should not use appeals related to self-control when convincing such consumers to join their institution. On the other hand, if the goal is to attract frugal consumers, then appeals related to self-control should be used. In sum, studying the antecedents analyzed in the current paper have practical implication for practitioners, guiding them on applying the findings in their marketing communication strategies.

2.2 - Materialism

Now that we have argued in favor of studying AC, the following section will discuss the influence of materialism. Previous literature studied the effect of materialism on the lifestyles currently analyzed. Materialism correlates negatively with tightwadism (Rick, Cryder and Loewenstein 2008), whereas voluntary simplicity is an antimaterialistic lifestyle by definition (Etzioni 1998; Gregg 1936; Shama 1981). For frugality, while some authors found a negative correlation between materialism and frugality (Lastovicka et al. 1999), others pointed that frugality does not necessarily correlate positively or negatively with materialism (Kasser 2006; Tatzel 2002). Specifically, the latter authors showed that frugality could be adopted to answer to materialistic aspirations (i.e. save resources to buy a house, or a car), which in turn results in a positive or non-significant relationship between materialism and frugality. Collectively, these studies reinforce the point that materialism relates more strongly with some of the studied lifestyles than others. However, this thesis aims to go a step further. Instead of simply exploring the correlation of materialism and AC lifestyles, the current goal is to explore instances in which materialism correlates positively with AC lifestyles. Therefore, two moderating variables will be examined.

Previous literature that studied the relation between materialism and AC lifestyles has an important shortcoming. Authors usually considered materialism as a single dimension, and several interesting insights might be gained from looking at the effects of each dimension of materialism on each AC lifestyle. One should recall that materialism has three domains: centrality, happiness and success (Richins 2004; Richins and Dawson 1992). In the first, named as acquisition centrality, materialists are those who put acquisition of material good as a central goal on their lives (Daun 1983). The second, named as acquisition as the pursuit of happiness, materialists are those who believe that possessions have a central place in their own satisfaction with life (Belk 1984). In other words, happiness is obtained mainly through acquisition, rather than other means (Richins and Dawson 1992). Finally, the third dimension of materialism describes the individuals who define success by the number and quality of possessions gained. In this case (Richins and Dawson 1992, p. 304), materialists are those who "view themselves as successful to the extent they can possess products that project desired images" (of status and of an imagined perfect life). Arguably, each dimension of materialism should correlate differently with the AC lifestyles. For example, one could adopt a frugal lifestyle to save today and buy something else in the future. This behavior might be motivated by one's belief that possessions make one happy. Therefore, one will adopt a frugal lifestyle to answer to the happiness dimension of materialism. This same rationale is less likely with voluntary simplicity. That is because an antimaterialistic person is less motivated to save to buy something in the future, as buying is unlikely to make him happy.

These differences in correlation between the dimensions of materialism and AC lifestyles should be even more pronounced when considering the moderators. As it will be discussed in detail further below, one's self-control and long-term orientation might explain instances when AC lifestyles correlate positively with each materialism dimension. Before

discussing the expected interaction between the materialism dimensions and the moderators, it is important to define the three anti-consumption lifestyles (e.g. the dependent variables) and review the relevant literature. This is the topic of the next section.

2.3 - Anti-consumption lifestyles

In this section, the three AC lifestyles are presented with relevant literature that points to how they are conceptually different. Another goal of this section is to present the relevant literature on AC, and defend the investigation of frugality, tightwadism and voluntary simplicity.

One of the lifestyles currently studied is frugality. This lifestyle is defined as “a unidimensional 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). The frugal consumer use goods and services differently than most people. This is not to say that they live a simple lifestyle or that they are less materialistic, as frugality does not necessarily correlate positively or negatively to materialism (Kasser 2006; Tatzel 2002). Interestingly, there is reason to believe that materialistic individuals use a frugal lifestyle to achieve their long-term goals (Laskovicka 2006).

Voluntary simplicity (VS) is a lifestyle that also reduces consumption, but for motivations quite different from frugality. While a frugal might consume less to achieve his materialistic motivations in the long-term, simplifiers are individuals who limit spending on consumer goods and services to cultivate nonmaterialistic values (Etzioni 1998; Gregg 1936; Shama 1981). Zavestoski (2002) states that VS is not a form of poverty, but simply an adoption of a lifestyle that encourages people to buy what they really want, rather to what is constantly advertised on

the media. Even though frugal and voluntary simplifiers seek to reduce consumption, these two lifestyles have two important differences. First, VS is not a means to an end (achieving long-term goals) as frugality is. Thus, a frugal might buy less to buy a house, a car or travel for a long vacation, whereas voluntary simplifiers buy less because they are against materialistic appeals. Second, VS is an antimaterialistic lifestyle by definition, whereas frugality does not necessarily relate to materialism. Therefore, while one would likely find a negative relation between VS and materialism the same relation does not necessarily hold true for frugality (Kasser 2006; Tatzel 2002).

A third lifestyle that considered in this thesis is tightwadism. Studies showed that the correlation between frugality and tightwadism is between .46 and .49 (Haws, Bearden and Nenkov 2011; Rick, Cryder and Loewenstein 2008). Though similar, these lifestyles work under different psychological mechanisms. While a tightwad uses less money to avoid the pain of spending, a frugal reduces spending because he feels pleasure while saving (Rick, Cryder and Loewenstein 2008). In fact, the tightwads do not feel any pleasure while saving, and they do it only to avoid an intense pain of paying. Also important, the relation between tightwadism and materialism is understudied. Though it seems clear that tightwadism correlates less to materialism than VS, only one study had the chance to confirm that (Rick, Cryder and Loewenstein 2008).

Though this thesis focuses on frugality, tightwadism and VS, these are not the only AC lifestyles identified in the literature. It is important to present other AC lifestyles to understand why they were not considered in the current thesis. A paper that deserves special attention is a recent by Iyer and Muncy (2009). In this study, the authors argue that two dimensions explain the adoption of AC lifestyles: object (general or specific) and purpose (societal or personal

concerns). They defend that individuals reduce consumption of a wide range of goods (or specific goods), and to answer to societal (or personal) concerns. Consumers are classified according to four possible profiles that combine these two bipolar dimensions. Despite providing interesting insights, the study has one important limitation. It did not compare the scale with similar AC constructs, such as frugality (Lastovicka, et al. 1999) or tightwadism (Rick, Cryder and Loewenstein 2008). In other words, the authors provided no test of construct validity, not testing a possible overlap of the proposed AC profiles with previously studied lifestyles. Frugality, tightwadism and VS will be considered in this thesis precisely because these constructs were clearly defined and extensively tested.

The next section will discuss the literature that supports the proposition that the moderators affect the three lifestyles differently. The first moderator to be presented is self-control. As it will become clear below, previous literature and theoretical reasons suggest that one's self-control might affect each of the studied lifestyles differently.

2.4 - Self-control

Self-control, or self-regulation¹, refers to the ability to inhibit, override, or alter responses that may occur due to undesired physiological process, habit, learning or the situation (Schmeichel and Baumeister 2004; Tangney, Baumeister and Boone 2004). Self-control has been subject of many studies, including some related to consumer behavior. For instance, low scores of self-control relates to increased impulsive consumption (Hoch and Lowenstein 1991; Wertenbroch 1998). A recent research by Haws, Bearden and Nenkov (2011) pointed that the scores on consumer spending self-control, a domain specific self-control scale, correlates

¹ Note that self-control and self-regulation are used interchangeably in the literature (Baumeister 2002; Schmeichel and Baumeister 2004). This dissertation is following this approach.

positively to higher levels of frugality and tightwadism. Nevertheless, given that self-control does not relate necessarily with consumer behavior (Tangney, Baumeister and Boone 2004), some individuals might have high self-control, while not adopting an AC lifestyle, simply because their self-control is expressed in other domains.

The goal of the present thesis is to examine the moderating effect of self-control on the relation between materialism and AC lifestyles. Therefore, it is important to review the relevant literature that has studied the relation between self-control and materialism. Poynor and Haws (2009) found that individuals who score low on self-control classify more items as necessities, thus being more attached to possessions. Similarly, Rose (2007) found that materialism correlates positively to compulsive buying, a behavior more common in individuals who score low in self-control (Baumeister 2002; Hoch and Lowenstein 1991; Wertenbroch 1998). Though the literature suggests a negative correlation between materialism and self-control, one could argue that an individual might score high on materialism and high on self-control. A person who overcomes difficulties, saves money, resists to temptation and works hard to buy possessions that signal success is an individual who scores high in both self-control and materialism. Obviously, these individuals are not common, given the difficulties of resisting to materialistic appeals. Nevertheless, they exist and more extreme cases, such as those who are averse to indulgence, have been recently examined in the literature (Haws and Poynor 2008; Kivetz and Keinan 2006). Given that individuals can be highly materialistic and highly self-controlled, this thesis defends the idea that frugality is a lifestyle adopted by individuals to achieve materialistic ambitions using a disciplined (self-controlled) strategy.

This section has discussed one of the moderating variables, and briefly looked at how it interacts with materialism to affect the AC lifestyles. In the next section, we will focus at another moderating variable, and discuss its role on the theoretical model.

2.5 - Long-term Orientation

Authors have studied the effect of long-term orientation on consumer behavior, arguing that it influences the attitudes and preferences towards products (Ganesan 1994; Hoch and Lowenstein 1991; Howlett, Kees and Kemp 2008; Mogilner and Aaker 2009). However, the relation between long-term orientation and AC is understudied in the literature. No study has looked at the relation between long-term orientation (LTO) and tightwadism or voluntary simplicity. In addition, no study relates LTO with materialism. One of the few related studies showed that LTO correlates positively to frugality, while correlating negatively with compulsive buying (Bearden, Money and Nevins 2006). Given the limited number of studies that related LTO with the dependent and independent variables, the rationale used is mainly theoretically based.

Bearden, Money and Nevins (2006) study suggests that LTO has an effect similar to self-control on consumption. That is, long-term oriented individuals are less likely to buy compulsively, and more likely to adopt an AC lifestyle. In this case, LTO reinforces AC goals (particularly frugality), because by saving resources one will be able to achieve long-term goals. In addition, one could argue that the relation between LTO and materialism is negative, because materialistic aspirations are a way to answer to one's short-term orientation (Adams, working paper). However, an individual might be highly materialistic and long-term oriented simultaneously. In this case, a frugal lifestyle becomes more attractive, as it helps consumers to achieve their materialistic goals in the long-term. Using this rationale, one should expect that, for frugality, the moderating role of LTO will be similar to the one played by self-control.

There is reason to believe that LTO will also play a similar moderating role for tightwadism and VS. As previously discussed, VS is an antimaterialistic lifestyle by definition.

Therefore, it is unlikely that LTO will moderate the relation between these two constructs. In other words, because VS is such an anti-materialistic lifestyle, it will not matter if the individual is led to believe that he is long-term oriented. Individuals will still prefer to live a simple lifestyle, regardless of whether they are long-term or short-term oriented. As for tightwadism, considering that this lifestyle possibly lead individuals to adopt antimaterialistic values, LTO will probably be a less relevant moderator.

In summary, the sparse literature and the logic presented above point that LTO and self-control play similar moderating roles on the relation between materialism and anti-consumption lifestyles. If this is confirmed, there is no reason to manipulate self-control and LTO separately. It becomes appealing to control LTO and self-control simultaneously to create a stronger manipulation effect. This is attempted at the pre-test (Chapter 3), to be discussed in details further below. Before moving to that, it is important to summarize what is researched in the present thesis and present a model to guide the reader. This is the topic of the next section.

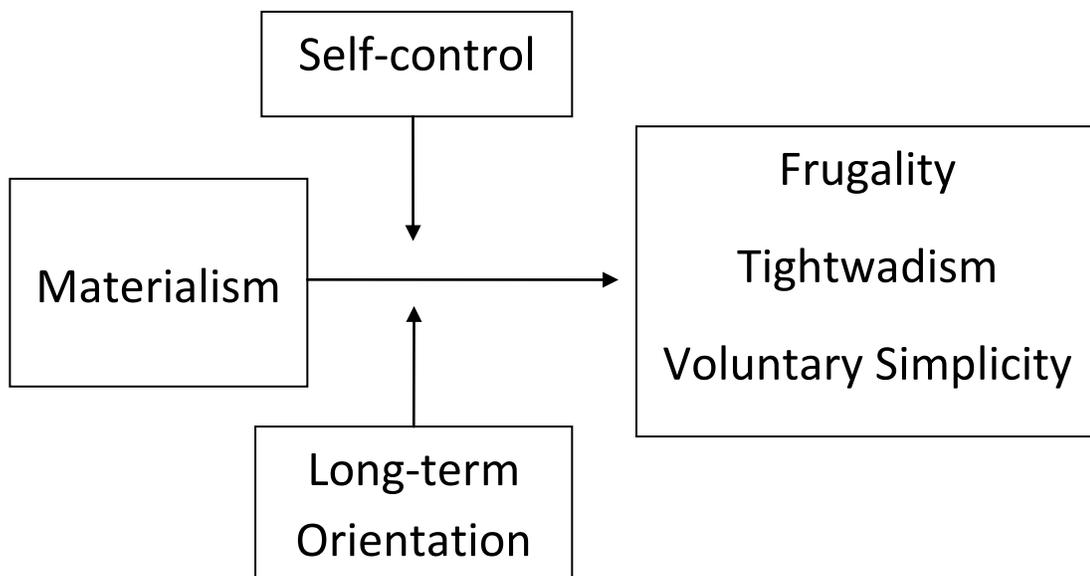
2.6 - Summary of Present Investigation

The goal of this thesis is to explore why some consumers row against the consumerist tide and adopt a lifestyle that results in reducing consumption. With that in mind, several antecedents are considered, to maximize the theoretical contributions and produce meaningful impact on theory and practice. However, given that several antecedents are considered, one can get lost on the clutter of relations to be analyzed. To deal with this problem, this section will briefly summarize the propositions to be tested and the studies that will tackle each of them.

In the model presented below (Figure 2.1), materialism is an independent variable, whereas the three AC lifestyles are considered as dependent variables. That is because the

importance given to possessions affects one's ability to reduce spending. A materialist person normally scores lower on AC lifestyles, because this individual has a hard time to avoid consumption while attending to materialistic goals. Previous research shows that all AC lifestyles correlate negatively with materialism, though some less than others (like frugality). Nonetheless, it remains to be seen if this relation is the same in any circumstance and in all cultures. As argued before, materialism might correlate positively with AC lifestyles for highly self-controlled individuals. This would be a disciplined materialistic person, who would see AC lifestyles as a way to exert self-control and materialistic impulses. Similarly, materialistic individuals who are long-term oriented could score high on AC lifestyles, as spending less allow them to answer to their materialistic ambitions in the long-term.

Figure 2.1: Self-control and Long-term Orientation as moderators of the relation between materialism and anti-consumption lifestyles



In short, the model above goes beyond the direct relation between materialism and AC lifestyles. It looks at the interaction of materialism with self-control and long-term orientation to

identify instances in which materialism might correlate positively with AC lifestyles. This model will be tested in the studies quickly summarized below.

On the pre-test we look at the effect of the moderators alone on the dependent variables. The expected result is that the scores on tightwadism and frugality, in particular, will change after manipulating one's perception on self-control and long-term orientation. In the pre-test, self-control and time orientation are manipulated separately. The pre-test makes a first assessment of the self-control and time orientation manipulations. The goal is to show that the two moderators have similar impacts on the dependent variables. That is, high self-control, or long-term orientation, leads to higher scores on AC lifestyles. In addition, it is expected that the scores on AC lifestyles to be highest for participants who had their self-control and long-term orientation increased by the manipulation.

In Study 1, self-control and time orientation are manipulated simultaneously using an improved manipulation method. The new manipulation aims to confirm and expand the findings of the pre-test, showing that participants primed with high (low) self-control and long (short) - term orientation scored lowest (highest) on the AC lifestyles.

Study 2 tests the full model, measuring participants' scores on materialism before exposing them to the manipulation. The goal is to assess how the interaction between materialism and the moderators affect the scores on AC lifestyles. Specifically, we were curious to see participants' scores on AC lifestyles after different opposing forces were in action (e.g. high materialism and high self-control). Study 3 also tests the full model, but without manipulating the moderators. An online survey is conducted with nonstudent samples from four countries: Canada, Brazil, USA and India. The goal is to test the model using a different sample and method, shedding some light into the generalizability of the findings.

Finally, Study 4 uses data of real customers of a Brazilian financial institution. These customers answered to an online survey, and were the same used for the cross-cultural comparisons in Study 3. However, in Study 4, participants' answers are correlated with the services they acquired at the institution. For example, their scores on frugality (self-control, tightwadism, and so forth) were correlated to their account balance and balance due.

Chapter 3

PRE-TEST: The effect of self-control and long-term orientation on anti-consumption lifestyles

The purpose of the pre-test is to make a first assessment of the self-control and long-term orientation manipulations. The current manipulation is based on the contrast effect, similar to Dijksterhuis et al (1998). Contrast effect occurs when an individual heighten a perception of a given attribute, after comparing it to a stimulus of lesser (greater) value in the same dimension. In the present manipulation, it is expected that if participants are forced to think on someone who is extremely self-controlled (uncontrolled) they will feel less (more) self-controlled. Similarly, if participants are forced to compare with someone who is extremely long-term (short-term) oriented, they will feel less (more) long-term oriented. If the manipulation works as expected, the scores on tightwadism and frugality will be maximum for participants who had their self-control and long-term orientation increased by the manipulation. That is because, as reviewed, self-control and long-term orientation correlate positively with frugality and tightwadism. Thus:

H1: The scores on frugality (a) and tightwadism (b) will be highest when participants have their own perception of self-control and long-term orientation increased by the manipulation

If the hypothesis above is confirmed, one can be confident to manipulate self-control and LTO simultaneously to get maximum effect on the dependent variables.

3.1 - Method

To test the hypothesis above, a 2x2 between subjects design was used, resulting in four versions of the questionnaire. Each participant was exposed to both a high (low) self-control manipulation and a long (short) time orientation manipulation. A similar treatment was used to manipulate participants' self-control and time orientation. The instructions presented in the high (low) self-control condition and the long (short) -term orientation condition are almost identical, to avoid undesirable biases (see Table 3.1).

Table 3.1: Instructions used to manipulate self-control and time orientation

Self-control	
High-self control (HSC) Manipulation	Low-self control (LSC) Manipulation
Think on the person who is an example of high self-control for you. In other words, imagine someone who has the ability to control his or her behaviors, emotions or impulses. You can think on any person: a friend, a family member, a celebrity, etc. After you have pictured this person, use the lines below to list what comes to your mind when you think about him/her, like the typical behaviors, lifestyle and appearance.	Think on the person who is an example of low self-control for you. In other words, imagine someone who does not have the ability to control his or her behaviors, emotions or impulses. You can think on any person: a friend, a family member, a celebrity, etc. After you have pictured this person, use the lines below to list what comes to your mind when you think about him/her, like the typical behaviors, lifestyle and appearance.
Time Orientation	
Long-term Orientation (LTO) Manipulation	Short-term Orientation (STO) Manipulation
Think about a person who is tremendously long-term oriented. In other words, imagine someone who works hard today, and gives up today's fun, for success in the future. This person constantly makes plans to achieve his or her future goals. Again, you can think on anyone: a friend, a family member, a celebrity, etc. After you have pictured this person, use the lines below to list what comes to your mind when you think about him/her, like the typical behaviors, lifestyle and appearance.	Think about a person who is tremendously short-term oriented. In other words, imagine someone who never work hard today, and give up today's fun, for success in the future. This person would never plan to achieve his or her future goals. Again, you can think on anyone: a friend, a family member, a celebrity, etc. After you have pictured this person, use the lines below to list what comes to your mind when you think about him/her, like the typical behaviors, lifestyle and appearance.

University students were contacted in classrooms with the professors' permission. Participants were first presented with a consent form. Later, they were presented with the two manipulations (self-control and time orientation), followed by the frugality scale (Lastovicka et al 1999) and tightwad-spendthrift scale (Rick, Cryder and Loewenstein 2008). Note that participants responded one of the four versions of the study. In each version, only the manipulations were different. Finally, they answered to demographic questions. A sample of 234 university students took part of the pre-test. However, 40 participants were excluded from the analyses, because they did not answer properly to the manipulation (i.e. left it unanswered). The participants were 21.52 years old on average, and 51% of the sample was female.

3.2 - Results and Discussion

A participant exposed to the high (low) self-control and long (short) -term orientation condition was forced to think on someone who was (not) extremely self-controlled and extremely long (short) -term oriented. The scores on frugality (Figure 3.1) and tightwadism (Figure 3.2) follows a continuum. Participants exposed to the low self-control and short-term orientation (LSC-STO) condition gained the highest scores, and participants exposed to the high self-control and long-term orientation (HSC-LTO) condition scored lowest. However, in the paired comparisons between the different conditions, the scores on frugality are significantly higher only when LSC-STO condition is compared with HSC-LTO condition ($p=.05$). The remaining paired comparisons were not significantly different. Curiously, a similar trend was found for tightwadism, in which the scores were closest to be significantly different when the LSC-STO condition was compared with the HSC-LTO condition ($p=.12$). These findings suggest that both self-control and time orientation have similar impact on the scores on frugality and

tightwadism, pointing that they should be manipulated simultaneously for maximum priming effect.

Figure 3.1: The scores on frugality increase on a continuum from the HSC-LTO Condition to the LSC-STO Condition

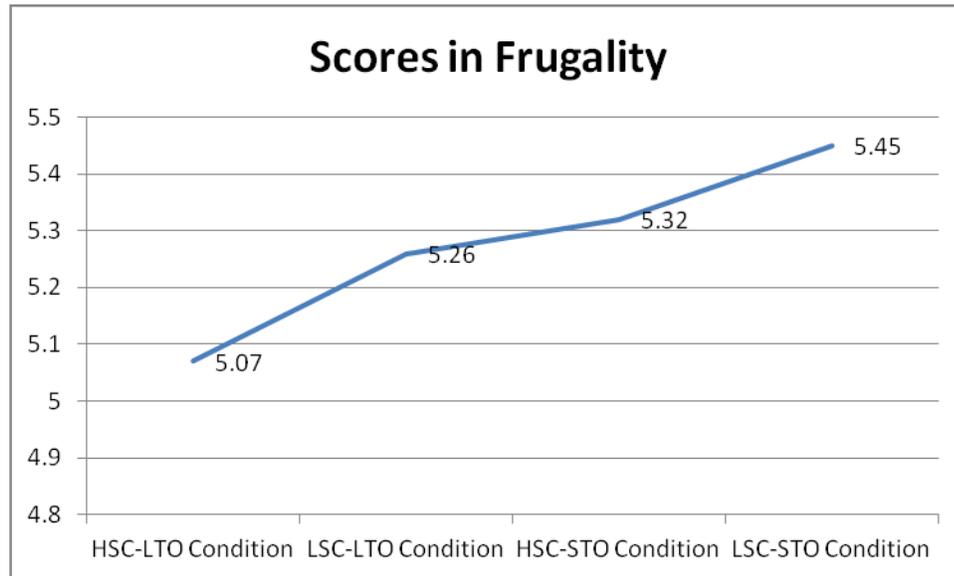
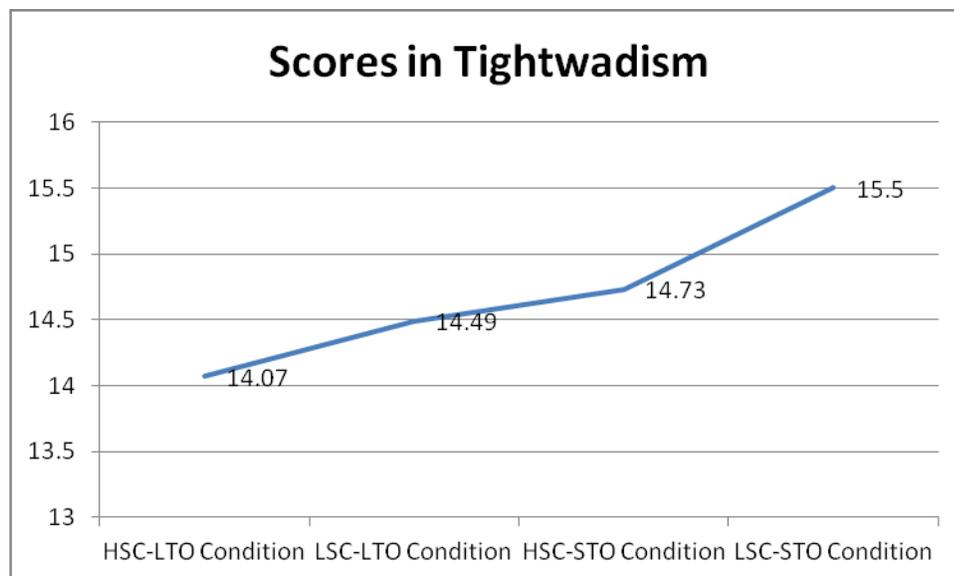


Figure 3.2: The scores on tightwadism increase on a continuum from the HSC-LTO Condition to the LSC-STO Condition



The pre-test has supported the early hypothesis for frugality (H1a). However, the comparison between HSC-LTO and LSC-STO conditions did not result on scores significantly different for tightwadism (H1b). A look into how participants answered to the manipulation explain why that was the case. Participants were asked to describe the behaviors of an individual who was extremely long (short) -term oriented, and the behaviors of someone who was an extreme example of high (low) self-control. Because participants were free to write what came to their minds, they often described behaviors unrelated to self-control or time orientation. As a result, this method did not produce a strong priming effect, as participants also wrote about characteristics unrelated to self-control and time orientation. In addition, the manipulation used at pre-test did not force participants to compare themselves to extreme examples (this might have occurred indirectly), which again weakened the priming effect. Finally, each participant imagined characters that are not necessarily similar in the manipulated attributes (i.e. self-control and time orientation), resulting in a manipulation of reference points were seldom the same. All these shortcomings combined resulted on a potentially weaker manipulation.

These shortcomings are tackled at Study 1, but instead using a different manipulation. Study 1 tests the same hypothesis as the pre-test, as it aims at testing the effect of self-control and long-term orientation on anti-consumption lifestyles.

Chapter 4

STUDY 1: Further assessing the effect of self-control and long-term orientation on anti-consumption lifestyles

Study 1 builds on the findings of the pre-test. Two goals are stipulated. The first is to confirm that participants primed with high (low) self-control and long (short) -term orientation score lower (higher) on the AC lifestyles. That is, Study 1 further tests H1a and H1b. The second goal is to compose an improved manipulation that produces a stronger priming effect. By achieving these goals, it is possible to corroborate if the scores on AC lifestyles change by manipulating participants' self-control and time orientation. In addition, by developing an improved manipulation, the full model is tested in Study 2, assessing the compelling question of whether one's score on AC might correlate positively with materialism.

4.1 - Method

To achieve the two goals listed above, self-control and time orientation are manipulated simultaneously (in the same task), and only two conditions are used (HSC-LTO and LSC-STO). A new manipulation is used with three important advantages. First, the manipulation reduces the time needed to answer the questionnaire, as it is comprised of only one task. Second, it forces participants to compare themselves to a character, instead of asking them to imagine someone. This is an important improvement, because in the pre-test participants are free to think on any individual, resulting in different reference points, and potentially weaker contrast effects. Third, in the improved manipulation, the attributes stressed in the character are the same within each

condition. Again, this is an important improvement, because it standardizes the reference of comparisons, and sets up a known and controllable reference point.

Participants are presented to a high self-control and long-term orientation (HSC-LTO) condition or to a low-self control and short-term orientation (LSC-STO) condition. Below follows the text presented to participants in each condition (see Table 4.1).

Table 4.1: Instructions used to manipulate participants self-control and time orientation in each condition

(LSC-STO) Condition

John is a portrait of impulsiveness. He avoids strict diets, and indulges in sweets, chocolates and junk food. Because of John's impulsiveness, many of his friends don't feel comfortable around him. For instance, he drinks so much that he is seen as antisocial. John's tendency to indulge often prevents him from having many of the things he wants in life. His finances are never in good shape, so he never buys what he really wants. The inability to control his impulses is perhaps John's most outstanding trait. If he feels like doing something, he will do it, even when he knows that he will regret it later. John is unable to exert self-control not only because of his lack of discipline, but also because he is short-term oriented. However, John's focus on the present often prevents him from planning ahead. He is not the sort of person who saves today to buy something better in the future, and because of that he never buys what he really wants. His work and study reflects his personality. He knows what to do, but he never works on tasks that will give him only long-term rewards. His performance in school and at work is often above average, but only when the tasks give him short-term gains. Steve, John's best friend, likes to say that "John is such a mess! He should be on the Oprah show!"

(HSC-LTO) Condition

John is a portrait of self-control. He follows strict diets, and refuses sweets, chocolates and junk food. Because of John's self-control, many of his friends don't feel comfortable around him. For instance, he drinks so little that he is seen as antisocial. John's tendency to restrain often prevents him from having many of the things he wants in life. His finances are always in good shape, but he still doesn't buy what he really wants. The ability to control his impulses is perhaps John's most outstanding trait. If he feels like doing something, he will contain the impulse, even when he knows that he will regret it later. John is able to exert self-control not only because he has discipline, but also because he is long-term oriented. However, John's focus on the future often prevents him from enjoying the moment. He is the sort of person who saves today to buy something better in the future, and because of that he never buys what he really wants. His work and study reflects his personality. He knows what to do, but he never works on tasks that will give him only short-term rewards. His performance in school and at work is often above average, but only when the tasks give him long-term gains. Steve, John's best friend, likes to say that "John is so tidy! He should be on the Oprah show!"

Note that both conditions have almost the same number of words (233 for the LSC-STO condition, and 231 words for the HSC-LTO condition). In addition, to avoid social desirability bias, the character is equally negative in both conditions, and only the priming words change. After reading the text, participants describe the three most noticeable behaviors expressed by John. Finally, participants compare themselves with the portrayed character to maximize the contrast effect. To hide the purpose of the manipulation, participants are told that the survey is part of two studies: one in Psychology and another in Marketing. John's description and the related questions are presented as part of the Psychology Study. The Marketing Study is composed by the following scales: frugality (Lastovicka et al. 1999); tightwad-spendthrift (Rick, Cryder and Loewenstein 2008); self-control (Tangney, Baumeister and Boone 2004); and long-term orientation (Bearden, Money and Nevins 2006). These last two scales are included for manipulation check purposes.

As in the pre-test, the students are approached in classrooms, with the professors' permission. They are randomly presented with one of the two versions of the study (either the LSC-STO condition or the HSC-LTO condition). In each of those versions, only the manipulations are different. This time around, students received 3\$ for taking part on the study. A sample of 140 university students took part of this study, in which 50.4% were male, and the average age was equal to 20.4 years old.

4.2 - Results and Discussion

The scores on frugality, tightwadism, self-control and time orientation for each condition are presented at Table 4.2. The scores on frugality ($p < .001$) and tightwadism ($p < .05$) are significantly higher in the LSC-STO condition than on the HSC-LTO condition, confirming H1a and H1b. Note that in the pre-test the differences are weaker, with less appealing p values (p was equal to .05 for frugality and .12 for tightwadism). This shows that the limitations of the pre-test are solved on the current manipulation. Also certifying the quality of this new manipulation, the scores on self-control ($p < .05$) and time orientation ($p < .001$) were higher on the LSC-STO condition than on the HSC-LTO condition. This result shows that participants in the LSC-STO condition consider themselves as more self-controlled and long-term oriented than participants in the HSC-LTO condition. These findings confirm that the contrast effect occurs as expected.

Table 4.2: The scores on frugality, tightwadism, self-control and time orientation are highest on the LSC-STO condition than on the HSC-LTO condition

Condition	Frugality***	Tightwadism*	Self-control*	Time Orientation***
High Self-control and Long-term orientation (HSC-LTO)	4.81	12.98	4.11	4.81
Low Self-control and Short-term orientation (LSC-STO)	5.27	14.31	4.46	5.35

* Significant at $< .05$

***Significant at $< .001$

The two goals set for Study 1 were achieved, indicating that the full model can be tested using a similar method. The improved manipulation worked considerably better, showing that one's own perception of self-control and time orientation can be manipulated by presenting

extreme cases of those same attributes. In addition, it is shown that one's score on frugality and tightwadism changes after manipulating one's own perception of self-control and time orientation. This strongly suggests that these two antecedents influence the adoption of frugality and tightwadism, as suggested by some authors (Bearden, Money and Nevins 2006; Haws, Bearden and Nenkov 2011; Joireman, Kees and Sprott 2010). In addition, as expected, it is shown that self-control and time orientation play a much stronger role for frugality than for tightwadism. Finally, the scores on self-report scales measuring past behaviors change after manipulating the moderators. Participants perceived their past behaviors as being more (less) frugal or tightwad after being presented with the LSC-STO (HSC-LTO) condition. This is arguably a very rigorous test, as momentary priming would arguably change one's immediate behavior, as opposed to the perception based on past behaviors.

Chapter 5

STUDY 2: The moderating role of self-control and time orientation

The objective of Study 2 is to test if self-control and time orientation moderate the relation between materialism and AC lifestyles. In other words, the goal is to certify if individuals increase scores on AC lifestyles while adopting materialistic values. This is important not only because it explores how these antecedents affect each AC lifestyle, but also because it guides policy makers motivated to reduce consumption in a highly materialistic society.

Materialism has three dimensions (centrality, happiness and success). Each dimension should interact differently with the moderators to affect the AC lifestyles. The scores on frugality should be determined by the interaction of self-control and time orientation with happiness or success. That is, individuals exposed to the LSC-LTO condition who score high on happiness or success should score high on frugality. By saving money and resources, they will be able to buy the possessions that may portray success or provide a more enduring source of happiness. On the other hand, individuals who score high on centrality will score low on frugality, regardless of the condition. That is because if one sees the possessions of goods as something central in one's life, one will not adopt a frugal lifestyle. Therefore:

H2a: Participants who score high on success will score higher in frugality in the LSC-STO than in the HSC-LTO condition.

H2b: Participants who score high on happiness will score higher in frugality in the LSC-STO than in the HSC-LTO condition.

Though in Study 1 the manipulation affects the scores in tightwadism, there is reason to believe that this lifestyle will be more influenced by materialism than by the moderators.

Considering that tightwads consume less to avoid the pain of spending, possibly they score low on all dimensions of materialism regardless of the moderators. Differently from frugal consumers who might reduce consumption to answer to materialistic goals (namely success and happiness), tightwads might be unable to reconcile. If a person believes that material goods are a way to portray success, this person would be unable to signal success with possessions if he feels pain when spending. Similarly, if a tightwad were to believe that possessions are a source of happiness, he would be unable to feel happy, because of the pain he experiences while spending. Therefore, tightwads might assume antimaterialistic values to rationalize their decision to avoid consumption. Thus, their scores on tightwadism will depend more on materialism than on the moderators. Therefore:

H3: Self-control and time orientation do not moderate the relations between materialism and tightwadism.

Finally, for voluntary simplicity (VS), the moderators will not play a relevant role. That is because VS is an antimaterialistic lifestyle by definition, thus it is expected that the relation between VS and each materialism dimension will always be negative, regardless of self-control and time orientation. Thus:

H4: Self-control and time orientation do not moderate the relation between materialism and voluntary simplicity.

5.1 - Method

To test the hypotheses presented, a method similar to Study 1 is used. To hide the purpose of the study, and disguise the priming effect of the manipulation, a cover story is used. It is stated that the study is part of two different studies, one in Psychology and the other in

Marketing. The Psychology study is introduced first to participants and it is comprised by two tasks. First, participants answer to Richins' (2004) materialism scale, and then they answer to the same manipulation used in Study 1 (see Table 4.1). This method is used to identify the relation between materialism (in its non-manipulated form) and AC lifestyles, under different levels of self-control and time orientation. Participants are randomly assigned either to the HSC-LTO condition or to the LSC-STO condition. After completing the two tasks that composed the Psychology Study, participants are introduced to the Marketing Study, which is comprised by the following measurements: frugality scale (Lastovicka et al. 1999), tightwad-spendthrift scale (Rick, Cryder and Loewenstein 2008) and voluntary simplicity scale. This last construct is measured using an adapted version of Iwata's (1997, 1999, 2006) scale. This measurement is preferred over Leonard-Barto's (1981), because the latter is overly focused on green behaviors, neglecting the antimaterialistic aspect of this lifestyle (Zavestoski 2002). For the items that composed this adapted version, please refer to the Appendix 1. The order of the three AC scales (frugality, voluntary simplicity and tightwadism) is randomly assigned to avoid order effect bias. In addition, to reduce the questionnaire's length, the self-control and time orientation scales were not included. Finally, after answering to the scales, participants responded to demographic questions. In the last question of the study, participants are asked if the psychology study affected their performance on the marketing study. They are given a few lines to explain how that was the case.

As in previous studies, participants are approached in classrooms with professors' permission and received 3\$ for taking part on the study. A sample of 423 university students completed the study, however, only 193 are kept for the final analysis. 27 participants were excluded because they properly indicated how the manipulation might have affected their answers. One participant was excluded because his score on frugality was significantly smaller,

being an influential outlier in X using Cook's distance approach (Fox 1991). Seven participants were excluded because they did not respond properly to the manipulation. They either left it unanswered, or they believe to be more (less) self-controlled or more long (short) -term oriented than the character presented in the HSC-LTO (LSC-STO) condition. Finally, the remaining 195 participants were excluded because they were from over 80 different countries. This last step was necessary, because the relation between materialism and AC lifestyles might be highly determined by culture. For example, consider the case of two countries where materialism is equally accepted. Due to social norms, in one country materialism might lead to overconsumption, as individuals are expected to attend to their materialistic goals on the short-term. In the other country, materialism might lead to adopting AC lifestyles, as it is expected from individuals to consume only the material goods that will portray very strong signals of success (e.g. a fancy car or a large house). Given the wide range of cultural backgrounds of the general sample, it was preferred to do the analysis only with Canadian participants, as the diverse cultural background of participants would likely influence the results. The diversity of the sample was considered before the data collection. The study was conducted with over 400 participants because it was expected that many would need to be removed due to cultural differences. This obviously increased the cost of the research, but it was necessary to ensure that the results were as clear and unbiased as possible.

5.2 - Results and Discussion

50.3% of participants retained for the final analysis are female, and the average age is equal to 21.8 years old. From the 193 participants, 100 were exposed to the low self-control and short-term orientation (LSC-STO) condition, whereas the remaining 93 were exposed to the high

self-control and long-term orientation (HSC-LTO) condition. Confirming previous study, the scores on frugality ($p=.02$) and tightwadism ($p=.05$) are higher in the LSC-STO condition. In addition, the scores on voluntary simplicity, the composite score of materialism, and the three dimensions of materialism (success, centrality and happiness) are not higher in any of the two conditions. The results described are presented at Table 5.1, which also lists the Cronbach's alphas obtained for this study.

Table 5.1: Only the scores on frugality and tightwadism were significantly higher in the LSC-STO condition than in the HSC-LTO condition

Condition	Frugality*	Tightwadism*	Voluntary Simplicity	General Materialism**	Success	Centrality	Happiness
HSC-LTO Condition	4.97	13.09	2.68	3.10	2.69	3.33	2.99
LSC-STO Condition	5.26	14.21	2.73	3.03	2.88	3.39	2.96
Cronbach Alpha***	.75	.72	.74	.82	.76	.56	.77

* Significant at $<.05$

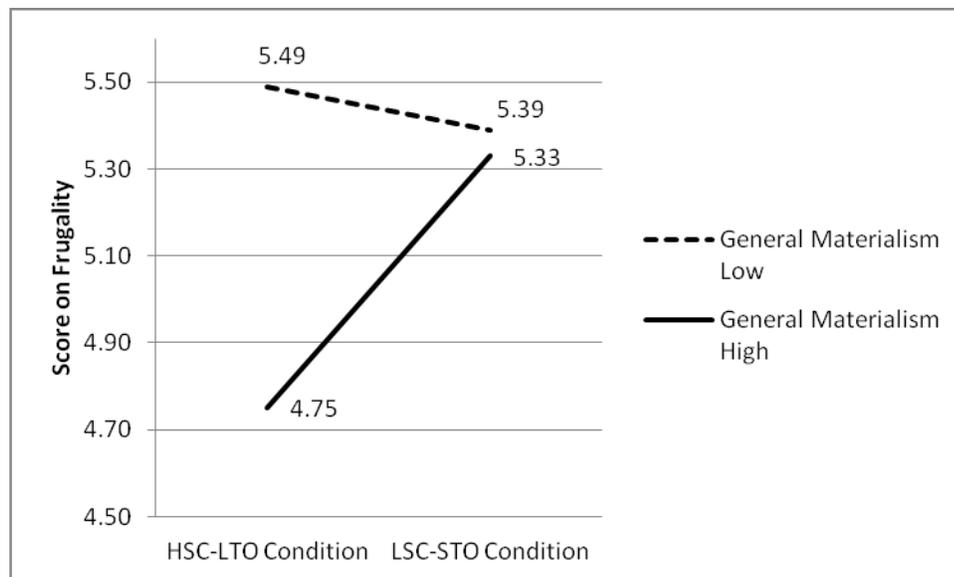
** This dimension is composed by all three dimensions of Materialism

***For Voluntary Simplicity, only items 1, 2, 3, 4, 5, 12 and 13 were kept after a Factor Analysis

Only participants who score on the top and bottom quartile of each dimension of materialism are used on the moderating analysis. This method allowed the comparison of the scores on AC lifestyles according to previous scores on materialism and the manipulation in which participants are exposed. Note that this is repeated for each of the three dimensions of materialism (success, happiness and centrality), and for the general (composite) score of materialism.

Participants exposed to the LSC-STO condition who score high on general materialism have scores on frugality that are significantly higher than participants with equal materialism scores, exposed to the HSC-LTO condition (5.33 vs. 4.75, $p=.01$). Additionally, the frugality scores of participants in the latter condition are not statistically different from those who score low on general materialism in any condition (see Figure 5.1). These findings suggest that one adopt a frugal lifestyle despite scoring high on materialism. This has great impact for policy makers, because it shows that reinforcing individuals' self-control and long-term orientation increases frugality even of materialistic individuals. This also has important implications for practitioners. For example, a financial institution might use these results, by advertising self-control and long-term orientation on consumers interested on saving, even if these consumers are materialistic.

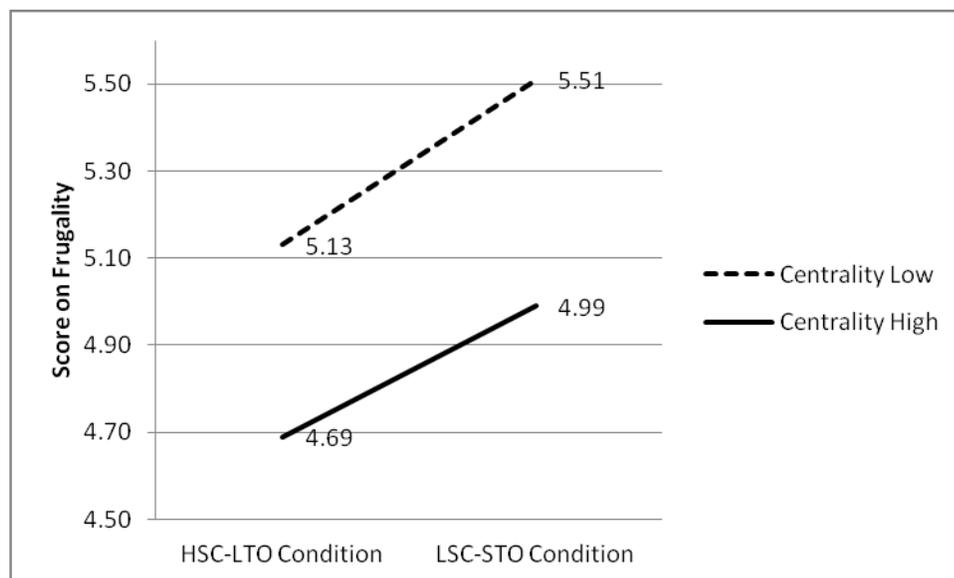
Figure 5.1: The scores on frugality of materialistic individuals increase from the HSC-LTO condition to the LSC-STO condition



When each dimension of materialism is analyzed separately, the results show a distinct picture. For instance, the moderators do not affect the scores on frugality significantly for

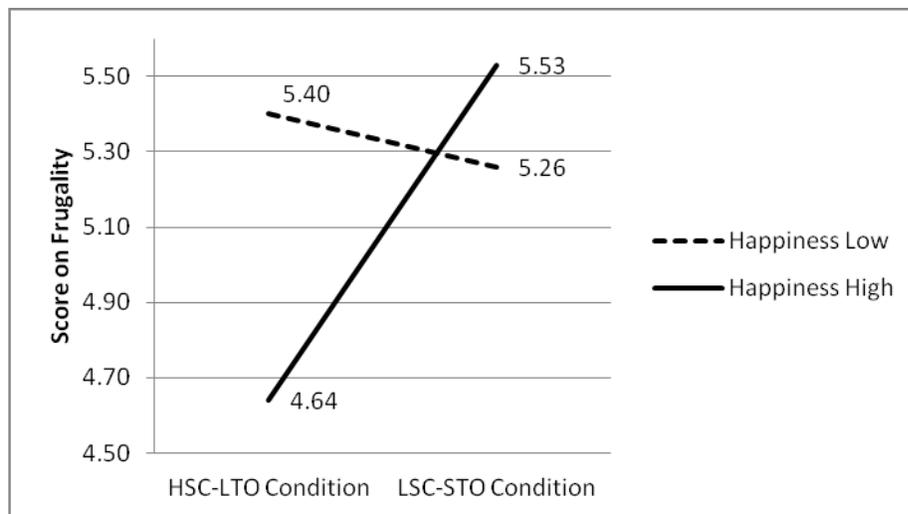
centrality (see Figure 5.2). In this case, for participants who believe that possessions play a central role in their lives, the scores on centrality, as opposed to the manipulation, affect the scores on frugality. Participants who score high on centrality exposed to the LSC-STO condition do not score significantly more in frugality than participants with similar scores on centrality, exposed to the HSC-LTO condition (4.99 vs. 4.69, $p=.25$). However, participants who score low on centrality exposed to the LSC-STO condition score significantly more on frugality than participants who score high on centrality exposed to the same condition (5.51 vs. 4.99, $p=.05$). Similarly, participants exposed to the HSC-LTO condition score marginally higher on frugality than participants who score high on centrality in the same condition (5.13 vs. 4.69, $p=.07$). The results indicate that participants who believe that the acquisition of possessions has a central role in their lives do not adopt a frugal lifestyle.

Figure 5.2: Centrality does not interact with self-control and long-term orientation for frugality



Participants who believe that possessions are a source of happiness and are exposed to the HSC-LTO condition score lowest on frugality (see Figure 5.3). Their scores are lower than any other condition (p. values of paired comparisons ranged from $<.001$ to $.02$). However, participants with similar scores on happiness exposed to the LSC-STO condition score significantly more on frugality than participants exposed to the HSC-LTO condition (5.53 vs. 4.64, $p. <.001$). They also score higher, though not significantly, than participants in the LSC-STO condition who score low on happiness (5.53 vs. 5.26, $p.=.27$) and participants in the HSC-LTO condition who score low on happiness (5.53 vs. 5.40, $p. =.61$). These results confirm the findings and conclusions obtained when general materialism is considered. In addition, the findings confirm H2b.

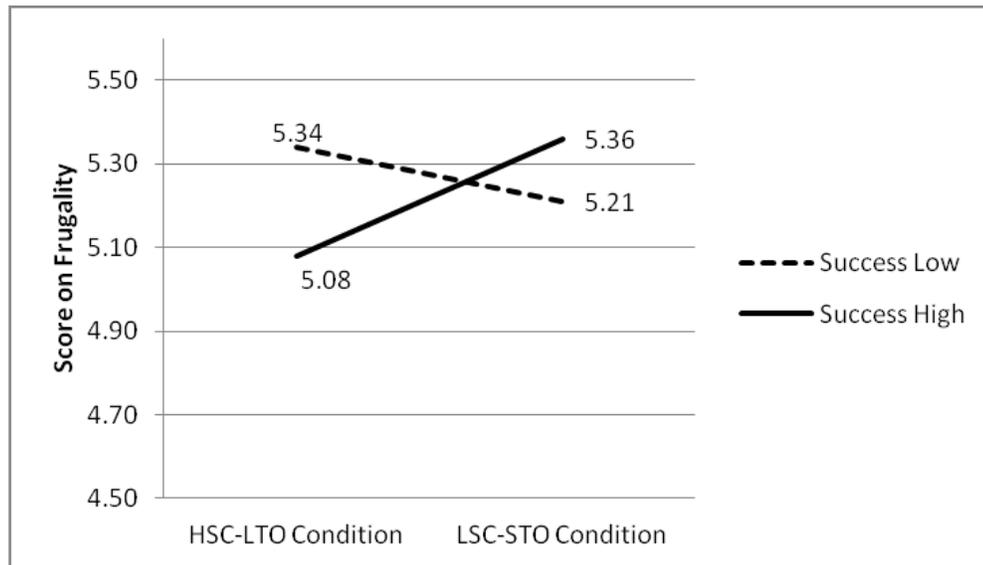
Figure 5.3: The scores on frugality of individuals who score high on happiness increase from the HSC-LTO condition to the LSC-STO condition



Visually, it would seem that the success dimension of materialism interacts with the moderators (see Figure 5.4). However, when the p. values are considered, this tendency is not confirmed. That is because the scores on frugality are not significantly different in any of the four conditions (p. values of paired comparisons ranged from $.29$ to $.94$). Finally, this suggests

that one's belief that possession signal success does not affect one's score on frugality. Thus, H2a unsupported.

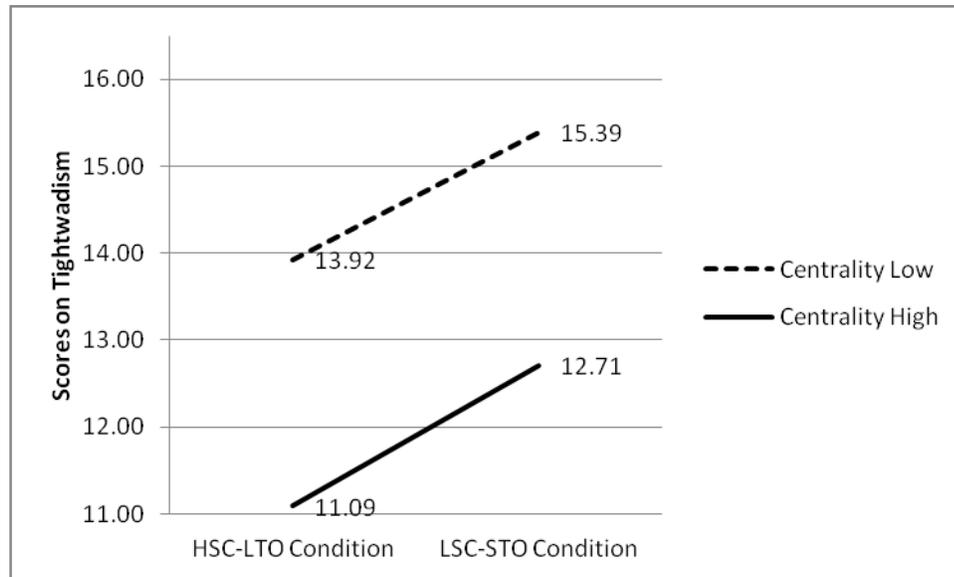
Figure 5.4: Success does not affect the scores on frugality



The same analysis performed with frugality is conducted for tightwadism. When looking at the effect of centrality, the results are similar to the obtained with frugality (see Figure 5.5). Participants in the LSC-STO condition who score low on centrality score significantly more on tightwadism than participants in the same condition who score high on centrality (15.39 vs. 12.71, $p=.02$). Similarly, participants in the HSC-LTO condition who score low on centrality score significantly more on tightwadism than participant in the same condition who score high on centrality (13.92 vs. 11.09, $p=.01$). However, participants who score low on centrality exposed to the HSC-LTO condition score higher, but not significantly, than participants who score high on centrality exposed to the LSC-STO condition (13.92 vs. 12.71, $p=.25$). Additionally, participants who score low on centrality (15.39 vs. 13.92, $p=.16$), and participants who score high on centrality (12.71 vs. 11.09, $p=.15$), do not score higher on tightwadism in the LSC-STO condition

than on the HSC-LTO condition. In sum, these results suggest that centrality has a stronger influence on the tightwadism scores than the experimental condition, supporting H3.

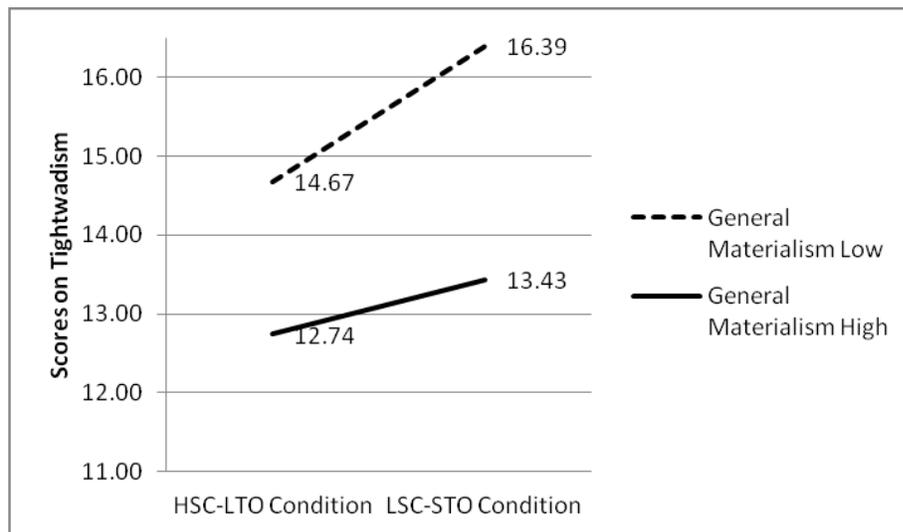
Figure 5.5: Centrality does not interact with self-control and long-term orientation for tightwadism



The scores on tightwadism are also more influenced by the general materialism score than by the manipulation (see Figure 5.6). Participants who score low on materialism exposed to the HSC-LTO condition have the second highest score on tightwadism. They score higher than materialistic participants exposed to the same condition (14.67 vs. 12.74, $p < .001$), and higher than materialistic participants exposed to the LSC-STO condition (14.67 vs. 13.43, $p < .01$). The highest score on tightwadism occurred for participants exposed to the LSC-STO condition who score low on general materialism. They scored more, though not significantly, than participants who score low in general materialism in the HSC-LTO condition (16.39 vs. 14.67, $p = .08$). The current results show a fundamental difference between frugality and tightwadism. The scores on frugality increase when high materialism combines with high self-control and long-term orientation. However, the scores on tightwadism are highest when low materialism (and not

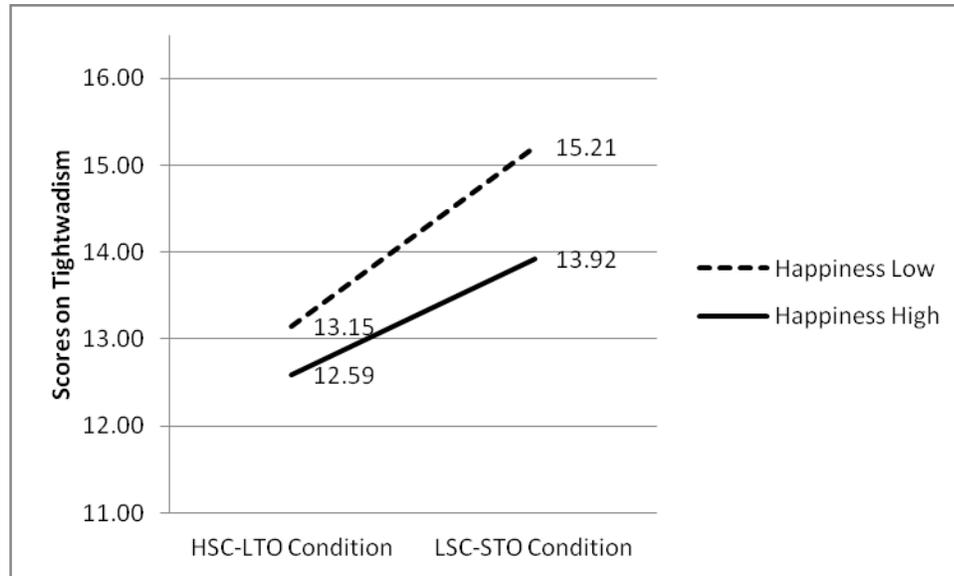
high materialism) combines with increased self-control and long-term orientation. This suggests that tightwadism answers to antimaterialistic appeals, while frugality answers to materialistic goals. In addition, it also points out that the findings with general materialism do not confirm H3. That is because the moderators interact with materialism, affecting the scores on tightwadism.

Figure 5.6: The scores on tightwadism are highest when participants who score low on materialism are exposed to the LSC-STO condition



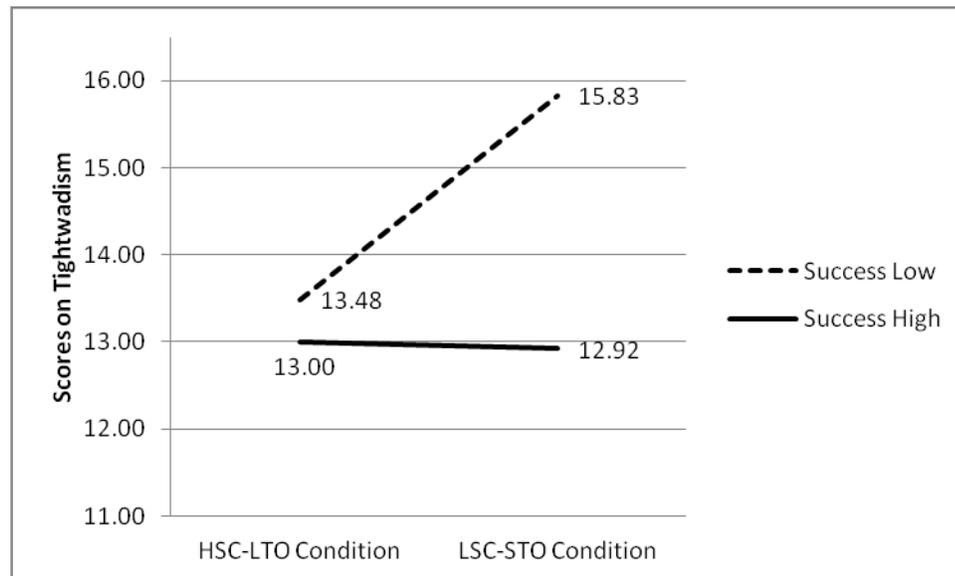
The paired comparisons for the happiness dimension of materialism shows only one significant difference between the cells (Figure 5.7). The scores on tightwadism for participants who score low on happiness and were exposed to the LSC-STO condition are significantly higher than the scores of participants who score high on happiness and were exposed to the HSC-LTO condition (15.21 vs. 12.59, $p=.03$). No scores in the remaining paired comparisons are statistically different. This points that the scores on tightwadism is higher (lower) when the LSC-STO (HSC-LTO) condition is combined with low (high) levels of happiness. Also important, this result suggests weak support for H3.

Figure 5.7: The scores on tightwadism are highest when participants who score low on happiness are exposed to the LSC-STO condition



The analysis with success also shows an interesting pattern (see Figure 5.8). Participants' scores on tightwadism are highest for those who score low on success exposed to the LSC-STO condition. Participants from this cell score higher on tightwadism than participants exposed to all other conditions (p values ranging from .01 to .04). The scores on tightwadism are unchanged by the manipulation (13.00 vs. 12.92, $p=.94$) for participants who score high on success. Finally, participants in the HSC-LTO condition who score low on success do not score higher on tightwadism than participants in the same condition who score high on success (13.48 vs. 13.00, $p=.69$), and participants exposed to the LSC-STO condition who score high on success (13.48 vs. 12.92, $p=.60$). Considering these results, one concludes that a person who has his self-control and long-term orientation increased might become a tightwad only if he does not believe that possessions signal success. In addition, this result does not support H3.

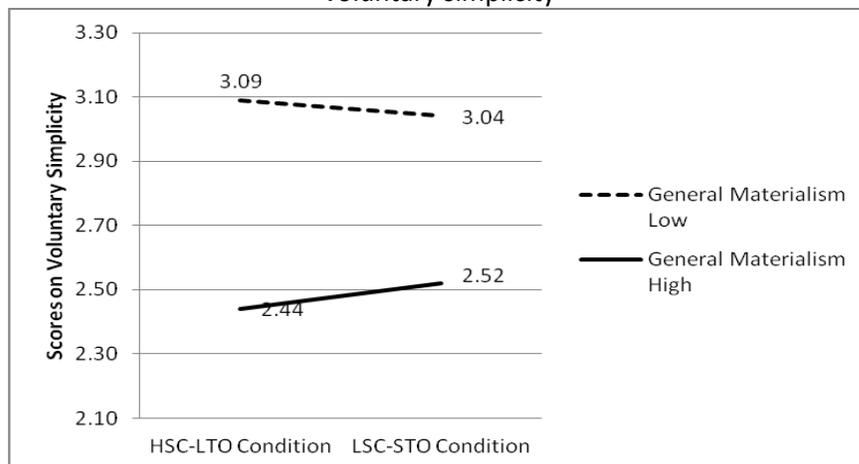
Figure 5.8: The scores on tightwadism is highest when participants who score low on success were exposed to the LSC-STO condition



Again, the same analysis is used, but this time having voluntary simplicity (VS) as the dependent variable. For all three dimensions of materialism and for general materialism, the score on VS is higher when participants score low on materialism than when they score high on materialism. For centrality, VS is highest when participants score low on centrality and are exposed to the LSC-STO condition. Participants in this cell have scores on VS significantly higher than participants who score high on centrality and who are exposed to the LSC-STO condition (3.26 vs. 2.18, $p < .001$), or to the HSC-LTO condition (3.26 vs. 2.37, $p < .001$). As expected, the moderators have no impact on VS scores, as participants in both experimental conditions who score low (3.26 vs. 3.03, $p = .21$) or high (2.37 vs. 2.18, $p = .23$) on centrality have similar scores on VS. An almost identical pattern of results is found for general materialism. The scores on VS are higher for participants who score low on materialism and lower for participants who score high on materialism, regardless of the manipulation. In addition, a similar pattern of results is found for success and happiness, with two exceptions. First, the scores on VS of participants who score low on success exposed to the HSC-LTO condition are not significantly higher than

participants who score high on success exposed to the same condition (2.91 vs. 2.58, $p=.10$). Second, the scores on VS of participants who score low on happiness in the LSC-STO condition are higher, but not significantly, than participants who score high on happiness exposed to the same condition (2.82 vs. 2.54, $p=.16$). These two exceptions have results that are marginally significant, and pointing to the same findings of the remaining comparisons. Therefore, one could be confident to claim that the scores on VS are determined by materialism alone. This conclusion supports H4. Given that the findings are similar across the dimensions of materialism, only the figure with the general score is presented (see Figure 5.9).

Figure 5.9: Materialism does not interact with self-control and long-term orientation for voluntary simplicity



5.3 - General Discussion

Due to the massive amount of data analyzed in Study 2, it is important to summarize the findings and conclusions. This section aims to clarify the differences between the three AC lifestyles studied in this thesis, and raise important questions for future studies. Three major conclusions can be driven from the present study. First, materialism plays a strong role for VS, whereas self-control and long-term orientation are less important. It was found that low scores

on materialism leads to higher scores on VS, regardless of the priming manipulation. This confirms H4 and the literature, which defines VS as an antimaterialistic consumer lifestyle, adopted by those who refuse to put up with the consumerism culture (Zavestoski 2002). It would be surprising to find highly materialistic individuals increasing their scores on VS after having self-control and time orientation manipulated. That is because adopting a lifestyle of simplicity is fundamentally opposed to materialism, and VS should not be used to answer to materialism motivations.

A second conclusion is reached from the analyses made with frugality. One could score high on frugality regardless of materialism, if one sees himself as long-term oriented and highly self-controlled. As discussed before, this result is encouraging for policy makers, as it shows an avenue of reducing consumption while not changing the cultural context in which consumers are inserted. If people are led to believe that they are highly self-controlled and long-term oriented, they might become more frugal to attend to their materialistic goals. For example, they might consume less to save money to pursue happiness by buying what they really want.

The third conclusion results from the analyses with tightwadism. The scores on tightwadism are highest for lowly materialistic participants who see themselves as highly self-controlled and long-term oriented. For tightwads, self-control and long-term orientation lead to less consumption when they are not materialistic. This shows a fundamental difference between tightwadism and frugality. While frugal consumers might use their self-discipline to attend to materialistic goals (of happiness), tightwads use the same discipline to answer to antimaterialistic ambitions.

Finally, the results show the differences between tightwadism and VS. As pointed before, the scores on tightwadism are highest when high self-control and long-term orientation is combined with low materialism. On the other hand, the scores on VS are highest when

materialism is low, regardless of self-control and time orientation. Therefore, while materialism plays a strong role on the scores of tightwadism, it is not nearly as strong as in VS. In other words, for tightwads it does not take only the denial of the materialistic culture, but also the discipline to follow this belief. This is an interesting conclusion that differs from the early hypothesis that assumes that self-control and time orientation would not interact with materialism to affect tightwadism (H3).

Study 1 and 2 provide important advances for the AC literature, showing how these lifestyles are fundamentally different. However, these studies are not definitive on themselves. First, Studies 1 and 2 analyze self-control and time orientation simultaneously. This was necessary to produce the maximum priming effect, and because if the two moderators were to be controlled individually, a much larger sample size would be necessary. Given that Studies 1 and 2 manipulate self-control and time orientation simultaneously, it is unclear which of the two moderators play a stronger role for each lifestyle. For example, it is unknown if highly materialistic individuals would score high on frugality if only time orientation was high. Therefore, it is necessary to include a study that accounts for the individual effect of each variable in the model.

A second important limitation of Studies 1 and 2 is sampling. These studies use university students, and one could argue that the findings would be different with other populations. Students might be tighter with money, because they are often financially dependent on their parents. Thus, they might be forced to reduce consumption because their parents might impose that on them. In consequence, some of the results found might be explained by a skewed distribution of the dependent variables (i.e. AC lifestyles). Curiously, one could also argue that students are more susceptible to impulsive buying (Wood 1998) or that AC lifestyles are more adopted by older individuals. In any way, it seems unsafe to guide

practitioners and policy makers based only on student samples, as some of the results might not be applicable for the general population. Therefore, this thesis should conduct studies looking at different sample profiles.

Still on the sampling issue, one could argue that participants nationality risk the generalizability of the results. Brazil, one of the countries examined at Study 3, has endured several economic crises, particularly during the eighties and nineties. In this period, inflation rates reached 80% a month (IBGE 2012), forcing individuals to become tight with money as a way to cope with the lack of resources. Ultimately, this might have influenced Brazilian culture, making it more favorable towards AC lifestyles. In sum, economic crises might affect the social norms of countries in a way that AC lifestyles become more (or less) socially accepted. Thus, the antecedents controlled in the current study might be less relevant for such countries.

There are extra reasons to conduct further studies testing the model. First, this allows the replication of the findings, something essential in empirical research. Also important, if a different research method is used, the replication is even more robust. Study 3 solves the limitations just pointed. The main goal of Study 3 is to replicate the findings of Study 2, by testing the model (see Figure 2.1) on samples of non-students and non-Canadians.

Chapter 6

STUDY 3: Generalizing the Results - Testing the model in Brazil, Canada, United States and India

We tested if the results obtained in Study 2 in a non-student sample from four countries: Canada, Brazil, United States and India. A few criteria were used to decide which countries to include. First, the countries needed to have major consumer markets to produce potential recommendations for practitioners and policy makers concerned with sustainability. Second, the ease of access to participants is an important criterion. In Brazil, an agreement with a financial institution facilitated the data collection with a representative sample of the bank's customers. Canada, USA and India were chosen because it was not complicated to conduct online surveys using Amazon's Mechanical Turk, a crowd-sourcing website. Third, as discussed in the previous chapter, to strengthen the reliability of the findings, the countries studied should represent different cultures. The next section will quickly review the literature to show how these four countries are culturally different and thus, offer potential interesting results.

6.1 – Cultural specificities of the selected countries

To understand if cultural differences might affect how self-control and long-term orientation affect the relation between materialism and AC lifestyles, it is important to show how these differences affect the antecedents (i.e. materialism, self-control and long-term orientation). Materialism is viewed differently from country to country. Comparing twelve countries, Ger and Belk (1996) conclude that USA scores the second highest on materialism, less than Romania, but more than India, France, Thailand, UK and other countries. Canadians score slightly higher than Chinese and Americans on materialism (Sirgy et al. 1998). India scores less

on materialism than USA (Ger and Belk 1996), which in turn scores less than Canada (Eastman et al. 1997; Sirgy et al. 1998). Though not directly compared with any of the pooled countries, Brazilians' scores on materialism (Garcia 2009) are similar to the ones obtained with Indians by Ger and Belk (1996). This brief review suggests that two of the pooled countries - USA and Canada - score high on materialism while Brazil and India score lower. These results suggest that two of the pooled countries - USA and Canada - score high on materialism while Brazil and India have the lowest scores.

In materialistic countries, individuals give a heavy importance to material goods, which in turn might impede the adoption of AC lifestyles. One could argue that when materialism is high, the negative correlation between AC lifestyles and materialism is stronger because individuals have a more radical stance towards consumption. They will feel more pressed to buy to attend to their materialistic goals, reducing their scores on AC lifestyles regardless of their own self-control or time orientation. On the other hand, one could defend the opposite. That is, self-control and time orientation will be even more important moderators when individuals are more materialistic, precisely because thinking on the long-term and being self-disciplined are important traits that assist on answering to materialistic ambitions satisfactorily. By revisiting H2a, H2b, H3 and H4 in countries with different levels of materialism, the present study tests these conflicting arguments. Will it be possible to identify a pattern in which the moderators play a stronger or weaker role according to the materialism scores?

AC lifestyles in under-developed countries might be highly influenced by poverty. In a poor country an individual might not adopt AC lifestyles because of the risk of signaling to others that he is from a lower social class. This argument is valid for any country. However, the social and economical differences between the rich and the poor are larger in less developed nations.

Therefore, adopting an AC lifestyle might produce a very negative signal in poor countries. On the other hand, in wealthier nations, one is less likely to portray a similar negative signal, because the difference between rich and poor is not so large. In short, they are less likely to be perceived as a member of a socially inferior group because he has reduced consumption. Because of the large difference between rich and poor, in under-developed countries, it might be more important to signal high status by buying, than to adopt an AC lifestyle and be seen as part of a socially inferior group. If this rationale is true, social norms might play a stronger role in poorer countries, which in turn reduces the relevance of materialism, self-control and time orientation (antecedents considered in this paper). Thus, if the model has a weak predictive power in Brazil and India, unaccounted variables, such as social norms, might have a more predictive power. On the other hand, if only materialism has a stronger or weaker effect, then this study will have successfully tested the conflicting arguments presented above.

The validity of the model has been justified, however specificity of the method and data collection requires special attention.

6.2 – Method

The same method of data collection is used with the samples from India, USA and Canada. In these countries, participants were recruited using Amazon's Mechanical Turk, an employer system website. Mechanical Turk, or "MTurk", is a crowd-sourcing website in which workers are assigned to micro-tasks and receive small sums of money for the tasks completed. MTurk is used to run experiments and surveys at low cost. It also provides a quick and effective response return. According to Paolacci, Chandler and Ipeirotis (2010), Americans and Indians are the majority of workers on MTurk. Most of the Americans workers are female. The average age

is 36 years old, and workers have higher educational level and lower income than the country's average (Paolacci, Chandler and Ipeirotis 2010). Interestingly, roughly 70% of American workers believe that MTurk is a fruitful way to spend their free time (Paolacci, Chandler and Ipeirotis 2010). On the other hand, most workers from India are males and younger than the average population. For more details about the demographics of MTurk's workers, please visit Ipeirotis (2010). Furthermore, MTurk's workers display the same heuristics and biases than respondents from traditional research sources (Goodman, Cryder and Cheema working paper; Paolacci, Chandler and Ipeirotis 2010), which qualifies them for testing the current model.

When using MTurk, the requester (i.e. the researcher) can define the workers' required location. One requirement for the present study is to ensure that participants are from one of the selected countries. Instructional manipulation checks are used (Oppenheimer, Meyvis and Davichenko 2009) to certify that participants paid attention to the survey. As suggested, fake items are included in the survey with instructions guiding participants to click only at an option at the bottom of the page. The layout on this fake section is identical to the remaining website. Workers who did not comply with the instruction were not paid and excluded from the final analyzes. Indian workers answered the survey in English. Participants who self-reported as having Intermediate, or lower, knowledge of English were not allowed to take part in the study. Finally, the following scales were used to measure each of the dimensions: frugality scale (Lastovicka et al. 1999); tightwad-spendthrift scale (Rick, Cryder and Loewenstein 2008); the voluntary simplicity scale adapted from Iwata (1997, 1999, 2006); Richins' (2004) measure of materialism; self-control scale (Tangney, Baumeister and Boone 2004); and long-term orientation measure (Bearden, Money and Nevins 2006). The American sample (n= 299) was obtained after seven days whereas Canadian (n= 85) took 21 days and the Indian sample (n=

300) was completed in two days. Time constraints limited the chance of getting more Canadian participants.

In Brazil, an adapted version of the scales was used when available. Materialism was measured with Richins' (2004) scale, adapted by Garcia (2009). Frugality was measured with Lastovicka's et al (1999) scale translated by Castilhos and Petersen-Wagner (2009). When there was no adapted version of the measure, the scale was back-translated to Portuguese. This resulted on the translation of the following scales: tightwad-spendthrift scale (Rick, Cryder and Loewenstein 2008); the adapted version of the voluntary simplicity scale (Iwata 1997, 1999, 2006); self-control scale (Tangney, Baumeister and Boone 2004); and long-term orientation measure (Bearden, Money and Nevins 2006).

For the data collection, the author of this thesis made a partnership with a Brazilian financial institution. In return, the results were presented firsthand to the institution, providing guidelines for the application of the findings with their customer base. The financial institution supported the data collection with their customers, recruiting 502 participants. To increase customer participation, the company raffled an Ipad2. As in the data collection of the remaining countries, a translated version of an instructional manipulation check was used (Oppenheimer, Meyvis and Davichenko 2009). Participants who failed this test were excluded (n= 45, or roughly 9%). All subjects had bank accounts in Cuiaba, the capital of the state of Mato Grosso, in one of the major rural areas in Brazil. Table 6.1 details the monthly income range of the sample. Over 50% of participants made between \$541 and \$2162 a month. Also a substantial percentage of the sample (26.5%) makes less than \$540 dollars a month, or less than \$2 a day.

Table 6.1: Monthly income of the Brazilian sample

	Monthly Income Range*	Percentage
Low Income	Below R\$1,000 (roughly \$540)	26.5%
Average Income	Between R\$1,000 and 4,000 (roughly from \$541 to \$2,162)	51.0%
High Income	From R\$4,000 to 10,000 (roughly from \$2,163 to \$5,400)	14.9%
Supreme	Above R\$10,000 (above roughly \$5,401)	7.6%

* Income calculated with \$1 US dollar equal to R\$1,85 Brazilian reais

The demographics of the participants in the five countries show the following key points (Table 6.2). First, participants from Brazil are much older than the remaining countries. They also have much lower educational level. These differences are probably because of the sampling method, which ensured a better representativeness in Brazil. Mostly male participants with disproportionately high educational level compose the Indian sample. This is probably because women have less access to computers in the country (Ipeirotis 2010), and because it was required that participants were fluent in English.

Table 6.2: Descriptive data of the countries studied

	Brazil (n=457)	Canada (n=85)	USA (n=299)	India (n=300)
Age*	43.23 (14.75)	29.75 (10.95)	33.39 (12.38)	28.78 (7.95)
Sex	Male = 56.9%	Male = 57.6%	Male = 46.2%	Male = 69.3%
Self-control*	5.14 (.98) α.80	3.91 (.96) α. 86	4.36 (1.07) α.88	4.70 (1.39) α. 89
Long-term Orientation*	5.15 (1.43) α.86	5.11 (1.23) α. 87	5.21 (1.23) α. 87	5.57 (1.11) α. 77
Materialism: Centrality*	2.58 (.77) α.71	2.80 (.93) α. 78	4.03 (1.14) α. 70	2.98 (.88) α. 69
Materialism: Happiness*	3.06 (.79) α.72	2.89 (.97) α. 85	3.02 (.88) α.83	3.37 (1.02) α. 83
Materialism: Success*	2.83 (.83) α. 73	2.67 (.86) α. 81	2.63 (.86) α. 83	3.37 (.85) α. 77
Materialism: General Score*	2.79 (.59) α.79	2.80 (.73) α. 89	2.84 (.70) α. 89	3.17 (.66) α. 84
Voluntary Simplicity*	3.21 (.70) α.79	3.33 (.70) α. 85	3.42 (.62) α. 82	3.81 (.66) α. 81
Tightwadism*	15.70 (4.26) α.55	16.19 (4.53) α. 78	16.82 (4.80) α. 78	14.21 (3.39) α. 43
Frugality*	5.07 (1.27) α. 89	5.59 (.95) α. 83	5.70 (1.02) α.90	5.67 (.93) α. 85
Education				
Graduate Level	8.3%	5.9%	12.7%	51%
Complete Undergraduate	25.4%	35.3%	35.5%	38%
Incomplete Undergraduate	9.2%	35.3%	26.1%	8.7%
Complete High School	29.8%	18.8%	10.4%	1.3%
Incomplete High School	9.0%	1.2%	10%	-
Complete Elementary School	8.3%	2.4%	4.7%	1%
Incomplete Elementary School	10.1%	1.2%	.7%	-

*In parenthesis follows the standard deviation of the average. The Cronbach's alpha is in the line below

6.3 – Results and Discussion - Brazil

Several analyzes are performed with 457 Brazilian participants and, in particular, how the scores on AC lifestyles (i.e. frugality, voluntary simplicity and tightwadism) are impacted by: each materialism dimension; self-control; time orientation; the interaction of self-control with each materialism dimension; and the interaction of time orientation with each materialism dimension. These analyses allowed a further assessment of H2a, H2b, H3 and H4 in a Brazilian sample.

Frugality

The results of the analyses having frugality as the dependent variable are summarized in Table 6.3. The Adjusted R Square is quite high, reaching .538. Confirming Study 1 and 2, long-term orientation ($\beta = .398, p < .001$) and self-control ($\beta = .301, p < .001$) correlate positively with the scores on frugality. The centrality dimension correlates negatively with frugality ($\beta = -.185, p < .001$). However, the happiness dimension of materialism correlates positively with frugality ($\beta = .121, p = .005$). This last result suggests that happiness co-exists with AC lifestyles in less materialistic countries. The direct correlation shows that in Brazil one does not need to be highly disciplined or long-term oriented to reconcile materialistic goals with a frugal life. Brazilians save money to attend to materialistic ambitions, regardless of their scores on self-control and time orientation. The interaction between self-control and the happiness dimension is significant ($\beta = -.097, p = .05$) (Table 6.3).

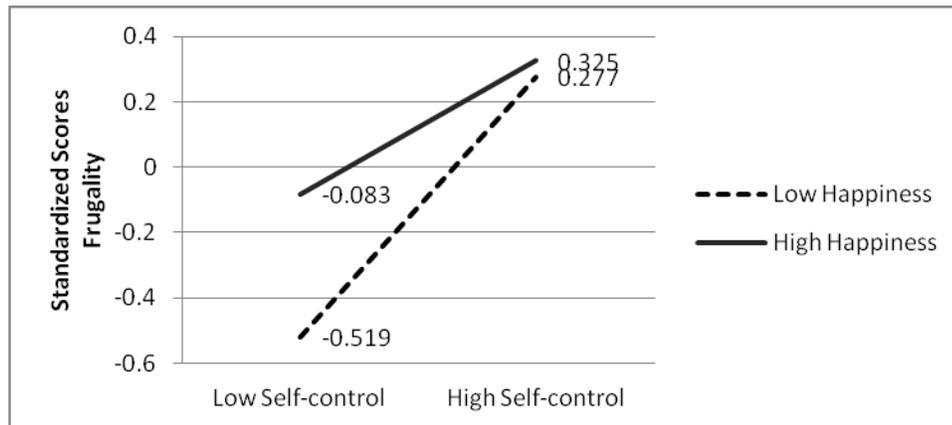
Table 6.3: In Brazil, frugality correlates positively with long-term orientation, self-control and happiness, but negatively with centrality

Variable Name	Standardized Beta	Sig.
(Constant)		.002
Long-term Orientation	.398	<.001
Happiness	.121	.005
Centrality	-.185	<.001
Success	.027	.56
Self-control	.301	<.001
Interaction: Centrality and Self-control	-.021	.62
Interaction: Success and Self-control	.040	.48
Interaction: Happiness and Self-control	-.097	.05
Interaction: Happiness and Long-term Orientation	-.024	.65
Interaction: Success and Long-term Orientation	-.042	.48
Interaction: Centrality and Long-term Orientation	.080	.05

Dependent Variable is Frugality

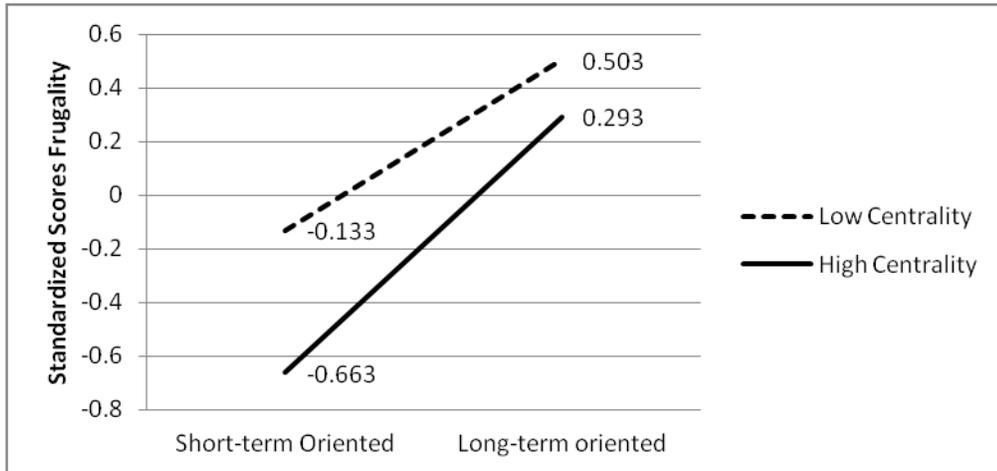
When happiness is high, self-control correlates positively with frugality (please refer to Figure 6.1). However, self-control correlates even more positively with frugality when happiness is low. These results differ from Study 2. In Study 2, self-control and time orientation had a stronger impact on frugality when happiness was high. On the other hand, with Brazilians, self-control has a stronger impact on frugality when happiness is low. Nonetheless, in both studies the frugality scores are higher when participants score high on self-control (and long-term orientation as well in the LSC-STO condition) and high on happiness, which partially confirms H2b. This stresses that highly materialistic individuals adopt frugality to answer to materialistic goals.

Figure 6.1: In Brazil, when happiness is low, self-control correlates more positively with frugality



The interaction between time orientation and centrality is also significant ($\beta = .080$, $p = .05$). When centrality is low, long-term orientation leads to higher scores in frugality. However, long-term orientation has an even stronger positive impact on frugality, when centrality is high. The interaction between these two factors shows that frugality is higher for long-term oriented individuals who do not believe that possessions are a central goal in their lives. Conversely, the scores on frugality are lower for short-term oriented individuals who believe that buying possessions is a central goal in their lives. This finding is particularly interesting because it partially confirms a result obtained in Study 2. In Study 2, frugality is highest for participants who scored low on centrality and are exposed to the LSC-STO condition, whereas it is lowest for participants who score high on centrality and are exposed to the HSC-LTO condition. Study 3 not only confirms these findings, but also suggests that long-term orientation plays a stronger role in Brazil, as no interaction was found between self-control and centrality.

Figure 6.2: In Brazil, when centrality is high, long-term orientation correlates more positively with frugality



As in Study 2, H2a was not confirmed. In Brazil, success does not affect the scores on frugality either directly or indirectly. This shows that Brazilians motivated to signal success do not discipline their impulses to signal success with unique goods on the long-term.

Voluntary Simplicity

The results of the analyses that have voluntary simplicity (VS) as the dependent variable are summarized in Table 6.4. The Adjusted R-Square reached .316. Long-term orientation ($\beta = .240, p < .001$) correlates positively with VS whereas centrality correlates negatively ($\beta = -.343, p < .001$). Interestingly, success correlates positively to VS ($\beta = .119, p = .03$), showing that, in Brazil, a materialistic dimension correlates positively with an AC lifestyle that is antimaterialistic by definition. This result is very surprising. VS is a consumer lifestyle adopted by consumers who refuse materialistic appeals. One might wonder what explains this result with Brazilian participants. A possible explanation refers to how success is perceived. In highly materialistic cultures, the purchase of high status items functions as an honest signal of success, as only rich

individuals may afford such luxury. However, in lowly materialistic countries, the purchase of such items might be perceived as a signal of arrogance and vanity, as fewer people are willing to appreciate such signal. To avoid being interpreted negatively, signaling success in lowly materialistic cultures might occur also by adopting a simple lifestyle. In this case, one would be making the following statement: “I’m so successful in my life, that despite being able to afford the fanciest car, I opt to live a simple life and not flaunt too much”. The analyses with Indians, Americans and Canadians will test if this finding is specific for the Brazilian culture. Nevertheless, policy makers should note this result, as it shows large openness to AC lifestyles in Brazil, given that even materialistic individuals would adopt such lifestyles.

Table 6.4: In Brazil, voluntary simplicity correlates positively with long-term orientation and success, but negatively with centrality

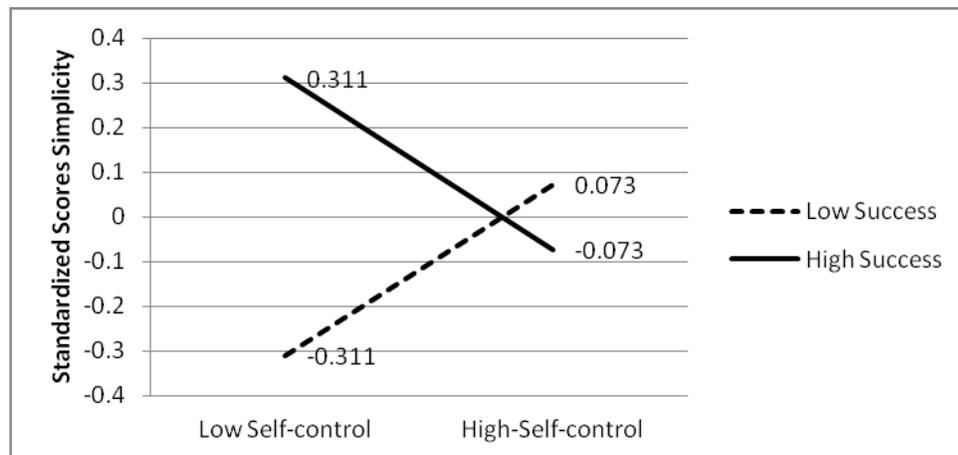
Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.240	<.001
Happiness	-.041	.43
Centrality	-.343	<.001
Success	.119	.03
Self-control	.084	.14
Interaction: Centrality and Self-control	-.078	.14
Interaction: Success and Self-control	-.192	.005
Interaction: Happiness and Self-control	.118	.05
Interaction: Happiness and Long-term Orientation	-.021	.74
Interaction: Success and Long-term Orientation	.020	.78
Interaction: Centrality and Long-term Orientation	-.044	.37

Dependent Variable is Voluntary Simplicity

The interaction between self-control and success is significant ($\beta = -.192$, $p < .01$). When success is high, self-control correlates negatively with VS (see Figure 6.3). However, when success is low, self-control correlates positively with VS. In addition, the scores on VS are highest

for participants who score low in self-control and high in success. Curiously, the scores on VS are lowest for participants who score low in self-control and in success. This interaction provides additional and interesting information about the effect of success on VS. For Brazilians at least, the true success does not lie in being disciplined to save money and buy the perfect car (or house, or any other product). In the Brazilian culture, one can believe that possessions signal success, while being modest about it and living a simple consumer lifestyle. Contrary to Study 2, this result does not confirm H4. In Study 2, self-control and long-term orientation do not moderate the relation between success and VS. However, with Brazilians, self-control interacts with success, influencing the scores on VS.

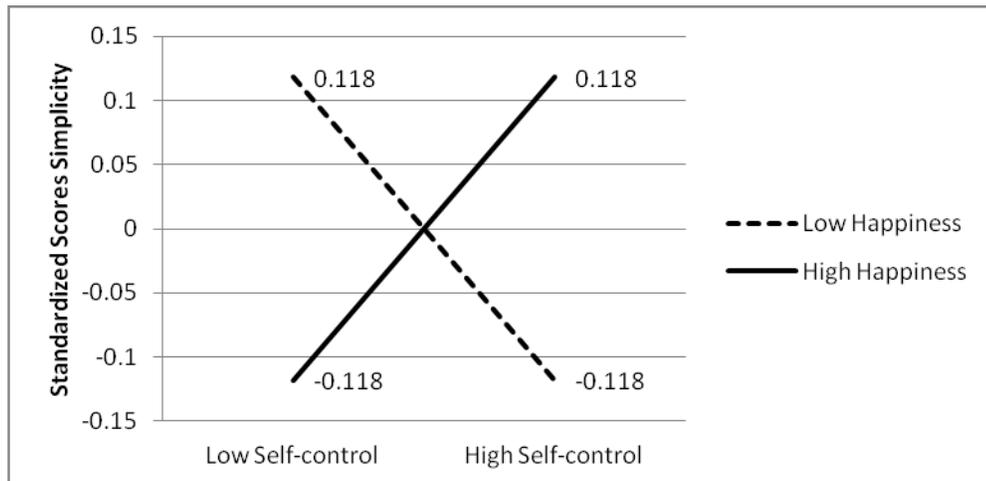
Figure 6.3: In Brazil, self-control correlates positively with voluntary simplicity when success is low, but negatively when success is high



The interaction between happiness and self-control is also significant ($\beta = .118$, $p = .05$). When happiness is high, self-control correlates positively with VS (see Figure 6.4). Interestingly, when happiness is low, self-control correlates negatively with VS. In addition, VS is highest when happiness and self-control are high, or when happiness and self-control are low. This interaction supports the idea that those who score high on materialism can adopt AC lifestyles. In Brazil, a

disciplined individual, who believes that possessions are a source of happiness, scores high on VS. A somewhat similar result was found in Study 2 and 3 with frugality, but not with VS. Interestingly, one also scores high on VS if one does not believe that possessions are a source of happiness, so long as one scores low on self-control. In this case, individuals are adopting a simple lifestyle because they are detached from the happiness that material possessions could provide and the discipline necessary to save resources. In other words, such individuals are relaxed towards consuming, thus adopting a simple lifestyle.

Figure 6.4: In Brazil, self-control correlates positively with voluntary simplicity when happiness is high, but negatively when success is low



Tightwadism

The results of the analyses having tightwadism as the dependent variable are summarized in Table 6.5. The Adjusted R-Square in tightwadism is equal to .287. Confirming Study 1 and Study 2, long-term orientation ($\beta = .162, p < .01$) and self-control ($\beta = .139, p = .02$) correlate positively with tightwadism. Also as expected, happiness ($\beta = -.181, p = .001$) and centrality ($\beta = -.304, p < .001$) correlate negatively with the scores on tightwadism. Surprisingly, as with VS, success correlates positively with the scores on tightwadism ($\beta = .105, p = .05$). This

finding reinforces the argument that the use of possessions to signal success is different in Brazil. In this South American country, to avoid being interpreted as too pretentious and arrogant, individuals might see the adoption of a lifestyle that reduces consumption as an honest signal of success. As discussed above, the statement that one makes is: “I have access to resources, but I opt to avoid buying, to not insult others”. Note that this logic makes more sense in collectivists’ cultures, such as Brazil and India, because in such countries individuals are pressed to preserve the group harmony (Bond, Leung and Wan 1982).

Table 6.5: In Brazil, tightwadism correlates positively with long-term orientation, self-control and success, but negatively with centrality and happiness

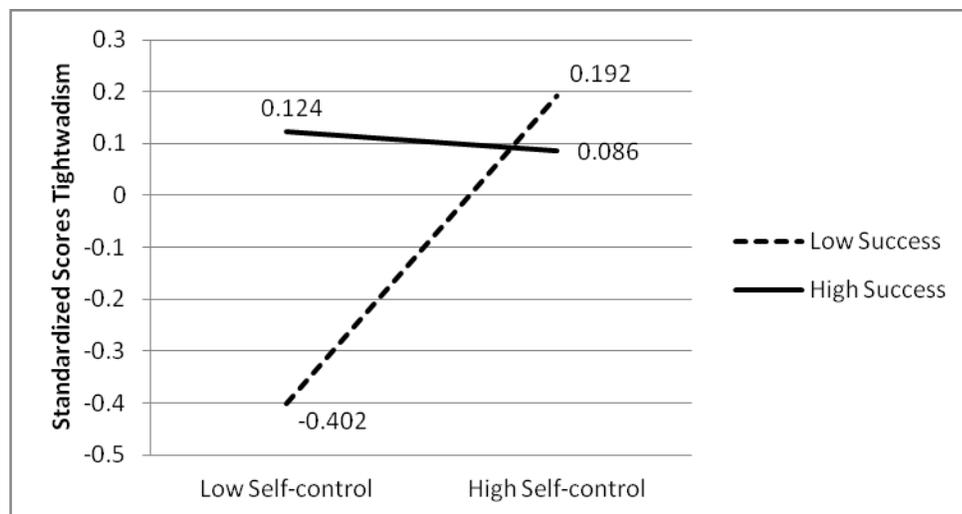
Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.162	.002
Happiness	-.181	.001
Centrality	-.304	<.001
Success	.105	.05
Self-control	.139	.02
Interaction: Centrality and Self-control	-.038	.47
Interaction: Success and Self-control	-.158	.02
Interaction: Happiness and Self-control	.162	.01
Interaction: Happiness and Long-term Orientation	-.038	.55
Interaction: Success and Long-term Orientation	.083	.26
Interaction: Centrality and Long-term Orientation	-.062	.22

Dependent Variable is Tightwadism

The interaction between success and self-control is significant ($\beta = -.158$, $p = .02$). When success is low, self-control correlates positively with tightwadism (see Figure 6.5). However, a slightly negative correlation exists between self-control and tightwadism when success is high. In addition, this interaction shows that the scores on tightwadism are lowest for participants

who score low on self-control and success. Even though success affects tightwadism positively, the scores on tightwadism are high for individuals who score low on success, if these individuals are highly disciplined. This finding suggests that self-control has a stronger effect than success on the scores of tightwadism. Nonetheless, given that the scores on tightwadism are lowest for individuals who score low on self-control and success, when both constructs are low, participants tend to be much less tight with money.

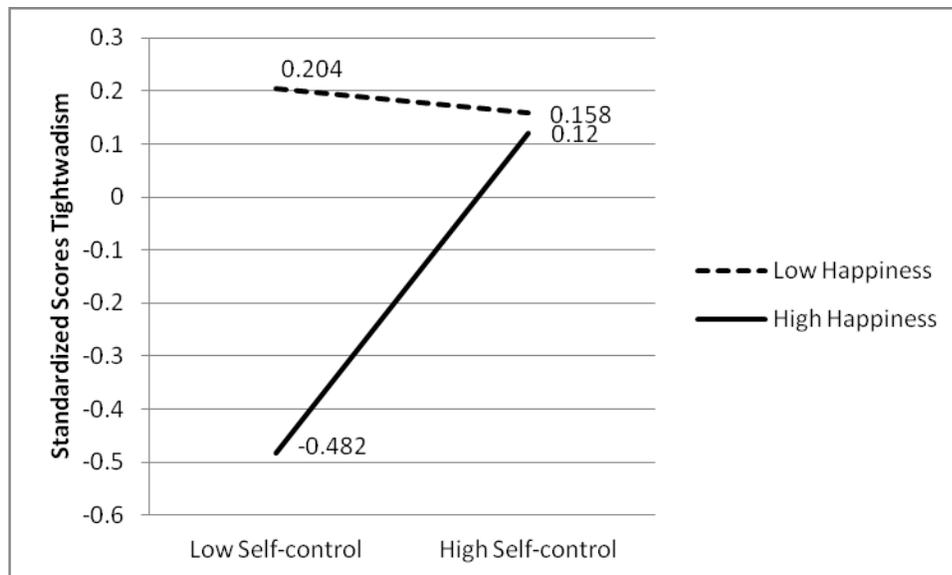
Figure 6.5: In Brazil, self-control correlates positively with tightwadism when success is low



The results also show an interaction between happiness and self-control ($\beta = .162$, $p = .01$). When happiness is low, a slightly negative correlation exists between self-control and tightwadism (see Figure 6.6). However, self-control correlates positively with tightwadism when happiness is high. In addition, the results suggest that the scores on tightwadism are lowest when self-control and happiness are low. Self-control correlates negatively with the score on tightwadism, while happiness correlates negatively as well. When both conditions are combined, the score on tightwadism is even lower. However, highly self-controlled individuals score high on tightwadism regardless of their scores on happiness. This result is similar to what was found with frugality in Study 2. In other words, an individual might become tight with

money to attend to materialistic goals providing that he is disciplined enough to save his resources. As discussed before, this finding has interesting application for practitioners and policy makers (please refer to the end of the chapter 5 for the discussion). In addition, one should note that, in the Brazilian sample, tightwadism and frugality are more similar than in the Canadian sample used in Study 2. Brazilians use both lifestyles as a strategy to save resources to attend to materialistic goals.

Figure 6.6: In Brazil, self-control correlates positively with tightwadism when happiness is high



6.4 – Concluding Remarks: Brazil

The sample of Brazilians provided quite different results from studies 1 and 2. Differently from the first two studies, all AC lifestyles in Brazil correlate to at least one materialism dimension. In time, frugality correlates positively with happiness, while tightwadism and VS correlates positively with success. At least in Brazil, results indicate one saves resources and prevent spending despite being highly materialistic, and regardless of one’s scores on self-control and time orientation. In Canada, a similar trend occurred only with frugality, and only

when time orientation and self-control were manipulated. If this trend is confirmed in India, one can infer that, in poorer countries, consumption desires are sought by the adoption of AC lifestyles. In other words, consumers prevent spending to answer to materialistic appeals.

All AC lifestyles can be used to attend to the materialistic goals raises the question of whether Brazilians perceive the lifestyles differently. However, what distinguish the three AC lifestyles in Brazil are the materialistic dimensions that correlate positively to each one, and how the moderators interact differently with materialism to impact the scores on each AC lifestyle. In Study 2, materialism leads to higher scores only for frugality, and only when self-control and time orientation are manipulated. The analyses with the other countries will provide a bigger picture and point out how culture might be affecting this trend.

Self-control and time orientation play a different role in the Brazilian sample, but only for VS. In studies 2 and 3, self-control and time orientation led to higher scores on frugality and tightwadism. Curiously, in the Brazilian sample, VS correlates positively with time orientation, whereas in Study 2 with Canadians this dimension does not affect the scores on VS. It remains to be seen if this dissimilarity occurs due to differences in the method, or if it is the result of cultural differences. Nonetheless, given that success correlates positively with VS in Brazil, it seems that VS is not an inherently antimaterialistic lifestyle in the South American country. One needs to be long-term oriented to prevent spending and focus on buying something in the future that is an honest signal of success.

The interaction between happiness and self-control shows that tightwadism is a consumer lifestyle avoided by materialistic individuals who are not self-controlled enough to save money. On the other hand, the interaction between success and self-control shows that non-materialistic individuals who score low on self-control also avoid tightwadism. These seemly

contradicting results reinforce the importance of studying the dimensions of materialism separately, as different insights and findings are generated when the specifics are measured. In sum, these results show that tightwadism represents a lifestyle of antimaterialistic individuals, as well as it is a lifestyle for individuals who save resources to answer to materialistic goals. A similar trend was found with frugality. Frugality is avoided by individuals who score high in centrality and low on time orientation; and by individuals who score low on self-control and low on happiness. In other words, frugality is a lifestyle that answers to materialistic ambitions, expressed by the happiness dimension, and antimaterialistic ambition defined by the centrality dimension.

Other possible explanation for the current results in Brazil is social-desirability bias. However, because participants answered the survey individually, and considering that the confidentiality was guaranteed, there is no reason to believe that they would be socially pressed to answer the survey in any given way. In addition, the research topic is not intrusive or highly personal, which reduces the possible impact of social desirability.

Finally, it was argued that economical and political upheaval make AC lifestyles be seen negatively in Brazil, increasing the importance of social norms (a variable not controlled in this study), and reducing the relevance of the model. Contrarily to this expectation, materialism, self-control and time orientation interact more often in the Brazilian sample than in the Canadian sample used in Study 2. For example, the moderators were irrelevant for VS in Study 2, whereas they played an important role with Brazilians. The analyses with the remaining countries will confirm this result or show if it is the result of a difference in the operationalization of the study and its methodology.

6.5 – Results and Discussion – Canada

Following the method used with the Brazilian sample, regression analyses are performed with the answers of the 85 Canadian participants. In these analyses, the AC lifestyles are considered as dependent variables. The following variables are included as independent variables in the regression: self-control; time orientation; each materialism dimension; the interaction between self-control and each materialism dimension; and the interaction between time orientation and each materialism dimension.

Frugality

When frugality is inserted as a dependent variable, the Adjusted R-Square obtained is equal to .355 (see Table 6.6 for the summary of the results). The findings obtained with the general population are very different from the Canadian student sample. First, self-control and long-term orientation do not directly affect the scores on frugality. In addition, success correlates strongly and negatively with frugality ($\beta = -.412$, $p = .001$). These results suggest that adopting a frugal lifestyle does not require self-control, or long-term thinking. For non-student Canadians, the scores on frugality are determined mostly by one's belief that the possessions signal success. In other words, individuals who do not think that possessions signal success tend to adopt a frugal lifestyle.

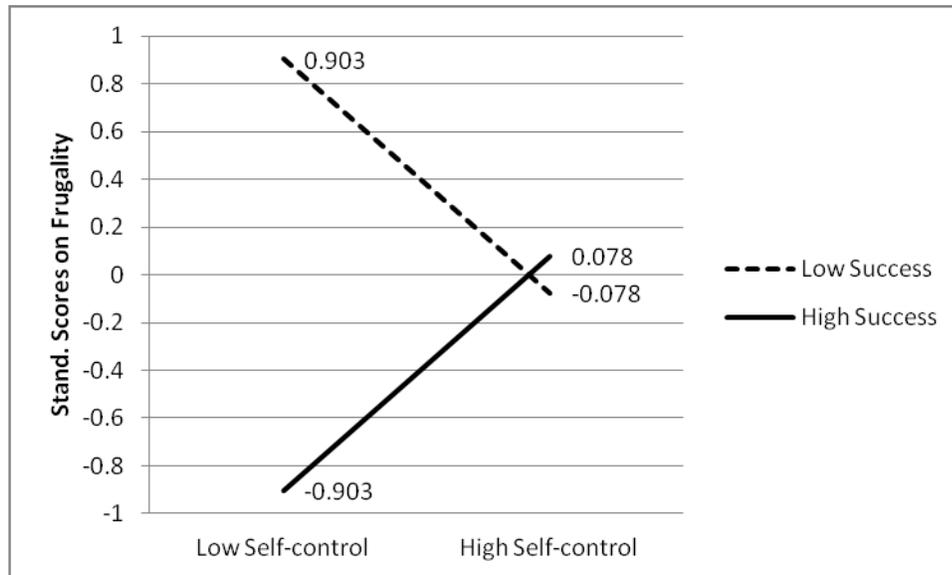
Table 6.6: In Canada, only success and interaction terms affect the scores on frugality

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.051	.67
Happiness	.070	.56
Centrality	-.163	.19
Success	-.412	.001
Self-control	.087	.45
Interaction: Centrality and Self-control	-.070	.68
Interaction: Success and Self-control	.491	.005
Interaction: Happiness and Self-control	-.403	.03
Interaction: Happiness and Long-term Orientation	.223	.22
Interaction: Success and Long-term Orientation	-.322	.09
Interaction: Centrality and Long-term Orientation	.169	.26

Dependent Variable is Frugality

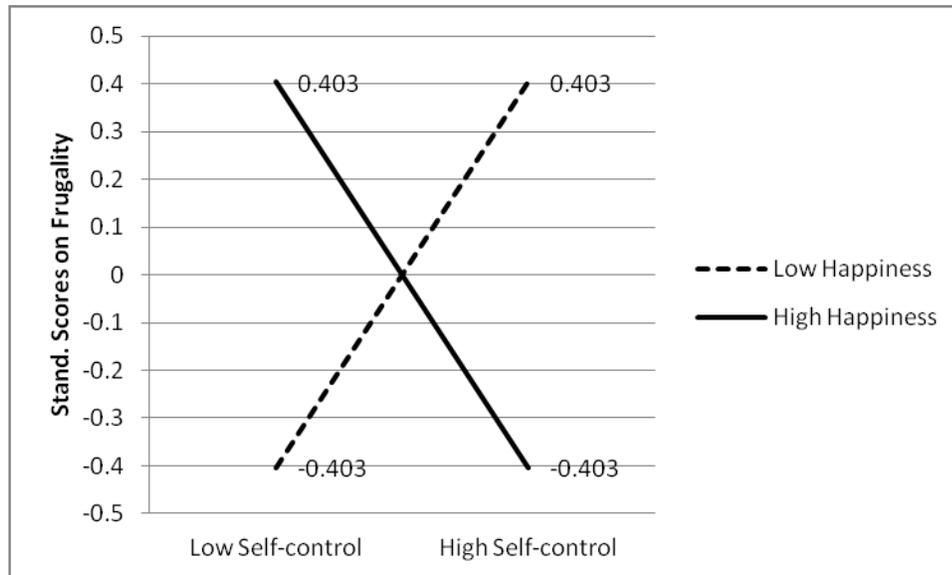
Two interaction terms significantly affected the scores on frugality, but again differently from Study 2. The first interaction is the one between success and self-control ($\beta = .491, p = .005$). When participants score low on success, self-control correlates negatively with frugality (see Figure 6.7). However, self-control correlates positively with frugality when participants score high on success. Frugality scores increase for disciplined and materialistic participants, supporting H2a. However, the scores on frugality are highest for participants who are not self-controlled and who score low on success. This result does not replicate Study 2, but it supports a finding obtained with Brazilian participants. In the latter analysis, low scores on happiness and self-control lead to higher scores on tightwadism. As argued, that resulted from a relaxed posture towards material goods (i.e. low scores on happiness and self-control), which leads one to reduce consumption.

Figure 6.7: In Canada, self-control correlates negatively with frugality when success is low, but it correlates positively with frugality when success is high



The second interaction term to affect significantly the scores on frugality is between self-control and happiness ($\beta = -.403, p = .03$), differing with Study 2 (see Figure 6.8). Self-control correlates positively with frugality when participants score low on happiness, whereas it correlates negatively with frugality when participants score high on happiness. This result shows that participants adopt frugality to attend to materialistic goals, in this case happiness, but in a different manner. If the participant believes that possessions are a source of happiness, surprisingly self-discipline prevents participants from saving. In other words, an undisciplined person will save resources if he believes that possessions will make him happier. This result contrasts with Brazilians and Canadian respondents (students), who are disciplined to reduce consumption while attending to materialistic ambitions. In addition, it provides no support for H2b.

Figure 6.8: In Canada, self-control correlates negatively with frugality when happiness is high, but it correlates positively with frugality when happiness is low



Tightwadism

The analysis conducted using tightwadism as the dependent variable provides an Adjusted R-Square equal to .351. As with frugality, these results are discrepant from what was obtained with Brazilians and Canadian students. The only similarity is the negative correlation between the centrality dimension of materialism and tightwadism ($\beta = -.478, p < .001$). As expected, if one believes that buying possessions is a central goal, one is less likely to reduce consumption. As it occurred with frugality, the scores on tightwadism do not correlate significantly with long-term orientation ($\beta = -.055, p = .65$) or self-control ($\beta = .115, p = .32$), contradicting what was found in Studies 1 and 2, and the Brazilian data. This difference suggests that, in this sample, materialism - represented by centrality - has a stronger impact on tightwadism than self-control and time orientation (see Table 6.7 for the summary of the results).

Table 6.7: In Canada, only centrality and the interaction terms affect the scores on tightwadism

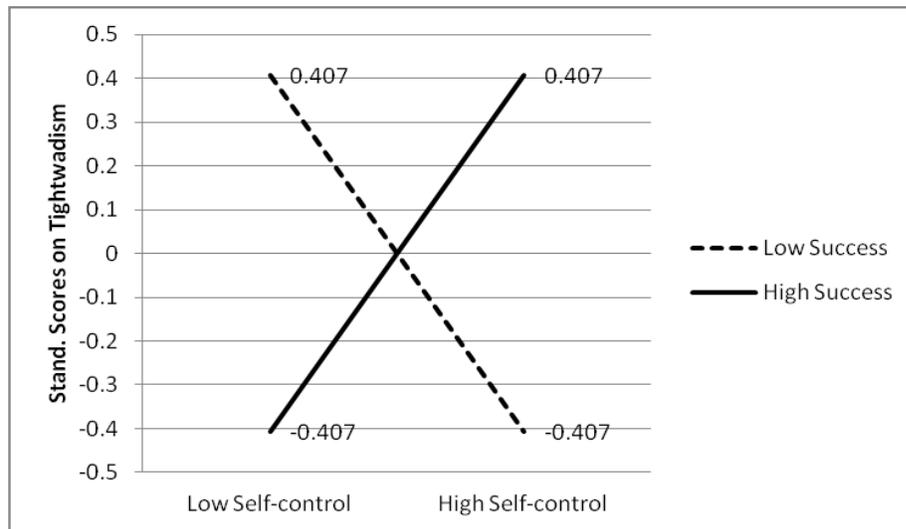
Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	-.055	.65
Happiness	.053	.65
Centrality	-.478	<.001
Success	-.113	.36
Self-control	.115	.32
Interaction: Centrality and Self-control	.100	.56
Interaction: Success and Self-control	.407	.02
Interaction: Happiness and Self-control	-.515	.007
Interaction: Happiness and Long-term Orientation	.599	.001
Interaction: Success and Long-term Orientation	-.289	.13
Interaction: Centrality and Long-term Orientation	-.221	.15

Dependent Variable is Tightwadism

Three interaction terms are found to influence the scores on tightwadism significantly. Given that the interaction terms have a strong effect on the scores on tightwadism, H3 is not supported in Canadians non-student sample. The first interaction found to affect tightwadism significantly is the one between success and self-control ($\beta = .407$, $p = .02$). As showed in Figure 6.9, self-control correlates positively with tightwadism when participants score high on success. However, when participants score low on success, self-control correlates negatively with tightwadism. Some participants are tightwads because they have a relaxed posture towards possessions, as they score low on success and self-control. These participants seem less preoccupied with controlling impulses or signaling success through possessions, thus they save resources more naturally. In addition, highly self-controlled individuals become tightwads to attend to materialistic goals (represented here by success). Similar findings are observed with the Brazilian sample, but they are different from Canadian students. In the latter sample, the

scores on frugality, and not tightwadism, were higher for disciplined and materialistic individuals.

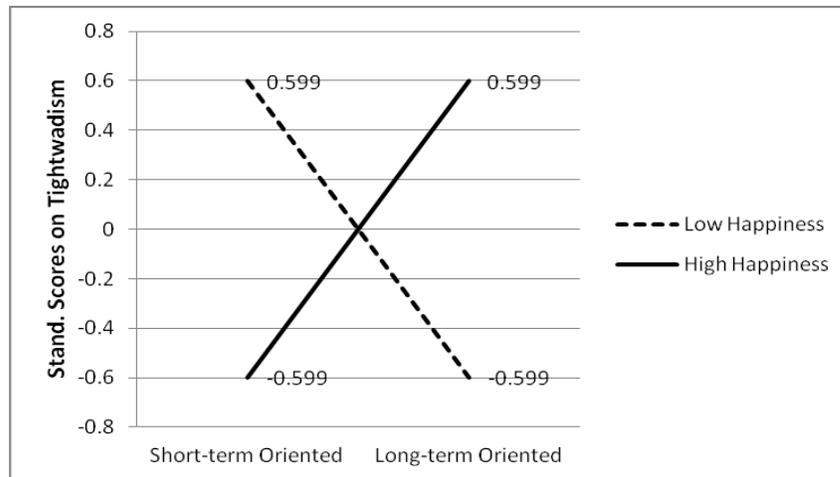
Figure 6.9: In Canada, self-control correlates positively with tightwadism when success is high, correlates negatively with tightwadism when success is low



Though tightwadism correlates negatively with materialism, the interaction between happiness and long-term orientation ($\beta = .599, p = .001$) also shows that disciplined individuals become tightwads to answer to materialistic goals. As in Figure 6.10, when participants score high on happiness, long-term orientation correlates positively with tightwadism. However, when participants score low on happiness, short-term orientation correlates negatively with tightwadism. Two factors are increasing the scores on tightwadism. First, a person who is short-term oriented and does not believe that possessions are a source of happiness will have higher scores on tightwadism. This individual does not need to think long-term to save, as he is not tempted by materialistic ambitions. This relaxed posture towards the future and with possessions makes them save naturally. A second combination that increases the scores on tightwadism is high scores on long-term orientation and high scores on happiness. In this case, participants are consuming less to buy, in the future, goods that will make them happier. In

other words, they are tight with money to attend to materialistic goals in the future. This result is similar to what was found with the scores of frugality of Canadian students, and the scores of tightwadism of Brazilians.

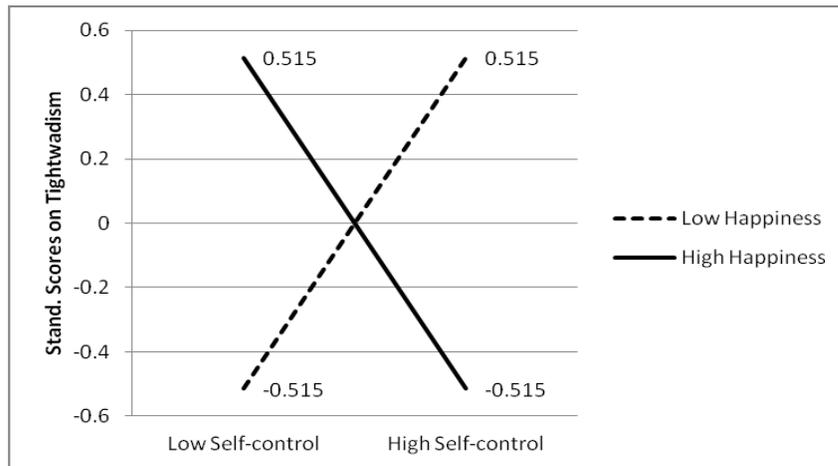
Figure 6.10: In Canada, long-term orientation correlates positively with tightwadism when happiness is high, correlates negatively with tightwadism when happiness is low



A third interaction term that significantly affects the scores on tightwadism is the one between happiness and self-control ($\beta = .599$, $p = .001$). This interaction is almost identical to the one observed with the same dimensions with frugality. When participants score low on happiness, self-control correlates positively with tightwadism (see Figure 6.11). On the other hand, when participants score high on happiness, self-control correlates negatively with tightwadism. As with frugality, Canadian participants are tight with money while not being disciplined, and answering to materialistic goals. This reinforces the argument that discipline does not lead to reducing consumption of participants who believe that possessions are a source of happiness. In addition, this result contrasts with what was found with Brazilians and Canadian students, who are disciplined to reduce consumption while attending to materialistic

goals. Finally, the results show that happiness and success interact differently with self-control. While a disciplined person who believes that possessions signal success will reduce consumption to answer to this belief, a less disciplined person will reduce consumption if he believes that getting possessions makes them happier.

Figure 6.11: In Canada, self-control correlates positively with tightwadism when happiness is low, correlates negatively with tightwadism when happiness is high



Voluntary Simplicity

VS as the dependent variable yield similar results to what is found with tightwadism. However, the Adjusted R-Square was high, reaching .588. Results are summarized in Table 6.8. Centrality ($\beta = -.505$, $p < .001$) and success ($\beta = -.261$, $p = .009$) correlate negative with VS. This is expected, because VS is an antimaterialistic consumer lifestyle adopted by individuals who resist the materialistic appeals present in western societies. Such individuals would not believe that acquiring possessions is a central goal in their lives, nor they would believe that possessions signal success to others. Also replicating Study 2 with Canadians, self-control and time orientation are not significantly correlated to VS. Simplifiers are not tempted by materialistic

appeals, so time orientation and self-control will not necessarily help them to save resources. In other words, they are naturally inclined to save, thus needing no self-control or thinking on the future to do so.

Table 6.8: In Canada, centrality, success and the interaction terms affect the scores on tightwadism

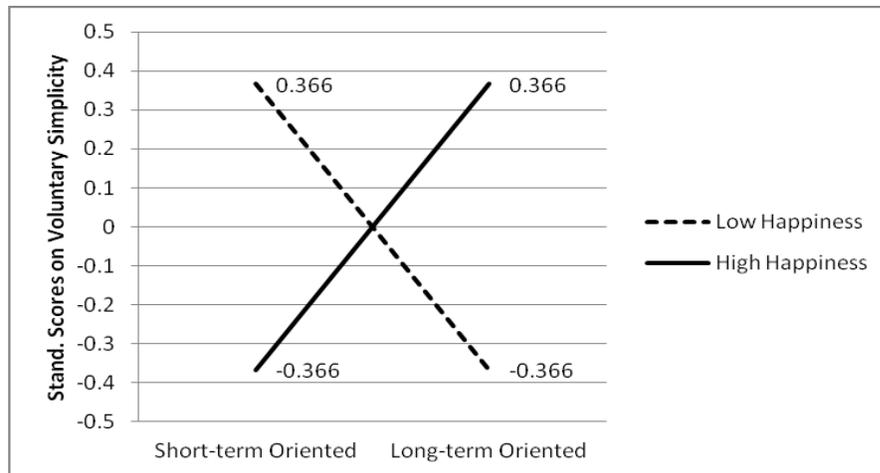
Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	-.057	.55
Happiness	.059	.53
Centrality	-.505	<.001
Success	-.261	.009
Self-control	.119	.20
Interaction: Centrality and Self-control	.038	.78
Interaction: Success and Self-control	.405	.004
Interaction: Happiness and Self-control	-.426	.005
Interaction: Happiness and Long-term Orientation	.366	.01
Interaction: Success and Long-term Orientation	-.131	.38
Interaction: Centrality and Long-term Orientation	-.059	.62

Dependent Variable is Tightwadism

Contrary to what was predicted in H4, self-control and long-term orientation moderate the relation between materialism and VS. Three interaction significantly affect the scores on VS. The first is the one between happiness and long-term orientation ($\beta = .366$, $p = .01$). As showed in Figure 6.12, time orientation correlates negatively with VS when participants score low on happiness. Interestingly, when participants score high on happiness, VS correlates positively with time orientation. This result is almost identical to what was found with tightwadism in the Canadian non-student sample. Short-term oriented participants who do not believe that possessions are a source of happiness tend to adopt a simple lifestyle. They are relaxed towards possessions and the future, thus saving becomes natural to them. On the other hand, long-term oriented participants who believe that possessions are a source of happiness also score high on

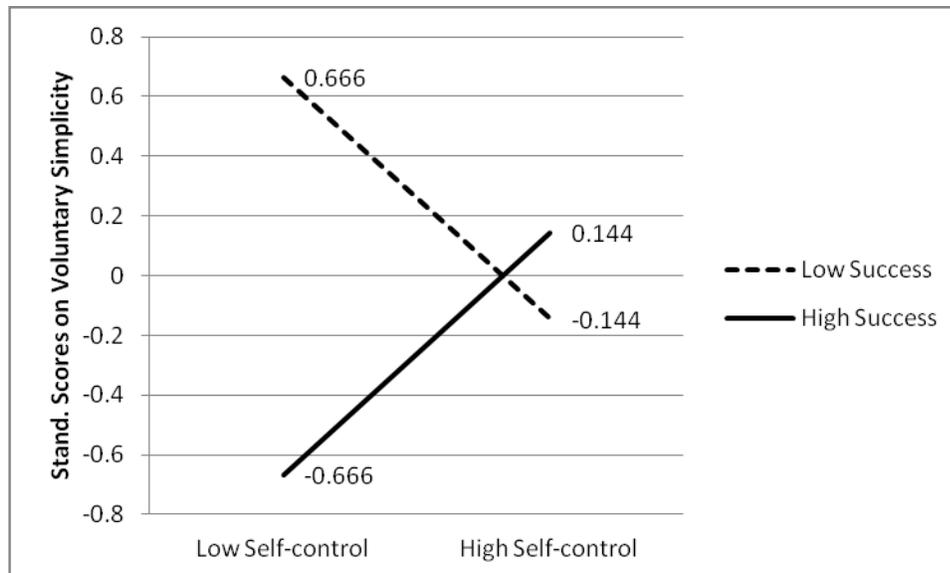
VS. As it occurred with Brazilians (but not with Canadian students), participants adopt a simple lifestyle to prevent consuming on the present, and concentrate in buying in the future goods that will make them happier.

Figure 6.12: In Canada, long-term orientation correlates positively with voluntary simplicity when happiness is high, correlates negatively when happiness is low



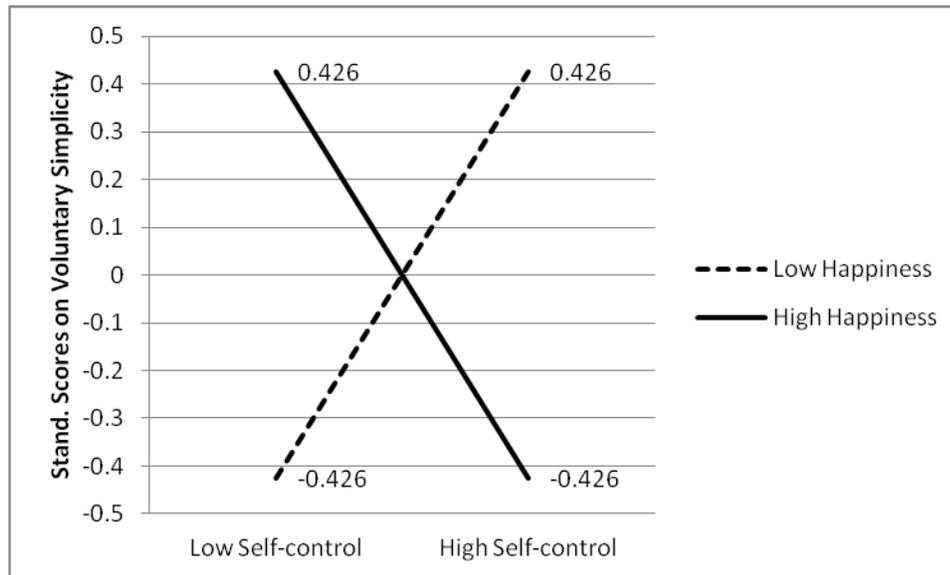
The interaction between success and self-control ($\beta = .405$, $p = .004$) show that, when participants score low on success, self-control correlates negatively with success (see Figure 6.13). However, when participants score high on success, self-control correlates positively with success. This result resembles what is found with tightwadism in the current study with non-student Canadians. Similarly, participants who score low on success and self-control scored high on VS. These results support that a relaxed posture towards possessions combined with low self-control lead one to reduce consumption. However, there is an important difference between VS and tightwadism. The scores on VS increase when participants are self-controlled and believe that possessions signal success, but not as much as it does with tightwadism. Therefore, there is evidence that a disciplined Canadian will adopt VS to attend to a materialistic goal of success. This interaction is less influential on VS than it is on tightwadism.

Figure 6.13: In Canada, self-control correlates positively with voluntary simplicity when success is high, and negatively when success is low



The third and final term to affect the scores on VS is the interaction between happiness and self-control ($\beta = -.426, p = .005$). Again, this result is similar to what is found with frugality and VS. Self-control correlates positively with VS when participants score low on happiness (please refer to Figure 6.14). However, when participants score high on happiness, self-control correlates negatively with VS. This result reinforces two arguments. First, for Canadians it takes self-control to adopt an AC lifestyle, when the person does not think that possessions are a source of happiness. Second, if the person is undisciplined and believes that possessions are a source of happiness, he-she will save resources by adopting VS, frugality or tightwadism. This result was unique to the non-student Canadian sample, being sharply different from what was found with Canadian students and Brazilian participants.

Figure 6.14: In Canada, self-control correlates negatively with voluntary simplicity when happiness is high, but it correlates positively when happiness is low



6.6 – Concluding Remarks: Canada

The non-student Canadian sample provides several unexpected results that seldom replicate the findings obtained in Study 2 or the results with Brazilian participants. One fact remains true, in the Canadian sample, individuals who are long-term oriented or self-controlled tend to score higher on AC lifestyles when they also score high on materialism. However, the results suggest differences on the dimensions that interact to create this effect.

Self-control or long-term orientation correlate positively with AC lifestyles when materialism is high, however, there is one exception for this rule. The correlation between self-control and all AC lifestyles is negative when participants score high on happiness. This suggests that participants are exerting self-control to save and attend to their antimaterialistic ambitions (represented by happiness). In other words, Canadians are not willing to exert self-control to

save and buy later goods that will make them happier. This occurred only in the Canadian non-student sample. Canadian students and Brazilian participants who believe that possessions would make them happier and who scored higher on self-control had the highest scores on frugality. Comparing these results with Americans and Indians may provide further insight on the interaction between happiness and self-control.

VS and tightwadism are perceived differently between the two Canadian samples. Non-student Canadians who are materialistic and long-term oriented or highly self-controlled can also adopt VS and tightwadism. In the Canadian student sample, only those who are highly disciplined and materialistic adopt frugality. However, MTurk workers (and Brazilian participants) who are long-term oriented or self-controlled believe that all AC lifestyles can be adopted to save resources. It may be that students see tightwadism and VS as lifestyles that have a strong antimaterialistic weight, whereas Brazilians and Canadians recruited on MTurk see less difference between these lifestyles.

As it was discussed in the beginning of this chapter, the current set of data analysis allows testing the role of materialism and moderators when materialism is high and low. Two opposing hypotheses are tested. One argues that when materialism is high, the interactions play a weaker role because individuals will feel pushed to attend to these materialistic goals, reducing the importance of the moderators. The alternative hypothesis defends that the interactions will play an even stronger role when materialism is high, because being self-disciplined and thinking on the long-term are key to answer to materialistic ambitions satisfactorily. A comparison between Canadians and Brazilians, and Canadians students and Canadians non-students allow a first test of this contradicting hypothesis.

Canadian participants recruited on MTurk scores lower in materialism than the Canadian students in Study 2. Both samples scores similarly in two of three dimensions of materialism. The scores on happiness (2.98 vs. 2.89, $p=.44$) and success (2.78 vs. 2.67, $p=.34$) are higher in the student sample, but not statistically different. On the other hand, the scores on centrality (3.35 vs. 2.80, $p <.001$) and general score on materialism (3.06 vs. 2.79, $p=.002$) are significantly higher with the student sample than with MTurk workers. Given that in the non-student sample, the interactions play a more significant role, by affecting all AC lifestyles, it seems that the moderators are more important when participants score less on materialism.

A comparison between Brazil and Canada produces an interesting discussion. With Brazilians, self-control and long-term orientation have strong direct effects on AC lifestyles, while in Canada these antecedents have an effect only through the moderators. One would think that self-control and time orientation do not affect AC lifestyles directly because Canadians are more materialistic than Brazilians. However, it does not seem to be the case. While Brazilians score marginally higher on happiness (3.06 vs. 2.89, $p=.08$) and success (2.83 vs. 2.67, $p=.12$), they score lower than Canadians on centrality (2.58 vs. 2.80, $p=.02$). In addition, both groups have very similar scores on the general materialism dimension (2.79 vs. 2.80, $p=.92$). In sum, Brazilian participants have scores on materialism very similar to Canadians recruited on MTurk.

Why self-control and time orientation are more important for Brazilians than for Canadians? The difference may probably be explained by economic and social factors. Brazilians have endured a long economic crisis during the 1980's and part of the 1990's. Resources became scarce and inaccessible, and individuals were forced to save to attend to their everyday needs. In such circumstance, AC lifestyles are less perceived as an expression of materialistic

beliefs and goals, as all consumers, materialistic or not, are saving to cope with the crisis. Saving is not expressing one's values, but rather a necessary strategy, which requires self-control and long-term orientation. On the other hand, Canadians have lived in the 'land of plenty' for several generations. This environment decreases the importance of self-control and time orientation on the adoption of AC lifestyles. It seems that lowly materialistic Canadians adopt AC lifestyles to express their materialistic beliefs. They are not tempted by materialistic appeals and they need less long-term orientation and self-control to reduce their consumption. The data analysis with Americans might provide an indirect test to this result. If American participants also score low on materialism, it will be interesting to see if self-control and time orientation play a weaker role.

6.7 – Results and Discussion – USA

The same analyses are conducted for the American participants, each one having a different AC lifestyle as the dependent variable. The dependent variables changed from one analysis to another, but the following antecedents are always included as independent variables: long-term orientation; self-control; the happiness dimension of materialism; the centrality dimension of materialism; the success dimension of materialism; the interaction of self-control with each dimension of materialism; and the interaction of long-term orientation with each dimension of materialism.

Frugality

The results of the analysis having frugality as the dependent variable are presented at Table 6.9. The Adjusted R-Square for this analysis was equal to .305. As expected, and confirming the findings with Canadian students and Brazilians, long-term orientation correlates positively with frugality ($\beta = .362$, $p < .001$). Confirming the results with Canadian students, self-control correlates positively ($\beta = .312$, $p = .02$) with frugality. These two results suggest that in most cultures self-control and particularly time orientation are key personality traits that influence the adoption of a frugal consumer lifestyle. Interestingly, in the USA, success correlates negatively with frugality ($\beta = -.267$, $p < .001$). This finding replicates the one obtained with Canadians recruited on MTurk, showing that adopting a frugal lifestyle is unattractive for those who believe that possessions signal success. It probably occurs because reducing consumption and resourcefully using goods go against the motivation to signal success by buying goods.

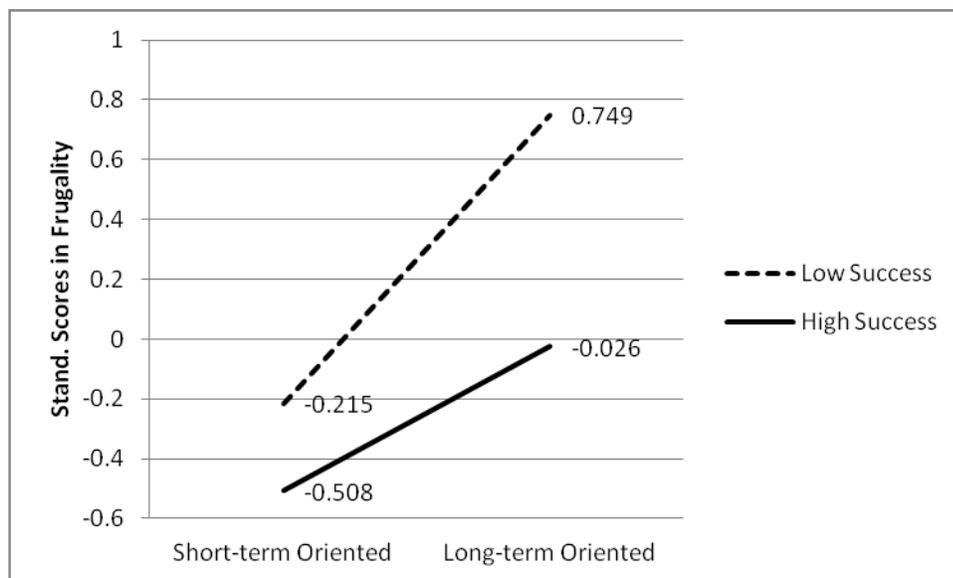
Table 6.9: In the USA, long-term orientation, self-control, success and the interaction terms influence the scores on frugality

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.362	<.001
Happiness	.009	.88
Centrality	-.171	.19
Success	-.267	<.001
Self-control	.312	.02
Interaction: Centrality and Self-control	.068	.29
Interaction: Success and Self-control	.008	.90
Interaction: Happiness and Self-control	.117	.08
Interaction: Happiness and Long-term Orientation	-.040	.54
Interaction: Success and Long-term Orientation	-.121	.05
Interaction: Centrality and Long-term Orientation	.046	.46

Dependent Variable is Frugality

Only one interaction term affects the scores on frugality significantly. As shown in Figure 6.15, the interaction between success and time orientation is significant ($\beta = -.121$, $p = .05$). The relation between time orientation and frugality is positive when participants score high on success. However, this relation is even more positive when participants score low on success. In addition, participants' scores on frugality are highest when long-term orientation combines with low scores in success. Curiously, this result goes against the findings obtained with Canadian students and Brazilian participants, where the scores on frugality were highest for materialistic individuals who are disciplined. Nonetheless, the positive correlation between frugality and long-term orientation for participants who score high on success was observed, pointing out that Americans also adopt frugality to answer to materialistic goals. This last conclusion supports H2a. However, H2b is not supported in the American sample.

Figure 6.15: In the USA, time orientation correlates more positively with frugality when success is low than when success is high



Tightwadism

The results of the analysis having tightwadism as the dependent variable are presented at Table 6.10. The Adjusted R-Square for this analysis was equal to .198. Confirming the results with Canadian students and Brazilians, long-term orientation ($\beta = .159$, $p = .01$) and self-control ($\beta = .279$, $p = .02$) correlate positively with tightwadism. These results point out that self-control and time orientation are important personality traits for adopting tightwadism in several cultures. The data analysis from the India sample will provide further information.

Table 6.10: In the USA, long-term orientation, self-control, success and interaction terms affect the scores on tightwadism

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.159	.01
Happiness	.004	.95
Centrality	-.026	.85
Success	-.271	<.001
Self-control	.279	.04
Interaction: Centrality and Self-control	-.143	.04
Interaction: Success and Self-control	.077	.22
Interaction: Happiness and Self-control	.013	.85
Interaction: Happiness and Long-term Orientation	.049	.49
Interaction: Success and Long-term Orientation	-.171	.01
Interaction: Centrality and Long-term Orientation	.085	.20

Dependent Variable is Tightwadism

As shown in the Table 6.10, success correlates negatively with tightwadism ($\beta = -.271$, $p < .001$), repeating the negative correlation found between success and frugality in the USA sample. This result contrasts sharply to what was found in Brazil, where success correlates positively with tightwadism. Cultural differences might explain the difference in results between

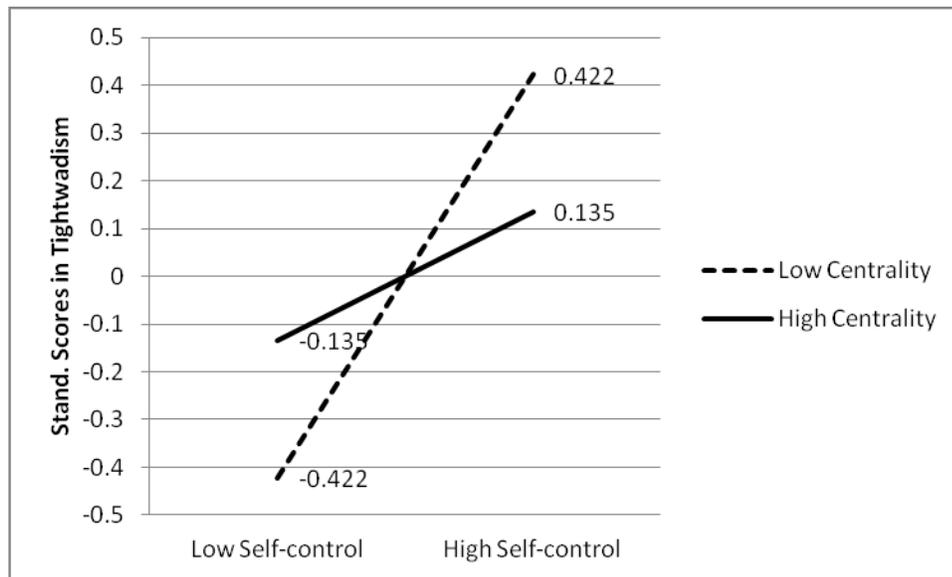
the countries. In individualistic and materialistic cultures (such as the USA), one will signal success with possessions, even if there is a risk of being seen as snobby by others. One is less concerned about disrupting the group harmony (Bond, Leung and Wan 1982) and does not care about insulting others while signaling success with possessions. Given that being tight with money reduces the chances of signaling success through possessions, Americans who score high on success reduce their scores on tightwadism because showing off their success with goods does not produce negative social repercussions. On the other hand, Brazilians are more collectivists and concerned with the social implications of being seen as a snob person. Therefore, they might be tight with money while also endorsing success, because they worry about the social implications of signaling success through possessions.

A rationale related to signaling strategies provide an alternative explanation for this difference between USA and Brazil. In a country where possessions are a strong signal of success, individuals will be less motivated to save than in a country where success is signaled in other fashions. For example, if performing a certain physical feat is a stronger signal of success than buying goods, then one will be open to the idea of saving, because buying is not a strong signal of success. Thus, it might be that possessions are not an honest signal of success in Brazil, making Brazilians more open to save.

Two interactions terms are found to be significant when having tightwadism as the dependent variable (H3 is not supported). In the first, self-control and centrality interact (please refer to Figure 6.16), affecting the scores on tightwadism ($\beta = -.143$, $p = .04$). Tightwadism correlates positively with self-control when participants score high or low on centrality. This shows that Americans tightwads' use self-control to attend to materialistic and antimaterialistic goals. However, given that this positive correlation is stronger when participants score low on

centrality, it seems that self-control is being used prevalently to attend to antimaterialistic appeals. Interestingly, the negative impact of centrality on tightwadism is direct with Canadians (students and non-student sample) and Brazil. However, in the USA, low centrality impacts only when combined with high self-control. This suggests that Americans require self-discipline to refuse materialistic appeals and adopt a tight consumption lifestyle.

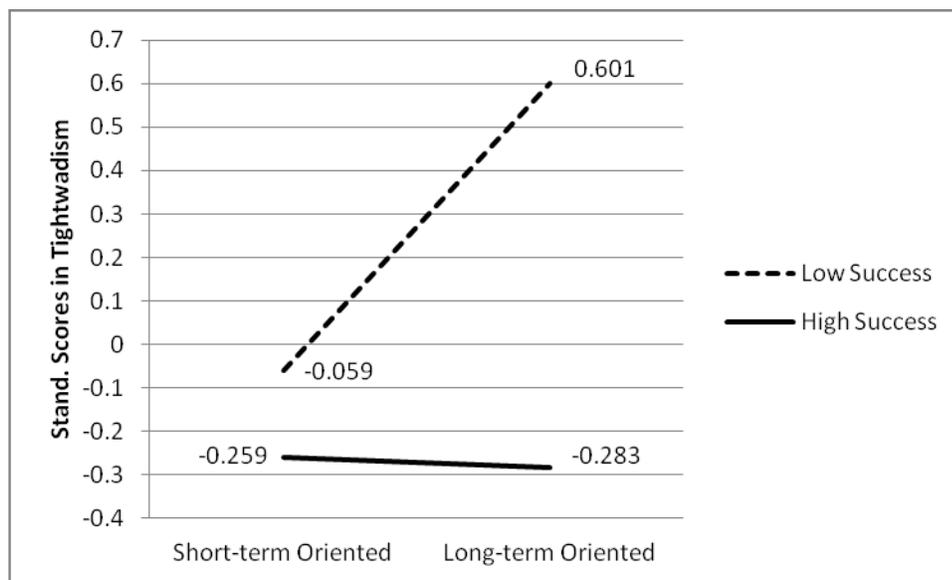
Figure 6.16: In the USA, self-control correlates positively with tightwadism particularly when centrality is low



A second interaction term found to significantly affect the scores on tightwadism is between success and time orientation ($\beta = -.171, p = .01$). As shown in Figure 6.17, the relation between time orientation and tightwadism is slightly negative when participants score high on success. However, when participants score low on success, this same relation becomes positive. In addition, the scores on tightwadism are highest for long-term oriented participants who score low on success. Long-term orientation and low scores on success lead to higher scores on tightwadism. Combining the two factors increases the scores on tightwadism even more. A

surprising finding is the scores on tightwadism, they are low when participants score high on success, regardless of the scores on time orientation. This puts the positive correlation between time orientation and tightwadism into perspective, showing that in the USA, success is the most important factor influencing one's scores on tightwadism. In fact, it confirms the general idea developed at Study 2 that tightwads are antimaterialistic consumers.

Figure 6.17: Graphic representation of the Interaction between success and time orientation – Tightwadism - USA



Voluntary Simplicity

A similar analysis is performed using voluntary simplicity (VS) as the dependent variable. The Adjusted R-Square equals to .225 (see Table 6.11 for summary of results). Only two factors correlate to the scores on VS. The first was long-term orientation, which correlates positively with VS ($\beta = .197$, $p = .001$). This observation replicates what is found in Brazil, but is different from what is found with Canadians (students and MTurk workers). In these latter cases, time

orientation did not affect one's score on VS. However, as in Brazil, in the USA VS is a lifestyle that relates to thinking on the long-term, and not only answering to antimaterialistic appeals.

Table 6.11: In the USA, only long-term orientation and success affect the scores on voluntary simplicity

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.197	.001
Happiness	-.101	.13
Centrality	.041	.76
Success	-.294	<.001
Self-control	.085	.53
Interaction: Centrality and Self-control	-.035	.60
Interaction: Success and Self-control	.089	.16
Interaction: Happiness and Self-control	.015	.83
Interaction: Happiness and Long-term Orientation	-.006	.93
Interaction: Success and Long-term Orientation	-.094	.15
Interaction: Centrality and Long-term Orientation	.11	.10

Dependent Variable is Voluntary Simplicity

VS correlates with success ($\beta = -.294$, $p < .001$). Given that success correlates negatively with tightwadism and frugality as well, it is safe to say that, in the USA, those who signal success with material goods do not adopt AC Lifestyles. Future studies need to examine reasons for this finding, explaining why success correlates so strongly and negatively to AC Lifestyles. Finally, none of the interaction terms affects the scores on VS. This confirms H4 and points out that materialism plays a stronger role on the adoption of a simple lifestyle. For Americans and Canadian students, VS is a consumer lifestyle less likely to be adopted by those who are willing to save resources to answer to materialistic goals.

6.8 – Concluding Remarks: USA

The findings obtained with the American participants provide a broader picture and pave the way for future research. Some American participants adopt AC lifestyles while scoring high on materialism, if they are self-controlled and long-term orientated. However, this occurs less in the USA than in Brazil and Canada. In other words, it is less likely to find an American who score high on AC lifestyle, while also being materialistic and self-controlled (or long-term oriented).

A comparison of the materialism scores might explain why the moderators are less relevant in the USA. This contrast allows further testing of the moderating roles played by self-control and time orientation. As discussed before, two opposing hypothesis are tested. The first argues that when materialism is high self-control and long-term orientation play a weaker moderating role, because individuals will feel pushed to answer to materialistic goals, reducing the importance of the moderators. The second hypothesis proposes an opposite position. It defends that self-control and long-term orientation will be even more relevant when materialism is high, because discipline and long-term orientation assist on answering to materialistic ambitions in a controlled manner.

The comparison between Canada and USA supports the first hypothesis, as it is found that self-control and time orientation interacts less with materialism, for materialistic individuals. Canadians and Americans score similarly in the general score of materialism, success and happiness. However, Americans score significantly more on the centrality dimension of materialism (4.03 vs. 2.80, $p < .001$). Given that materialism is slightly higher in the USA, and that the interactions are less relevant for this same country, one concludes that the interaction terms

are more relevant when participants score less on materialism. Note that the same conclusion occurred when the two samples of Canadians were compared.

However, when Brazil is compared with USA, a different conclusion is obtained. Though Brazilians score higher on success (2.83 vs. 2.63, $p = .002$), Americans score higher on centrality (4.03 vs. 2.58, $p < .001$). Both countries score the same on general materialism and happiness. Thus, the scores on materialism from both countries are similar. Still, self-control and long-term orientation interacted more often with materialism in the Brazilian sample than in the American sample. This suggests that none of the competing hypotheses is correct. As argued before, self-control and time orientation might be more important in Brazil because of economical and social factors, and not because of materialism. The economical crisis endured in Brazil in the 1980's and 1990's forced individuals to consume less. AC lifestyles were not expressing materialistic values. It became a necessary strategy requiring self-control and long-term orientation. In contrast, the USA (like Canada) is a land of plenty, where saving is less often imposed on individuals. It is true that in economically turbulent times, Canada and USA may experience similar changes. However, the current generation of Americans and Canadians have not experienced anything remotely close to what occurred not so long ago in the South American country. Brazilians remember well the difficulties of dealing with inflation rates of over 80% a month (IBGE 2012). Thus, AC lifestyles might have a different function in Canada and USA than in Brazil. In Canada and USA, self-control and long-term orientation are weaker moderators because AC lifestyles are expressing materialistic values, thus requiring less self-control or long-term orientation to adopt it. On the other hand, in Brazil these moderators are more relevant because the crisis endured by this generation taught that self-control and time orientation are important traits for efficiently expressing materialistic goals.

The negative correlation between success and all AC lifestyles is particularly interesting. It may be explained by the materialistic culture existing in the USA. If the social setting presses individuals to signal success with possessions, AC Lifestyles are likely to relate negatively to success, as these lifestyles act as obstacles to the prevailing signaling strategy. In countries where possessions do not signal as much status, individuals might save to answer to materialistic goals, as they can preserve their status by signaling in other fashions. An alternative explanation for the negative correlation between success and AC lifestyles has to do with collectivism and individualism. In collectivist countries, people can be concerned that their levels of consumption insult others, whereas this concern is less pronounced in individualistic countries (Bond, Leung and Wan 1982). Keeping group coherence allows one to save while signaling success with possessions, as over-signaling might be negatively interpreted. Given these competing explanations, future studies should look into why success correlates so negatively to AC Lifestyles in USA, while it did not in Brazil and Canada.

Americans are less likely to use self-control or time orientation to answer to materialistic goals. It may be difficult to promote an AC Lifestyle in the USA. Therefore, policy makers interested in reducing the consumption levels will be less successful in their efforts if a materialistic culture is still prevalent. Given that changing a country's culture is an extremely hard and time-consuming task, future studies should identify lifestyles that lead to less consumption even for materialistic Americans. Such finding may provide important tools for promoting consumer lifestyles that are more sustainable on the long-term.

6.9 – Results and Discussion – India

Repeating the method performed with Canadians, Brazilians and American participants, the analysis with the Indian sample tests the impact of the antecedents on the three AC Lifestyles (i.e. frugality, tightwadism and VS). The following antecedents are used as the independent variables: long-term orientation; self-control; the happiness dimension of materialism; the success dimension of materialism; the centrality dimension of materialism; the interaction of long-term orientation with each dimension of materialism; the interaction of self-control with each dimension of materialism.

Frugality

The results of the analyses having frugality as the dependent variable are presented at Table 6.12. The Adjusted R-Square obtained is equal to .378. None of the interaction terms significantly affects the scores on frugality, showing that the direct relations have a stronger role, and provide no support for H2a and H2b. Self-control and time orientation do not act as moderators. On the other hand, the direct relations occurs as expected. In India frugality correlates positively with long-term orientation ($\beta = .527, p < .001$) and self-control ($\beta = .127, p = .02$). Frugality demands discipline from the individuals who adopt this lifestyle. Frugality correlates negatively with centrality ($\beta = -.188, p = .004$) showing that Indians who see the acquisition of goods as a central goal in their lives are less likely to adopt a lifestyle that leads to less consumption.

The negative correlation of centrality with frugality, and the fact that the interaction terms does not significantly affect the scores on frugality shows an important pattern.

Differently from Canada Brazil and USA, in India frugality is not adopted to answer to materialistic goals. On the contrary, frugality is a lifestyle adopted by disciplined or antimaterialistic individuals. The analyses with VS and tightwadism test if this finding is specific to frugality.

Table 6.12: In India, only self-control, long-term orientation and centrality correlate with frugality

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.527	<.001
Happiness	.054	.45
Centrality	-.188	.004
Success	.030	.68
Self-control	.127	.02
Interaction: Centrality and Self-control	-.026	.74
Interaction: Success and Self-control	.061	.43
Interaction: Happiness and Self-control	-.058	.47
Interaction: Happiness and Long-term Orientation	-.015	.87
Interaction: Success and Long-term Orientation	.159	.15
Interaction: Centrality and Long-term Orientation	-.075	.45

Dependent Variable is Frugality

Voluntary Simplicity

The results of the analysis having voluntary simplicity (VS) as the dependent variable are presented at Table 6.13. The Adjusted R-Square is equal to .357. The pattern of results is very similar to what is found with frugality, that is, VS correlates positively with long-term orientation ($\beta = .323$, $p < .001$), self-control ($\beta = .247$, $p < .001$) and negatively with centrality ($\beta = -.338$, $p < .001$). For Indians, a simple lifestyle requires self-control and long-term thinking. In addition, those who think that buying goods is a central goal in their lives refuse a simple lifestyle.

Table 6.13: In India, only self-control, long-term orientation and centrality correlate with voluntary simplicity

Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.323	<.001
Happiness	-.097	.17
Centrality	-.338	<.001
Success	.117	.10
Self-control	.247	<.001
Interaction: Centrality and Self-control	-.018	.81
Interaction: Success and Self-control	-.085	.27
Interaction: Happiness and Self-control	.060	.44
Interaction: Happiness and Long-term Orientation	-.008	.93
Interaction: Success and Long-term Orientation	.142	.20
Interaction: Centrality and Long-term Orientation	-.044	.65

Dependent Variable is Voluntary Simplicity

The positive correlation between self-control and VS is unique to the Indian sample and unexpected, because simplifiers refuse materialistic values (Zavestoski 2002) and do not need to exert self-control to adopt a simple lifestyle. This result suggests that Indian participants see frugality and VS in a similar fashion. That is, frugality is perceived as a more antimaterialistic lifestyle in India than it is perceived in Canada, USA and Brazil. Pointing to the same conclusion, the interaction terms does not significantly affect the scores in VS, repeating the finding obtained with frugality. Interestingly, the significant impact of the interaction terms replicates all previous analyses with VS, except for Brazil, and shows that VS does not answer to materialistic goals, confirming H4.

Tightwadism

The analysis having tightwadism as a dependent variable produces an Adjusted R-Square equal to .185. As presented in Table 6.14, long-term orientation correlates positively

with tightwadism ($\beta = .115, p = .05$) to a smaller extent than it correlates with frugality and VS. On the other hand, centrality correlates very strongly with tightwadism ($\beta = -.456, p < .001$) and in the same negative direction it did with frugality and VS. In addition, self-control does not correlate significantly with tightwadism. Considering these results, it seems that tightwadism has a great antimaterialistic appeal for Indians, as it does not require self-control to adopt it, and those who believe that acquiring goods is a central goal do not become tightwad.

Table 6.14: In India, long-term orientation, centrality and one interaction term correlate with the scores on tightwadism

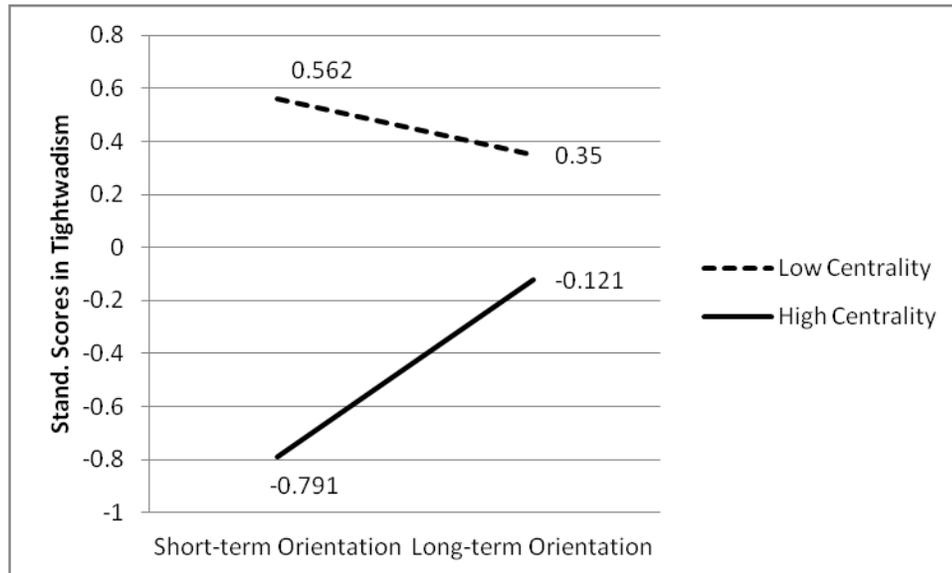
Variable Name	Standardized Beta	Sig.
(Constant)		<.001
Long-term Orientation	.115	.05
Happiness	.034	.68
Centrality	-.456	<.001
Success	.053	.51
Self-control	.070	.25
Interaction: Centrality and Self-control	-.030	.73
Interaction: Success and Self-control	.014	.88
Interaction: Happiness and Self-control	.061	.50
Interaction: Happiness and Long-term Orientation	-.007	.95
Interaction: Success and Long-term Orientation	-.132	.29
Interaction: Centrality and Long-term Orientation	.221	.05

Dependent Variable is Tightwadism

Contrary to H3, the interaction between centrality and long-term orientation significantly affects the scores on tightwadism ($\beta = -.221, p < .05$). As shown in Figure 6.18, when participants score low on centrality, time orientation correlates negatively to tightwadism. However, when participants score high on centrality, time orientation correlates positively to tightwadism. Materialistic individuals consume less when they plan on the long-term, than when they are focused on obtaining gains on the present., showing that time orientation plays a role on reducing one's consumption in India as well. The scores on tightwadism are lowest for short-

term oriented participants who score high on centrality, whereas the scores are highest for short-term oriented participants who score low on centrality.

Figure 6.18: In India, long-term orientation correlates negatively with tightwadism when centrality is low, but positively when centrality is high



In India, short-term oriented participants who score low on centrality also score high on tightwadism (please refer to Figure 6.18). This interesting result is similar to what was found in Brazil, where a relaxed posture towards spending, that is a low score in a materialism dimension and long-term orientation, makes one less willing to consume. Thus, another way to reduce consumption, or adopt an AC lifestyle, is to be relaxed with possessions and the long-term implications of one's attitudes and behaviors.

6.10 – Concluding Remarks: India

While in the USA AC lifestyles are not adopted by those who see goods as source of success, in India AC lifestyles are not adopted by those who see the acquisition of goods as

something central in their lives. In accordance with a previous discussion, it was argued that success is a relevant dimension in the USA because of its individualistic culture. In this context, individuals care less about group harmony and are less shy to signal their success with the goods they acquired. On the other hand, in a collectivist country, such as India, signaling success with possessions is bound to disrupt group harmony, so centrality becomes a factor that correlates more strongly with AC lifestyles. This is arguably a more profound materialistic motivation, because it emphasizes why buying is a central goal in a person's life.

While Brazilians reduce consumption to buy goods that they believe will make them happier, Indians do not have similar motivations. Notably, in India happiness does not correlate directly with any of the AC lifestyles. In addition, the interaction of this dimension with self-control and time orientation does not affect the lifestyles studied. This shows a stark contrast between India and Brazil. Indians do not accept the myth that possessions make one happier.

Social norms could have a strong impact on the scores of AC lifestyles, reducing the relevance of the model. This argument is based on the belief that economic and political upheaval would make AC lifestyles be seen negatively in India, thus increasing the importance of social norms. Interestingly, the analyses in India suggest that this is not the case, as the R-Squares were high in India and Brazil, precisely the countries where economic and political upheaval are stronger issues.

In the India sample, the moderators play a weaker role when participants score high on materialism. Indians score higher than Americans, Brazilians and Canadians in all dimensions of materialism and on the general score of materialism. The only exception is the centrality dimension, which Americans scores higher than all other samples ($p < .001$ for all paired comparisons). Precisely in the group of participants with highest materialism score, it was

observed that self-control and time orientation played a much smaller moderating role. This result provides strong evidence that when materialism is high, the moderators play a weaker effect.

This high score on materialism with Indians goes against findings in previous studies (Ger and Belk 1996). Differences may be attributed to the data collection method. The Indian participants were recruited using Mechanical Turk, and are considerably more educated than the average population in India. It is likely that the sample is drawn from more westernized Indians, as proficiency in English was required for participating in the study. This higher educational level and the high scores on materialism provide strong signals that this sample is not representative of the Indian population. Therefore, the results discussed above should not be generalized to all Indians, unless they are replicated by future studies using different samples. The results might be applicable only to materialistic Indians.

6.11 - General Discussion

Frugality

The purpose of this section is to summarize the results obtained in the current set of studies (Brazil, USA, Canada and India) and provide concluding remarks and direction for future research. The results obtained when frugality is used as the dependent variable are summarized in table 6.15.

Table 6.15: Summary of the correlations found having frugality as the dependent variable in all four countries (USA, China, Brazil and India)

	Frugality			
	Brazil	Canada	USA	India
Long-term Orientation	.398 (<.001)	Not significant	.362 (<.001)	.527 (<.001)
Happiness	.121 (.005)	Not significant	Not significant	Not significant
Centrality	-.185 (<.001)	Not significant	Not significant	-.188 (.004)
Success	Not significant	-.412 (.001)	-.267 (<.001)	Not significant
Self-control	.301 (<.001)	Not significant	.312 (.02)	.127 (.02)
Correlates positively with self-control or time orientation when materialism is high	2	1	1	0
Frequency that Self-control interacted with Materialism	2	2	0	0
Frequency that Time Orientation interacted with Materialism	0	0	1	0
Frequency that Success interacts with Self-control or Time Orientation	0	1	1	0
Frequency that Centrality interacts with Self-control or Time Orientation	1	0	0	0
Frequency that Happiness interacts with Self-control or Time Orientation	1	1	0	0
Adjusted R-Square	.538	.355	.305	.378

Self-control and long-term orientation are important antecedents of the adoption of frugality. Though these dimensions were not important in Canada, they play a crucial role for the remaining countries. Personality traits positively affect frugality's scores in most individuals. The trend is less obvious when looking at the materialism dimensions. In particular, except for Brazil, the happiness dimension of materialism does not relate to frugality. Success correlates negatively with frugality in USA and Canada, whereas centrality correlates negatively with frugality in Brazil and India. USA and Canada are materialistic and individualistic countries. On the other hand, Brazil and India are identified as

collectivistic and less materialistic countries. These results pose some interesting questions. Does success correlate negatively with frugality in USA and Canada because these two countries are individualistic? Conversely, does collectivism explain why centrality correlates negatively with frugality in India and Brazil? Future studies should explore these questions.

In all four countries, except for India, frugality scores are higher when participants score high in a materialism dimension and high on self-control or long-term orientation. In other words, the interaction term causes a positive correlation between self-control (or long-term orientation) with an AC lifestyle when materialism is high. These results suggest that disciplined individuals adopt a frugal lifestyle to attend to materialistic goals. Thus, though H2a and H2b are not always confirmed, the rationale behind these hypotheses seems correct.

Though there is great variation between countries, happiness and success interact twice with self-control or time orientation, whereas centrality interact only once with the moderators. This confirms previous expectations that these two dimensions would interact more often with the moderators to affect the scores on frugality, as proposed at H2a and H2b. In addition, happiness on itself has a smaller impact on frugality, but when combined with self-control or time orientation its impact is larger. This also points that success not only has a strong direct effect, but also an impact through the moderators.

A final point that deserves attention is how often self-control and time orientation interact with materialism to affect the scores on frugality. Interestingly, self-control is a more relevant moderator, as it played a role twice in Canada and Brazil. On the other hand, long-term orientation plays a role only once and in the USA. This result answers an important question unanswered by Study 2, showing that self-control is a more relevant moderator on the scores of

frugality than time orientation. While long-term orientation has a strong direct effect, self-control is also relevant, but especially when it interacts with materialism dimensions.

Voluntary Simplicity

The findings obtained having VS as the dependent variable in all four countries are summarized at Table 6.16. As expected, it is shown that self-control correlates positively with the scores of VS only in the sample of Indian participants. Nonetheless, contradicting previous expectations, long-term orientation affects positively the scores on VS in Brazil, USA and India. It was expected that this would not be the case, because simplifiers are antimaterialistic consumers, who would not need to think on the long-term to prevent spending. However, it seems that a person who aspires to be self-sufficient and live a simple life is also a person who plans ahead, not only in consumer-related domains, thus scoring higher on long-term orientation.

As expected, the materialism dimensions play a strong role on the scores of VS. Specifically, centrality correlates negatively with VS in all countries, except for USA. Success correlates negatively in Canada and USA, while correlating positively in Brazil. As discussed before, this last result shows that Brazilians adopt an antimaterialistic lifestyle even if they believe that possessions signal success and regardless of the moderators. Interestingly, happiness does not correlate with VS in any of the four countries, showing that it has no direct impact on the scores of VS.

The interaction between materialism dimensions and the moderators show that in Brazil and Canada VS correlates positively with self-control or time orientation for materialistic

individuals. This result is surprising, as disciplined individuals might adopt VS to attend to materialistic goals (rejecting H4). Happiness interacts with self-control or time orientation more often, showing that it influences the scores on VS when combined with self-control or time orientation. On the other hand, centrality has not interacted a single time with the moderators, showing that its effect on VS occurs only directly. It is also worth mentioning that in India and USA no interaction term significantly affects the scores on VS. Direct correlations have a stronger effect on these countries.

Table 6.16: Summary of the correlations found having voluntary simplicity as the dependent variable in four countries (Brazil, Canada, USA and India)

	Voluntary Simplicity			
	Brazil	Canada	USA	India
Long-term Orientation	.240 (<.001)	Not significant	.197 (.001)	.323 (<.001)
Happiness	Not significant	Not significant	Not significant	Not significant
Centrality	-.343 (<.001)	-.505 (<.001)	Not significant	-.338 (<.001)
Success	.119 (.03)	-.261 (.009)	-.294 (<.001)	Not significant
Self-control	Not significant	Not significant	Not significant	.247 (<.001)
Correlates positively with self-control or time orientation when materialism is high	1	2	0	0
Frequency that Self-control interacted with Materialism	2	2	0	0
Frequency that Time Orientation interacted with Materialism	0	1	0	0
Frequency that Success interacts with Self-control or Time Orientation	1	1	0	0
Frequency that Centrality interacts with Self-control or Time Orientation	0	0	0	0
Frequency that Happiness interacts with Self-control or Time Orientation	1	2	0	0
Adjusted R-Square	.316	.588	.225	.357

Tightwadism

The findings obtained in the four countries having tightwadism as the dependent variable are summarized at Table 6.17. As expected, self-control and long-term orientation play a weaker role on tightwadism than on frugality. Long-term orientation correlates positively with tightwadism in three countries (Brazil, USA and India), while self-control correlates positively with tightwadism only in Brazil and USA. The p. values of these correlations are generally weaker for tightwadism than for frugality, suggesting that they are more relevant for the latter. Nonetheless, as it occurred with frugality, the scores on tightwadism correlate more positively with long-term orientation than with self-control.

The correlation between tightwadism and materialism dimensions is generally negative. Centrality correlates negatively with VS in all countries except the USA, reproducing what was found with VS. However, differently from VS, happiness correlates negatively with tightwadism in the Brazilian sample. In addition, success correlates negatively with tightwadism in the USA whereas it correlates positively with VS in Brazil. As argued before, this shows that one is tightwad in Brazil, even when scoring high on materialism, and regardless of the moderating variables. In Brazil, at least one materialism dimension correlates positively with an AC lifestyle.

The scores on tightwadism correlate positively with self-control or time orientation when participants score high on a materialism dimension. A disciplined individual becomes a tightwad to attend to his materialistic ambitions (contrary to H3). Interestingly, this observation occurs more often in tightwadism than it does with frugality and VS. In frugality, such

correlation does not occur in India, and with VS it does not occur in India and USA. On the other hand, in all countries a materialistic person scores higher in tightwadism if he is disciplined or long-term oriented. This surprising result contradicts Study 2, where students were disciplined to attend to antimaterialistic goals. It also shows that tightwadism is an AC lifestyle that can be promoted to motivate materialistic individuals to buy less.

Table 6.17: Summary of the correlations found having tightwadism as the dependent variable in all countries

	Tightwadism			
	Brazil	Canada	USA	India
Long-term Orientation	.162 (.002)	Not significant	.159 (.01)	.115 (.05)
Happiness	-.181 (.001)	Not significant	Not significant	Not significant
Centrality	-.304 (<.001)	-.478 (<.001)	Not significant	-.456 (<.001)
Success	.105 (.05)	Not significant	-.271 (<.001)	Not significant
Self-control	.139 (.02)	Not significant	.279 (.04)	Not significant
Correlates positively with self-control or time orientation when materialism is high	1	2	1	1
Frequency that Self-control interacted with Materialism	2	2	0	0
Frequency that Time Orientation interacted with Materialism	0	1	1	1
Frequency that Success interacts with Self-control or Time Orientation	1	1	1	0
Frequency that Centrality interacts with Self-control or Time Orientation	0	0	1	1
Frequency that Happiness interacts with Self-control or Time Orientation	1	2	0	0
Adjusted R-Square	.287	.351	.198	.185

As with VS and frugality, self-control has a strong moderating effect with tightwadism. However, with tightwadism self-control and time orientation seem equally important, whereas time orientation

had a weaker indirect effect on frugality and VS. Also differing from frugality and VS, the materialism dimensions interact more often with the moderators than with tightwadism. In particular, centrality interacts almost as much as success and happiness. However, it has not only a strong direct effect, but also indirect ones through the moderators, proving that it plays a stronger role. On the other hand, happiness is far more important as an indirect factor, than as a direct one.

On the difference between the Adjusted R-Squares for the four countries, the values obtained are somewhat smaller in India and USA, than in Canada and Brazil, suggesting that the model is more relevant in the latter two countries (please refer to Tables 6.15 to 6.17). Interestingly, Indians and Americans are precisely the two groups that scored highest on materialism. From the samples pooled, Americans score the highest on centrality, whereas Indians score highest on happiness, success and the general score of materialism. The high scores on materialism might explain why the R-squares are lower in these two samples. When individuals score too high on materialism, the model becomes less relevant, because of a decreased importance of the moderators. Future studies should replicate this finding on other samples using a different method, to ascertain this possibility.

It is interesting to note that the Adjusted R-Squares coefficient is smaller for tightwadism in all countries. The model is less relevant for this AC lifestyle. Future studies should look at variables not analyzed in the current study, as they might have a stronger effect on the scores of tightwadism. Rick, Cryder and Lowenstein (2008) showed that psychological traits correlate with tightwadism. For example, tightwads score higher on a guilt scale. Interestingly, as reviewed before, tightwads save because they feel pain when spending. Therefore, a possible

interesting avenue of research is to study the mechanism that triggers this painful experience. Is it that tightwads are simply more attached to money?

The purpose of this study was to test the generalizability of the results, by recruiting participants of different nationalities. However, one needs to keep in mind that this generalizability is limited in the current paper. The sample of Canadians, Americans and Indians are all of MTurk workers, which do not represent a total population in a given country. The high scores on materialism obtained with Indians reinforce this point. In Brazil, the sampling method is more rigorous, as all customers of the financial institution have the same chance to take part in the study. This guarantees the participation of subjects from all social spheres. Nonetheless, the results might be only applicable for that institution or city in which the study took place.

The generalizability of the findings is an important concern. Nonetheless, the current data collected with Brazilians provides a unique opportunity. The financial institution that supported the data collection not only agreed to collect data with their customers. They also crossed their answers in the variables analyzed in this study with some real banking behaviors. This provides an opportunity to go beyond just measuring participants' intent to save. The next study examines the effect of adopting an AC lifestyle on one's bank account. For instance, it is possible to test if a frugal has less debt, or a larger account balance than a simplifier. Similarly, it is possible to see how the interaction between materialism and self-control (or long-term orientation) affects one's balance due. These are some of the questions addressed in the next chapter.

Chapter 7

STUDY 4: Anti-consumption lifestyles, socio-demographic data and banking behavior

To what extent does the scores on the AC lifestyles affect real consumer behavior? This question remains unanswered by the previous studies (Studies 1 to 3). Study 4 attempts to answer this question. As described in Chapter 6, the author made a partnership with a Brazilian financial institution. Customers from this banking institution were asked to complete a survey respecting all conditions related to the code of ethics. In this chapter, we look at participants' scores on the dimensions (i.e. frugality, materialism, etc.) and how they compare to their personal income; number of children; average account balance for the last three months; and average balance due for the last three months. New variables required developing new models. These models are presented in this Chapter along with expected results and relevant literature. The first four section of this Chapter presents the research questions along with the results and discussion. The last section summarizes the findings, providing an overview and general discussion.

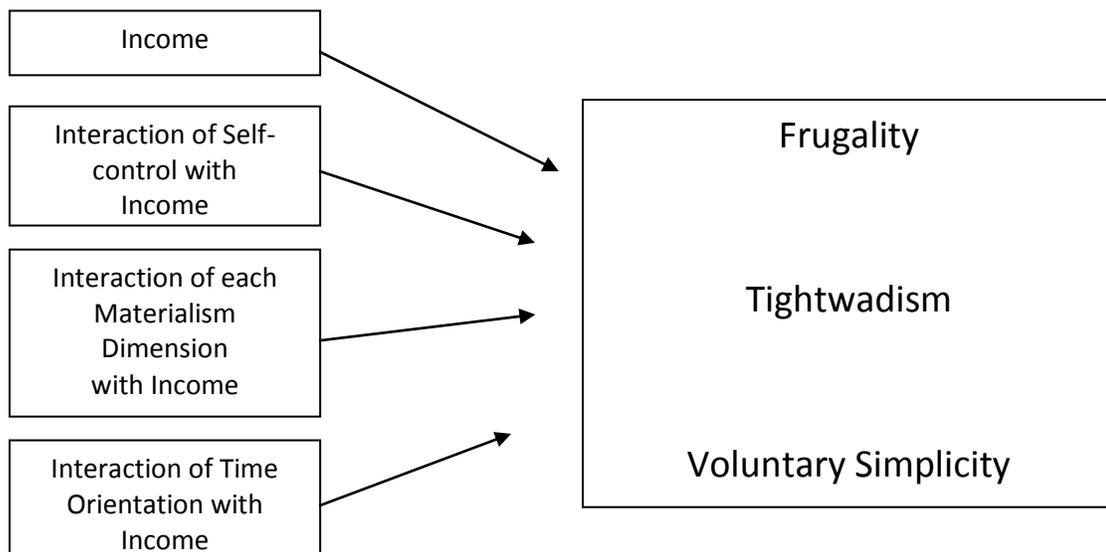
7.1 – AC Lifestyles and Income

There is a naïve notion that individuals adopt AC lifestyles only because they have limited income, and therefore are forced to consume less to live within their means. However, AC lifestyles are, by definition, adopted voluntarily. In other words, if one is not consuming because he cannot pay for a certain good, one is not adopting an AC lifestyle. Rather, one is behaving under financial limitations, and forcibly reducing one's consumption level. As it is shown in Studies 1, 2 and 3, the scores on frugality, tightwadism and VS are largely influenced

by psychological traits. As indicated by Lastovicka et al. 1999, the goal is to confirm that income does not correlate with the scores on AC lifestyles in a Brazilian sample. AC lifestyles are voluntarily adopted by those who want to consume less, by buying less or efficiently using resources (Lee, Fernandez and Hyman 2009). However, literature on AC has been developed and tested only in North American countries, and it is important to confirm the findings in other cultures.

To test the impact of income on the AC lifestyles, we test the model presented in Figure 7.1. In this model, income acts as an independent variable. Additionally, the interactions of income with each of the other variables measured in the survey are included to provide a more comprehensive model. Note that, for parsimonious reasons, the independent variables analyzed in Study 3 (i.e. the materialism dimensions; self-control; and time orientation) are not included in this model. Presenting them again would be cumbersome and not particularly necessary, as the effects of these variables are accounted in Study 3.

Figure 7.1: The impact of income on AC lifestyles



Frugality

The first analysis tests the model using frugality as the dependent variable. The results are summarized in Table 7.1. Contrary to the expectations and previous research (Lastovicka et al. 1999), frugality correlates negatively with income ($\beta = -.080$, $p = .03$). This result shows that in Brazil, individuals save money and resources to deal with their limited income. However, one should note that frugality and many other AC lifestyles were studied almost exclusively in developed countries, where poverty is not as extended as in Brazil. Notably, Brazil has one of the largest gaps between rich and poor (World Fact Book, 2011). Therefore, its citizens live in a social and economical environment where resources are extremely concentrated on the hand of a few. This might explain why frugality correlates negatively with income. Individuals buy less because they need to resourcefully use income when possible. This has profound implications for the AC literature, as it implies that not all cultural groups adopt AC lifestyles voluntarily. In short, in environments where resources are limited, saving is not only an option, but an obligation for those who have limited income.

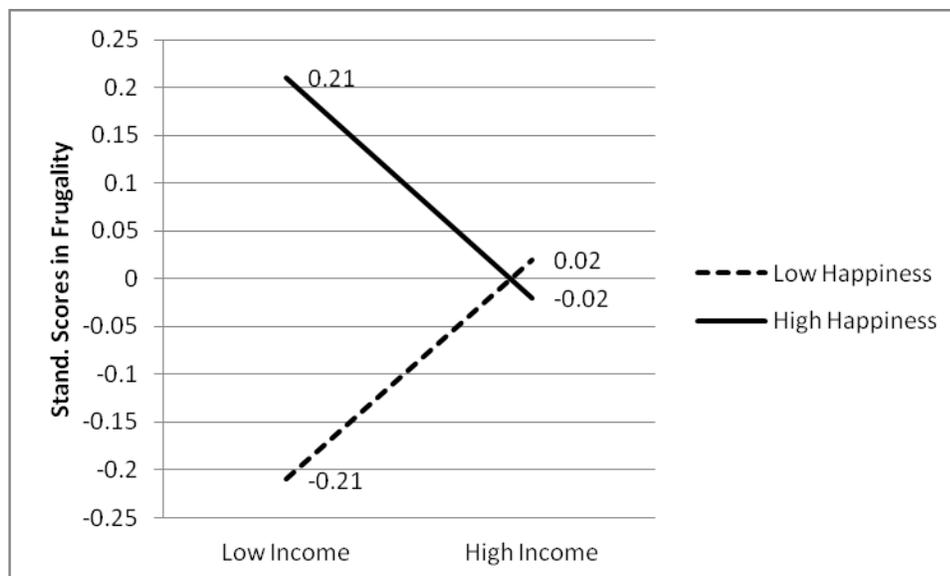
Table 7.1: In Brazil, income and two interaction terms correlate with frugality

Variables	Standardized Beta	Sig.
(Constant)		<.001
Income	-.080	.03
Interaction: Time Orientation and Income	.008	.83
Interaction: Self-control and Income	-.019	.73
Interaction: Happiness and Income	-.121	.02
Interaction: Centrality and Income	.096	.04
Interaction: Success and Income	-.039	.41

Dependent Variable is Frugality

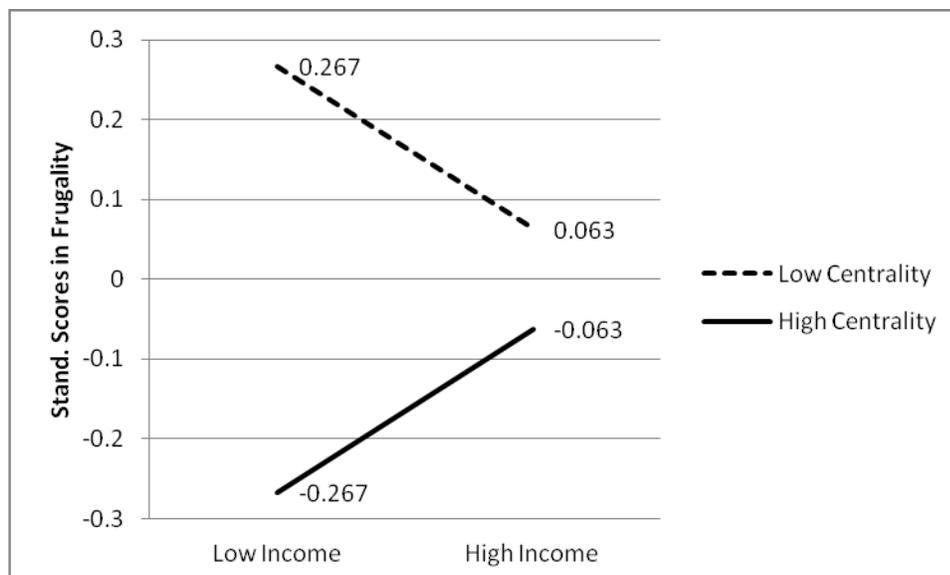
Two interaction terms affect significantly frugality. The first is the interaction between income and the happiness dimension of materialism ($\beta = -.121, p = .02$). As presented in Figure 7.2, the relation between income and frugality is negative for individuals who score high on the happiness dimension of materialism. On the other hand, frugality correlates positively with income when happiness is low. This interaction puts the negative correlation between frugality and income into perspective. Low income leads to higher frugality particularly for those participants who believe that possessions are a source of happiness. Thus, low-income consumers save money and resources to attend to materialistic goals. Specifically, they save money and resources to buy what will make them happier. This pattern of results seems similar to what is found in Study 2 and 3 where happiness interacted with self-control. In those studies, participants who perceive themselves to be disciplined adopt a frugal lifestyle to acquire goods that will make them happier. Interestingly, the present result shows that low-income participants in Brazil also adopt a frugal lifestyle to respond to the same materialistic ambition.

Figure 7.2: In Brazil, income correlates negatively with frugality when happiness is high, but positively when happiness is low



The interaction between centrality and income also correlates significantly with frugality ($\beta = .096$, $p = .04$). As shown in Figure 7.3, income correlates positively with frugality when centrality is high. On the other hand, income correlates negatively with frugality when centrality is low. This result leads to a very different conclusion of the previous finding with happiness. In that case, low-income customers save resources to achieve happiness through possessions. However, low-income consumers who believe that acquiring goods is something central in their lives do not adopt frugality. On the contrary, they have very low scores on frugality. The most frugal consumers in such case are the ones who have low-income and do not believe that acquisition of goods is a central goal in their lives. Again, this finding puts the negative correlation between income and frugality into perspective. Considering these two significant interactions simultaneously, it seems that the negative correlation between frugality and income expresses materialistic and anti-materialistic aspirations.

Figure 7.3: In Brazil, income correlates positively with centrality when centrality is high, and it correlates negatively when centrality is low



Voluntary Simplicity and Tightwadism

The analyses with frugality are repeated using voluntary simplicity (VS) and tightwadism as the dependent variables. The results for VS are presented in Table 7.2, whereas the results for tightwadism are presented in Table 7.3. Differently from what is found with frugality, neither VS nor tightwadism correlate with income. This result confirms what other authors have argued in previous studies (Lee, Fernandez and Hyman 2009). These two lifestyles, VS and tightwadism, are voluntarily adopted rather than enforced by financial constraints or social-economic condition.

Table 7.2: In Brazil, income does not correlate with voluntary simplicity

Variables	Standardized Beta	Sig.
(Constant)		<.001
Income	-.045	.32
Interaction: Time Orientation and Income	-.034	.47
Interaction: Self-control and Income	-.074	.25
Interaction: Happiness and Income	.006	.92
Interaction: Centrality and Income	.054	.34
Interaction: Success and Income	.006	.91

Dependent Variable is Voluntary Simplicity

Table 7.3: In Brazil, income does not correlate with tightwadism

Variables	Standardized Beta	Sig.
(Constant)		<.001
Income	-.040	.38
Interaction: Time Orientation and Income	.005	.92
Interaction: Self-control and Income	-.065	.33
Interaction: Happiness and Income	.038	.56
Interaction: Centrality and Income	-.033	.57
Interaction: Success and Income	-.108	.07

Dependent Variable is Tightwadism

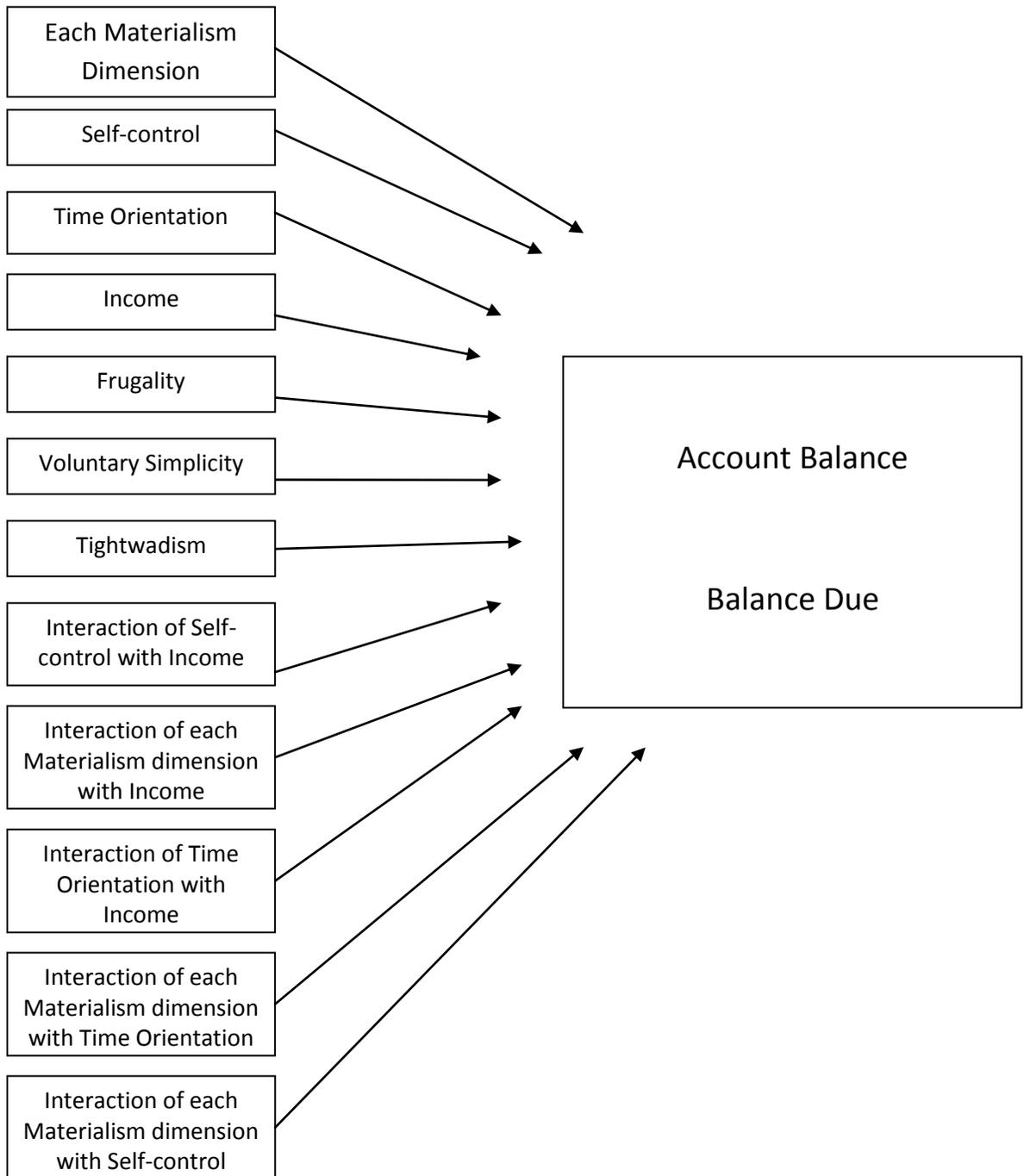
The Tables 7.2 and 7.3 also show that none of the interaction terms correlates significantly with tightwadism or voluntary simplicity. Thus, customers with low or high-income are equally inclined to adopt these lifestyles, regardless of how their materialistic beliefs, self-control and time orientation interact with income.

7.2 – AC Lifestyles and Account Balance

Another unique opportunity presented by the current study is to test the impact of income, the antecedents (i.e. self-control, time orientation and materialism dimensions) and AC lifestyles (e.g. frugality) on participants' account balance and balance due. Given the lack of prior studies, one could expect positive or negative correlations between the independent and dependent variables. For example, one could argue that frugality impacts account balance positively, because frugal customers save money and leave the excess amount in the bank account. However, one could also argue that the account balance of frugal consumers is smaller, because they invest their savings. Given these contradicting hypotheses, it seems less cumbersome and more parsimonious to conduct a post-hoc analysis. Hence, no specific hypotheses are crafted. For a graphical representation of the variables included in the current analysis, please refer to Figure 7.4.

Each participant's account balance and balance due is calculated based on the average balance in the three months prior to the data collection. A more longitudinal data is not possible, as it would involve larger operational costs for the financial institution.

Figure 7.4: The antecedents of balance due and account balance



The summary of the analysis having account balance as the dependent variable is presented in Table 7.4. None of the antecedents on themselves correlates with participants' account balance. Account balance does not correlate significantly with income, long-term

orientation, self-control, frugality, VS, tightwadism, the happiness dimension of materialism, the centrality dimension of materialism and the success dimension of materialism. However, some interactions between these variables correlate significantly with account balance, resulting on an Adjusted R-square equal to .061.

Table 7.4: In Brazil, only the interaction terms correlate significantly with account balance

	Standardized Beta	Sig.
(Constant)		0.74
Income	0.091	0.11
Happiness	-0.041	0.54
Centrality	0.081	0.23
Success	0.021	0.76
Long-term Orientation	-0.022	0.75
Self-control	-0.066	0.37
Frugality	-0.006	0.94
Voluntary Simplicity	0.064	0.32
Tightwadism	0.077	0.20
Interaction: Centrality and Self-control	-0.157	0.01
Interaction: Success and Self-control	-0.036	0.67
Interaction: Happiness and Self-control	-0.097	0.21
Interaction: Happiness and Time Orientation	0.066	0.40
Interaction: Success and Time Orientation	0.078	0.38
Interaction: Centrality and Time Orientation	0.152	0.01
Interaction: Time Orientation and Income	-0.104	0.11
Interaction: Self-control and Income	-0.056	0.52
Interaction: Happiness and Income	-0.174	0.03
Interaction: Centrality and Income	-0.026	0.72
Interaction: Success and Income	0.158	0.03
Interaction: Frugality and Income	-0.08	0.32
Interaction: Tightwadism and Income	0.104	0.14
Interaction: Voluntary Simplicity and Income	0.117	0.07

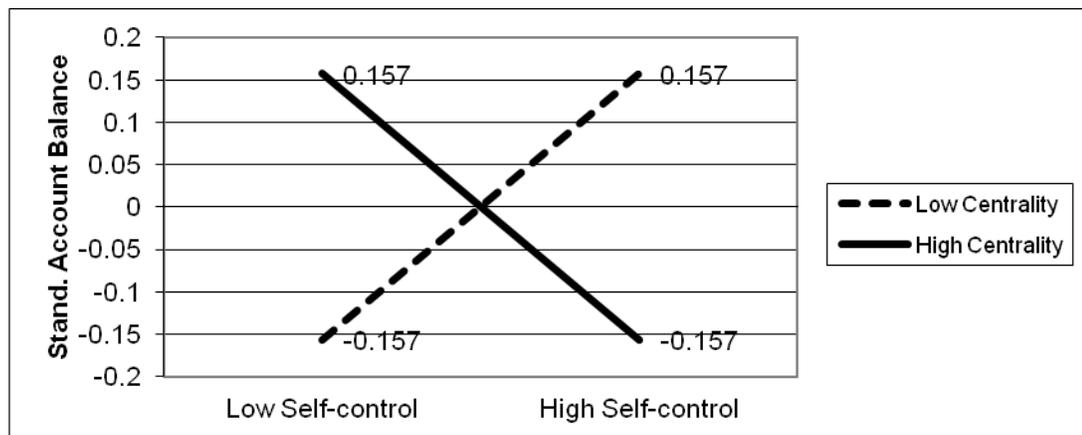
Dependent Variable: Account Balance

Some antecedents were expected to correlate positively with account balance, such as self-control, income, and the AC lifestyles, but they did not. For example, one could argue that income correlates positively with account balance, simply because the larger the income, the larger the balance for a given period. Similarly, highly disciplined individuals would have larger balance than undisciplined ones', because the latter are arguably more likely to fall into debt. In any case, it is possible that the null effect occurs because of some particularities of the Brazilian economy. First, Brazil's economy is booming, despite the crisis in Europe and USA. Its economy has grown continuously in the last 10 years, fuelled by an emerging middle class and by the high price of commodities (Economist 2009). In the last years, at least 20 million Brazilians were lift out of poverty and are now able to consume like never before (World Bank 2010). Therefore, it is possible that Brazilians are optimistically enjoying this booming economy, and not leaving much money on their bank accounts. In addition, this analysis considered account balance, and not investments. Given the somewhat high inflation rate in Brazil (around 5% an year), and the easiness to profit from investing in that country, one is less likely to leave money available at the bank account. At the time of this research, even though interest rates were at its lowest point through the world, Brazilian bond pays 9.75% an year to its investors. This scenario provides huge incentives for saving and investing money, thus reducing the balance in the bank account, which in turn reduces the expected correlation between account balance and the remaining variables.

Despite the null effects, when the variables are allowed to interact, a series of interesting findings emerge. The first significant interaction is between centrality and self-control (see Figure 7.5). In this interaction ($\beta = -.157$, $p = .01$) self-control correlates negatively with account balance when participants score high on centrality. On the other hand, when participants score low on centrality, self-control correlates positively with account balance. This

result suggests that disciplined customers who believe that purchasing is a central goal in their lives tend to have larger account balance. They seem aware of their inability to exert self-control, and the importance of purchasing in their lives, thus they leave the money in their personal account, as they fear falling into temptation and getting into debt. A second combination between self-control and centrality leads to large account balance for those who are highly self-controlled, but do not think that purchasing is a central goal in their lives. These consumers should be able to save money, because they are highly disciplined. However, as they do not think that purchasing is a central goal in their lives, they seem less motivated to invest the money to acquire something else in the future. Due to this relaxed approach to money, they end up leaving it at their bank accounts.

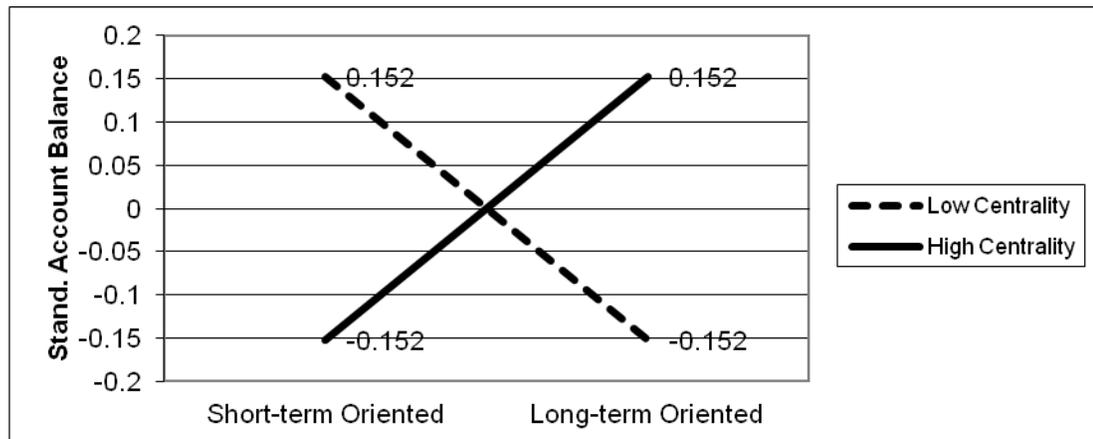
Figure 7.5: In Brazil, self-control correlates positively with account balance when centrality is low, and negatively when centrality is high



The interaction between time orientation and centrality correlates significantly with account balance ($\beta = .152, p = .01$). As shown in Figure 7.6, when participants score low on centrality, time orientation correlates negatively with account balance. However, when participants score high on centrality, time orientation correlates positively with account balance. Account balance is larger in two conditions. The first condition is when participants are short-

term oriented and do not believe that purchasing is a central goal in their lives. Though these consumers are oriented to the present, they end up leaving the money in the bank account, because they are not motivated to invest and attend to materialistic aspirations. On the other hand, customers who think that possessions are not the central goal in their lives, but are long-term oriented, have smaller balance probably because they invest their money, anticipating potential future problems. The second condition generating larger account balance is when participants are long-term oriented and think that the acquisition of possessions is a central goal in their lives. These customers are concerned with the future, and they leave the money in the bank account because they need the resources available to answer to materialistic impulses. Interestingly, customers who score similarly on centrality but who are short-term oriented have smaller account balances. They probably answer to their short-term materialistic impulses and end up overspending, ending up with smaller account balance.

Figure 7.6: In Brazil, long-term orientation correlates positively with account balance when centrality is high and negatively when centrality is low

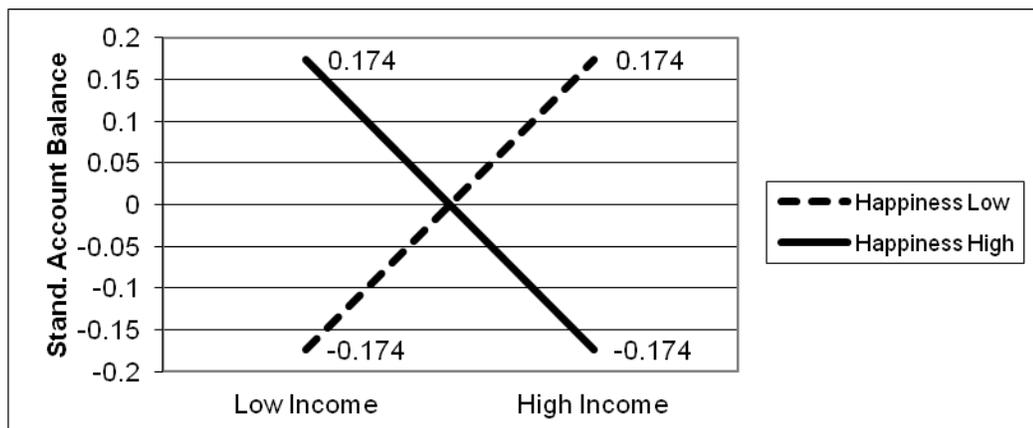


A third interaction that significant correlates with account balance is the one between happiness and income ($\beta = -.174, p = .03$). As shown in Figure 7.7, when participants score high on

happiness, income correlates negatively with account balance. However, this correlation is positive when participants score low on happiness. Account balance is larger in two conditions. The first condition is when participants have low-income and score high on happiness. These participants are probably saving to buy in the future goods that will make them happier. They should be investing their money, but they are not because they are less informed about investments. They are likely unaware of this option because they have low-income and income correlates very positively with education in Brazil (França, Gasparini and Loureiro 2005).

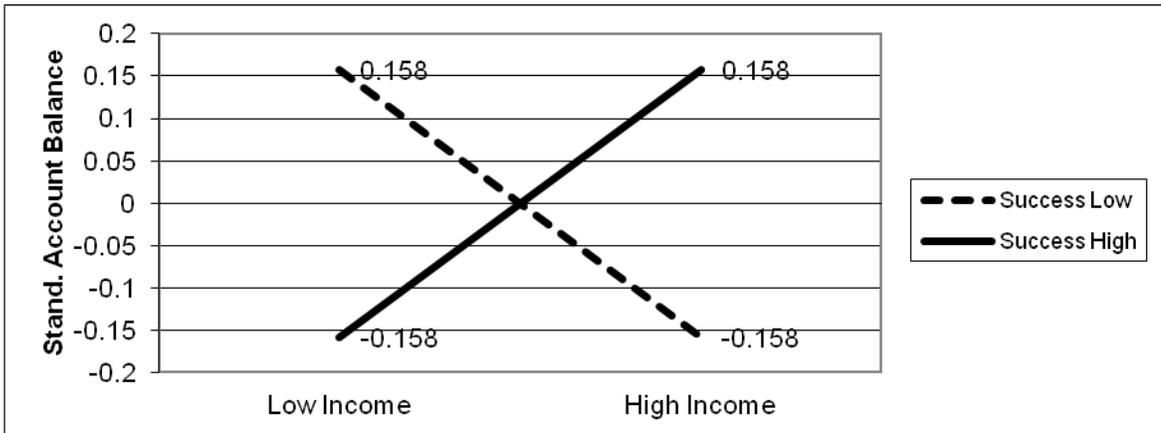
The second combination that lead to larger account balance is when high-income is combined to low happiness (see Figure 7.7). These individuals are probably relaxed with money, as they do not aspire to buy anything to make them happier. They are also less likely to invest, as they are less motivated to buy something in the future that will make them happier. This relaxed posture creates the perfect combination, where the funds not spent in the everyday costs of living is left in the bank account. Curiously, high-income individuals who believe that possessions are a source of happiness are unable to behave similarly. Either they save their money to buy something substantial in the future, or they fall into materialistic temptations, reducing the available asset in their bank accounts.

Figure 7.7: In Brazil, income correlates positively with account balance when happiness is low, but it correlates negatively when happiness is high



The fourth significant interaction occurred between success and income ($\beta = .158$, $p = .03$). As shown in Figure 7.8, when participants score high on success, the correlation between income and account balance is positive. On the other hand, when participants score low on success, this correlation is negative. As in previous results, two combinations between success and income lead to higher account balance. The first combination occurs for low-income participants who believe that possessions do not signal success. These customers are relaxed with money, as they do not have strong materialistic ambitions. They also have low-income, suggesting that they are not informed about investments. This combination of limited information about investments with a relaxed posture toward possessions might be making them more inclined to leave their money in the bank account. This logic is not valid for low-income participants who score high on success, probably because the latter are constantly tempted to buy to signal success, thus having a smaller balance. The second combination leading to larger account balance is when participants have high income and believe that possessions signal success. Differently from low-income participants, these customers are probably well informed about investments. They are highly motivated to buy goods that will signal their success, but still leave the money in the bank account instead of investing their reserves. It is unclear at this point why they do not invest their money, to signal success more quickly and avoid having their savings eaten by inflation. This question needs to be tackled by future studies.

Figure 7.8: In Brazil, income correlates positively with account balance when success is high, but it correlates negatively when success is low



It is important to point the practical implications of the findings above. A practitioner can work on increasing customer loyalty. If a customer is motivated to invest his money left in the account, this customer is less likely to switch to another financial institution. To motivate customers to invest, one may use appeals that match the customer's own view of the world. For example, it is shown that low-income participants who score high on happiness have a larger account balance. If an institution identifies its low-income customers with similar motivation, it will be able to communicate and sell a given investment more easily, using arguments that are equivalent to the customers' personal goals.

The next section will revisit the current model, but this time having balance due as the dependent variable. This is an interesting exercise, as it shows the profile of the Brazilian customers who are highly in debt.

7.3 – AC Lifestyles and Balance Due

To test how the antecedents affect balance due, only the 172 participants with balance due are considered. These customers own a debt of R\$ 1,220.36 (roughly \$660) on average with

a large variation amongst them (standard deviation is equal to R\$ 1,976.20 or roughly \$1068). Financial institutions in Brazil offer pre-approved credit to their customers, without the need to order a loan. This credit is always available and is used whenever the qualified customer wants. However, this service comes with a price, as substantially larger interest rates are applied for those who use it. In addition, high-income is a necessary condition to have access to this pre-approved credit. Thus, low-income individuals are considerably less likely to have balance due, as financial institutions do not offer them this service. To deal with this bias, the variable balance due is transformed into a new one named “weighted balance due”, which takes into account the customers’ income. In time, weighted balance due is the mathematical result of the division of balance due by income. This transformed variable points that the 172 participants own, on average, 28.43% of their monthly income to this service.

The results of the regression analysis using weighted balance due as the dependent variable are presented in Table 7.5. Only two dimensions correlate directly with the dependent variable. Success correlates negatively with weighted balance due ($\beta = -.214$, $p = .05$), though a positive correlation would be expected. This finding is surprising because individuals motivated to signal success through possessions are constantly tempted to purchase goods that signal success, and thus more likely to own larger debts as they answer to this materialistic goal. However, the result questions this rationale and future studies might provide alternative explanations. A plausible reason is that Brazilians are concerned with signaling success by purchasing only goods that act as undeniable signals of success. In other words, instead of constantly signaling success by purchasing several minor goods, Brazilians who score high on success might be motivated to signal only with possessions that are unquestionable signals of one’s success in life. In order to portray such honest signals, these customers save money,

spending only on goods/items that are irrefutable signs of success (such as a fancy car). Consequently, they save money and own less debt relative to their income.

A second factor that correlates directly with weighted balance due directly is VS ($\beta = -.283, p = .006$). This negative correlation is less surprising. Simplifiers should own less debt, given that they are less tempted by materialistic ambitions. However, frugality and tightwadism do not correlate significantly with weighted balance due. Thus, these lifestyles on themselves do not shield one from falling into debt. This occurs because frugality and tightwadism are not anti-materialistic by definition, thus one can be materialistic and frugal (or tightwad) at the same time. Such individuals would eventually fall into temptation, getting into debt to attend to materialistic goals.

Table 7.5: In Brazil, success, voluntary simplicity and the interaction terms correlate with weighted balance due

	Standardized Beta	Sig.
(Constant)		.03
Income	.146	.23
Happiness	.180	.11
Centrality	-.112	.34
Success	-.214	.05
Long-term Orientation	.055	.64
Self-control	-.025	.85
Frugality	.018	.89
Voluntary Simplicity	-.283	.006
Tightwadism	.026	.78
Interaction: Centrality and Self-control	.010	.92
Interaction: Success and Self-control	.062	.61
Interaction: Happiness and Self-control	.031	.78
Interaction: Happiness and Time Orientation	-.010	.93
Interaction: Success and Time Orientation	.076	.58
Interaction: Centrality and Time Orientation	-.211	.05
Interaction: Time Orientation and Income	-.197	.28
Interaction: Self-control and Income	.392	.02
Interaction: Happiness and Income	.130	.33
Interaction: Centrality and Income	.271	.13
Interaction: Success and Income	.016	.91
Interaction: Frugality and Income	.104	.59
Interaction: Tightwadism and Income	.157	.27
Interaction: Voluntary Simplicity and Income	-.002	.99

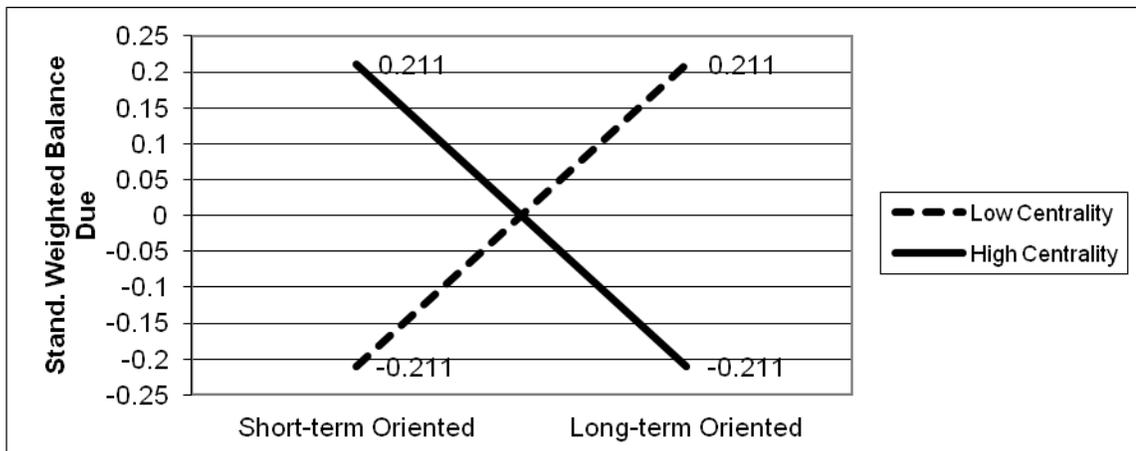
Dependent Variable: Weighted Balance Due

Two interaction terms correlate significantly with weighted balance due. The first interaction is between centrality and long-term orientation ($\beta = -.211$, $p = .05$). Neither centrality nor long-term orientation correlates directly with weighted balance due. When centrality and long-term orientation interact, there is an effect (see Figure 7.9). When participants score high

on centrality, time orientation correlates negatively with weighted balance due. However, when participants score low on centrality, time orientation correlates positively with weighted balance due. "Weighted balance due" is larger for short-term oriented participants who score high on centrality. This result is to be expected with individuals who are focused on the present, and believe that the acquisition of goods is a central goal in their lives. These individuals end up owning more money when they are focused on the present.

There is also a second combination of time orientation and centrality that leads to larger weighted balance due. Participants who are long-term oriented and do not think that the acquisition of goods is a central goal in their lives have larger weighted balance due. A person who plans and does not think that purchasing is a central life goal is precisely the sort of person who would own less debt compared to their income. This person is neither tempted to purchase too much, nor is focused on the present. Future studies will need to investigate these unexpected results and eliminate the possibility of a Type I error.

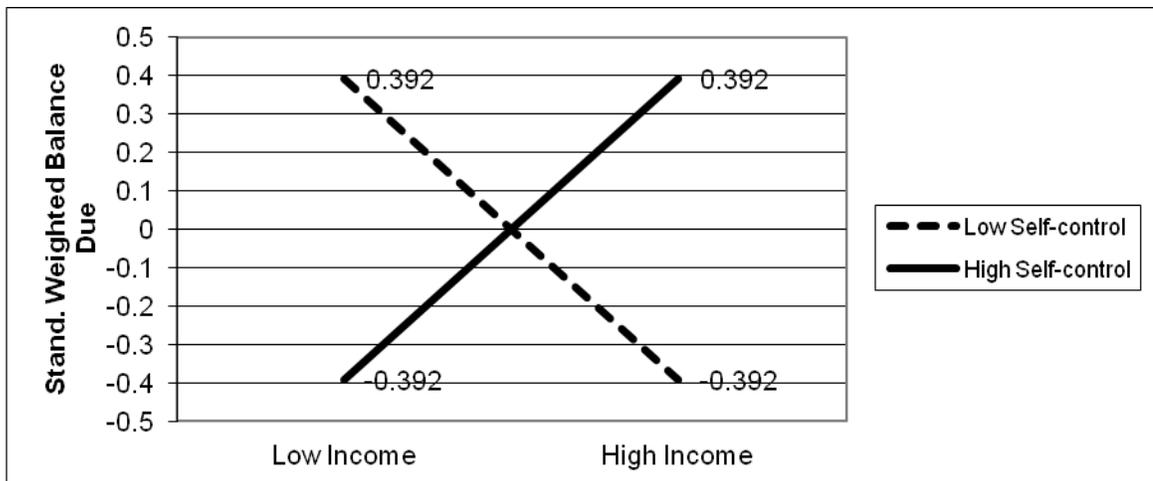
Figure 7.9: In Brazil, time orientation correlates positively with weighted balance due when centrality is low, but positively when centrality is high



A final interaction that correlates significantly with weighted balance due was between income and self-control ($\beta = .392, p = .02$). As presented in Figure 7.10, when participants score

low on self-control, income correlates negatively to weighted balance due. However, when participants score high on self-control, income correlates positively with weighted balance due. The combination of self-control and income lead to larger weighted balance due in two occasions. First, low-income participants who score low on self-control tend to have larger weighted balance due. These customers are undisciplined and do not have the income to sustain their seemingly disorderly purchasing habits. Interestingly, self-controlled participants with similar income level are immune to this effect, and discipline themselves to avoid owing larger debt.

Figure 7.10: In Brazil, income correlates positively with weighted balance due when self-control is high, but It correlates negatively when self-control is low



A second combination that leads to larger weighted balance due occurs for high-income participants who are highly self-controlled. This is a somewhat counter-intuitive result. One would expect such customers to be able to regulate their purchase habits and use their income to avoid falling into debt. A possible explanation relates to overconfidence (a bias in one's judgment of own performance). Overconfidence is a common phenomenon that affects a wide array of behaviors. For example, overconfident CEOs have poor investment performance (Malmendier and Tate 2005). Similarly, overconfidence plays an important role on pathological

gambling, such that pathological gamblers process information about confidence and control more poorly, harming their performance (Goodie 2005). The pervasive effect of overconfidence also occurs in consumption-related phenomenon. Consumers who overestimate their credit ratings are less likely to budget, save and invest regularly (Perry 2008). In sum, overconfidence has several negative effects, and it is possible that it explains the current counter-intuitive result. These participants may be overconfident with their own self-control. In other words, they report to have high self-control, when in fact they do not have self-control. This erroneous judgment combined with high-income is a perfect fuel for owning larger debts. It makes the person believe that he will be able to pay the debt in the future, after exerting self-control, and controlling expenses. Future studies should investigate this interesting finding.

We have looked at the effect of the antecedents on account balance and weighted balance due, the next section will look at the effect of another demographic variable on the scores of AC lifestyles. Specifically, the analyses will examine if number of children correlate with the scores on frugality, tightwadism and voluntary simplicity.

7.4 – AC Lifestyles and Number of Children

Two opposing hypotheses are tested in this stage. The first argues that AC lifestyles correlate positively to number of children, because the more children one has, the more one will be motivated to reduce consumption and make ends meet. However, the second hypothesis argues in favor of the exact opposite. That is, AC lifestyles correlate negatively to number of children, because parents are pressed to purchase goods that they would normally not, such as toys, video games and the like. As a result, they would see themselves as less frugal or tight with money.

To test which of the two concurrent hypotheses are correct, regression analyses are calculated having number of children as the independent variable and each of the AC lifestyles as the dependent variables. The results indicate that the second hypothesis is correct. In Brazil, AC lifestyles correlate negatively with number of children. The scores on frugality ($\beta = -.104$, $p = .03$), voluntary simplicity ($\beta = -.102$, $p = .03$) and tightwadism ($\beta = -.106$, $p = .02$) correlate negatively with number of children. These correlations are not particularly strong, but due to their consistency through the AC lifestyles, number of children act as an obstacle for the adoption of AC lifestyles.

With the information on number of children, other interesting questions are explored. These questions are somewhat less related to the purpose of this paper, thus they will be briefly explored. One question is the correlation between materialism dimensions and number of children. Curiously, happiness ($\beta = -.052$, $p = .27$) and success ($\beta = -.015$, $p = .75$) do not correlate significantly with number of children. However, centrality correlates positively with number of children ($\beta = .104$, $p = .03$). In other words, Brazilians who have children see the acquisition of possessions as a central goal in their lives. Future studies should investigate the reasons for this finding, but a possible post-hoc interpretation is that parents seem concerned with acquiring possessions, possibly to provide them to their children. Does self-control and time orientation correlate with number of children? It was found that self-control ($\beta = -.050$, $p = .41$) and time orientation ($\beta = -.041$, $p = .50$) do not correlate significantly with number of children, suggesting that these personality traits are not relevant predictors of number of children.

7.5 – General Discussion

A summary of findings from the Brazilian study is presented in Table 7.6. The AC lifestyles correlate very little with the socio-demographic and banking behavior variables. AC lifestyles correlate negatively with number of children, showing that parents have a hard time to reduce their consumption levels. As expected, with the exception of frugality, AC lifestyles are uncorrelated to income. In addition, participants' account balance is not influenced by any AC lifestyle, or by the interaction between AC lifestyles and income. This indicates that adopting an AC lifestyle does not change one's amount in the bank account. The money saved might have been used for investments. Surprisingly, only VS correlates negatively with weighted balance due, indicating that this lifestyle truly shields one from the temptations of a materialistic culture. This is probably true due to its inherent antimaterialistic motivation. Frugality and tightwadism does not ensure less debt for participants, indicating that even those who declare to be consuming less are not immune from debt.

Self-control and time Orientation have smaller effect than the materialism dimensions. They correlate with the dependent variables only when interacting with materialism. On the other hand, the dimensions of materialism correlate more strongly with the variables analyzed. Though success and happiness do not correlate with number of children, centrality correlates positively. Regarding account balance and weighted balance due, the materialism dimensions have a stronger role than AC lifestyles. High centrality generates larger debt, when combined with short-term orientation, and reduces account balance, when combined with high self-control and short-term orientation. On the other hand, high success correlate to less debt and, when combined with high-income, it leads to larger account balance. Finally, high happiness leads to larger account balance only for low-income participants. These findings point out that

centrality is the most important dimension for the variables studied, acting as a crucial motivational force in favor of increased consumption.

Table 7.6 - Anti-consumption lifestyles, socio-demographic data and banking behavior: Summary of the findings

Variables	Relation with Income	Relation with Number of Children	Relation with Weighted Balance Due	Relation with Account Balance
Frugality	Negative correlation	Negative Correlation	Direct correlation and interaction with Income are not significant	Direct correlation and interaction with Income are not significant
Tightwadism	Correlation is not Significant	Negative Correlation	Direct correlation and interaction with Income are not significant	Direct correlation and interaction with Income are not significant
Voluntary Simplicity	Correlation is not Significant	Negative Correlation	Direct correlation is negative, but interaction with Income is not significant	Direct correlation and interaction with Income are not significant
Success	Interaction of Success and Income does not affect any AC Lifestyle	Correlation is not Significant	Direct correlation is negative, but interaction with Income, Self-control and Time Orientation are not significant	No direct correlation, but interaction with Income is significant
Happiness	Interaction of Happiness and Income affects Frugality only	Correlation is not Significant	Direct correlation and interactions with Income, Self-control and Time Orientation are not significant	No direct correlation, but interaction with Income is significant
Centrality	Interaction of Centrality and Income affects Frugality only	Positive Correlation	Direct correlation is not significant, but interaction with Time Orientation affects Balance Due	No direct correlation, but interaction with Self-control and Time Orientation are significant
Self-control	Interaction of Self-control and Income does not affect any AC Lifestyle	Correlation is not Significant	Direct correlation is not significant, but interaction with Income affects Balance Due	No direct correlation, but interaction with Centrality is significant
Time-Orientation	Interaction of Time Orientation and Income does not affect any AC Lifestyle	Correlation is not Significant	Direct correlation is not significant, but interaction with Centrality affects Balance Due	No direct correlation, but interaction with Centrality is significant
Income	N/A	N/A	Direct correlation is not significant, but interaction with Self-control affects Balance Due	No direct correlation, but interaction with Happiness and Success are significant

Chapter 8

OVERALL CONCLUSIONS

The goal of this thesis is to unveil the motivations behind the adoption of an AC lifestyle. The underlying hypothesis tested throughout this research is that individuals can prevent consumption to answer to materialistic aspirations.

Study 1 and Study 2 test the model on a sample of Canadian students. These experimental studies show important differences between the three AC lifestyles in students. Whereas frugality seems to be a lifestyle adopted by disciplined individuals to attend materialistic aspirations, particularly the ones related to happiness, tightwadism requires self-discipline to answer to anti-materialistic motivations. Finally, VS is essentially an antimaterialistic lifestyle, affected only by materialism, but not by self-control and long-term orientation.

Study 3 tests the generalizability of the findings by recruiting non-student participants from four countries (Canada, Brazil, USA and India). For the Brazilian sample, even those who are not highly disciplined adopt all AC lifestyles to attend to materialistic aspirations. Nonetheless, when self-control and long-term orientation act as moderators, the correlations between materialism and AC lifestyles are often positive. In the Canadian sample, materialism influences all AC lifestyles negatively, and one's discipline increases the scores on AC lifestyles by attending both materialistic and anti-materialistic aspirations, depending on the interaction term. For the Americans sample, materialism has also a very negative effect on AC lifestyles, and though self-discipline increases the likelihood of adopting an AC lifestyle to attend to materialistic goals, this same discipline is more often used to answer to antimaterialistic

aspirations. Finally, the Indian sample indicates that materialism has a robust negative effect on all AC lifestyles. Nonetheless, the scores on tightwadism increase with highly disciplined and materialistic individuals.

As noted, the interactions between the dimensions were not the same in Study 2 and 3. However, most findings in Study 3 shows that one can consume less to attend to materialistic aspirations, particularly in Brazil. On the other hand, discipline seems also an instrument for reducing consumption to attend to antimaterialistic aspirations. Therefore, the differences between the lifestyles are less conclusive in Study 3, and highly dependent on the country of origin. Future research should look to other variables, like social norms, that might explain what motivates one to adopt an AC lifestyle.

Study 4 tests how demographic variables, such as income and number of children, affect the scores on AC lifestyles in Brazil. Number of children correlates negatively with all AC lifestyles, showing the difficulty imposed by parenthood. As expected, tightwadism and VS are unrelated to income. On the other hand, frugality correlates negatively with income, showing that the adoption of frugality is not a voluntary act in Brazil. Nonetheless, it was found that low-income participants adopt a frugal lifestyle to attend to both materialistic and antimaterialistic motivations. Therefore, it is safe to argue that psychological aspects play a stronger role on the adoption of frugality than socio-economical ones.

Study 4 also tests how AC lifestyles correlate with balance due and account balance. Interestingly, account balance does not correlate directly with AC lifestyles or any of the other antecedents (e.g. materialism, self-control and long-term orientation). However, several interaction terms are found to correlate significantly with account balance. Most notably, an undisciplined person who believes that acquisition is a central goal has larger account balance to

deal with the temptation of consuming. In addition, low-income individuals have larger account balance when they think that possessions are a source of happiness. Regarding balance due, it is found that simplifiers own less debt, whereas frugality and tightwadism do not correlate with balance due. High-income individuals who score high on self-control have large balance due, probably because they are fooling themselves to believe that they are more self-controlled than they actually are.

Overall, this research introduces important developments for the consumer behavior field, particularly for the understanding of anti-consumption lifestyles. The different studies investigate empirically why consumers voluntarily reduce consumption. Important insights germinate from the result analyses with the interaction terms, and the comparison between the four countries. Practitioners working in financial institutions have much to gain from these findings and with particular with the motivations behind consumers' saving behavior. Policy makers can use these findings to promote anti-consumption and a more sustainable economy. Finally, the current research has important theoretical contributions, demonstrating the differences between the AC lifestyles, while paving the way for future research.

8.1 - Study Limitations

Despite providing strong contributions to the field, this research is not without its limitations. Multiple methods are used to reduce method bias. Nonetheless, an important limitation in the pre-test, Study 1 and Study 2 is the arguable artificiality of the experimental method. To elicit the contrast effect, participants were forced to compare themselves to a hypothetical individual. However, it would also be interesting to force the comparisons through

videos or another multimedia tool (as opposed to text), as these are the channel in which consumers are naturally exposed in real world situations.

Self-control and long-term orientation are manipulated simultaneously in Study 2. Study 3 aims to solve this limitation and tests the moderating effect of self-control and time orientation isolated from each other. A different method is used in Study 3 making it unclear at this point if the difference of findings is due to the method or the sample itself.

Even though several antecedents are examined, many others are still worthy investigating such as human values (Schwartz 1992) and social norms. The human values is interesting as it might show the motivational goals that are relevant for the adoption of each anti-consumption lifestyle. As for social norms, it would be interesting to know if consumers who adopt AC lifestyles are somewhat more resistant to follow social norms and adopting these lifestyles as a way to refuse the established idea that happiness is obtained through consumption. Social norms should be investigated as a direct predictor of AC lifestyles, like materialism was in the current paper. It would be an interesting research question, which would test if consumers avoid consumption because of social norms.

Limitations regarding the scales should also be pointed. The voluntary simplicity scale (Iwata 1997, 1999, 2006) is under-tested by the literature. Even though it performs well in the current study, future research should focus on assessing the reliability of this scale. Surprisingly, the Cronbach's alphas obtained in tightwadism are very low in the Indian and Brazilian samples. Similarly, the reliability index for the centrality dimension of materialism is very low for Canadian students. Future studies might obtain different results, due to the error measurement of these constructs.

Finally, a great effort is dedicated to conduct studies with different samples, as it allows for testing the generalizability of the model. Nonetheless, as argued before, one has to consider the sampling method before applying the results of this study. The results are highly dependent on the sample analyzed, and the conclusions can only be generalized for the population in which the samples originated.

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Appendix 1 - Voluntary Simplicity Scale adapted from Iwata (1997, 1999, 2006)

Please, indicate how much you agree with the statements below using the scale provided:

	1	2	3	4	5
1 - I fully adhere to a simple lifestyle and only buy necessities					
2 - I never buy impulsively					
3 - I only shop after seriously considering whether or not an item is absolutely necessary					
4 - I am more concerned with personal growth and fulfillment than with material possessions					
5 - Even when I have money, I never buy things unexpectedly					
6 - I want to be as self-sufficient as possible					
7 - I want to grow my own food in the future					
8 - In the future, I want to produce my own goods (such as clothes and tools)					
9 - I try very hard not to pollute or destroy the environment					
10 - People don't notice that excessive consumption hurt the environment					
11 - Conserving the environment is extremely valuable					
12 - I would adopt a simple lifestyle even if I were able to live extravagantly					
13 - A simple lifestyle makes you financially independent from others					
14 - A life of convenience and comfort is extremely important to me					