ORGANIC COTTON APPAREL: KNOWLEDGE LEVEL, ATTITUDES, VALUES, AND THE CONSIDERATION OF FUTURE CONSEQUENCES IMPACT ON PURCHASE INTENTIONS

By

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IMPACT ON PURCHASE INTENTIONS

Abstract

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Concern for the environment has steadily increased, and interest in understanding certain actions that consumers take to help alleviate some of the adverse environmental impacts has become the focal point of much research. Understanding the determinants of more environmentally friendly products like organic cotton apparel is important to better market these types of products. Accounting knowledge level, attitudes, values, and the consideration of future consequences this study aimed to expand on existing research regarding individual's participation in environmentally friendly consumptive behaviors. A survey was written and distributed online to a national sample to measure purchase intentions for organic cotton apparel. OLS and ordered probit models were used to estimate the relationships for an aggregate Pi index, as well as each of the separate purchase intention items from the survey. Biospheric values and subjective norms were found to be the strongest and most consistent predictors for organic cotton

apparel purchase intentions across all estimations. Attitudes, price, country of origin and fiber content were also found to be significant predictors of organic cotton apparel purchase intentions, but varied throughout the estimations. Overall, individuals with strong normative beliefs and environmental values were found to be most likely to express purchase intentions for organic cotton apparel. This information is pertinent for future marketing officials, and retail providers interested in organic cotton apparel.

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Chapter 1

Introduction

Environmental concern has become increasingly more important in recent years. Individuals have become more aware of the pressing needs surrounding the protection of the earth and its resources. Dunlap and Scarce (1991) note "support for environmental protection not only has persisted but also has risen substantially." Due to this increase in concern there has been a shift towards sustainability or sustainable consumption has occurred. The term 'sustainability' or 'sustainable consumption' has acquired several definitions throughout the literature, but the most widely used definition is "meeting the needs of current generations without compromising the ability of future generations in meeting their needs (Brundtland, 1987; Schaefer and Crane, 2005). Some examples of products considered by some as sustainable include organic food products, low-impact laundry detergents, energy efficient appliances, products made from recycled goods, and lastly this study's focus, organic cotton apparel. The present study aims to establish a better understanding of purchase intentions for organic cotton apparel by examining individuals' knowledge level, attitudes, values, and the consideration of future consequences.

Organic food consumption has increased in popularity in recent years, with the organic fruit and vegetables sector totaling 12% of all U.S. fruit and vegetables sales in the U.S. (Organic Trade Association, 2011). Studies have shown that consumers are

willing to pay more for organic food because of health-related and environmentally friendly attributes (Sparks and Shepherd, 1992; Krystallis and Chryssohoidis, 2005; Magistris, 2008). Organic cotton apparel is also considered more environmentally friendly due to its lack of harsh, and sometimes toxic, pesticides traditionally used in conventional cotton production (Organic Trade Association, 2010). Although it has not been shown that organic cotton has any direct health benefits to the consumer, it has been documented to have environmental benefits over that of conventional cotton (Organic Consumers Association). Some of these environmental benefits include the elimination of toxic chemicals, preservation of the biodiversity, and long-term soil fertility (Lee, 2009).

Environmental knowledge, or "the ability to understand and evaluate the impact of society on the eco-system (Haron, Paim, and Yahaya, 2005)," has been shown to be significant in the explanation of various pro-environmental behaviors (Laroche, Bergeron, and Barbero-Forleo, 2001; Tanner and Kast, 2003; Haron, Paim, and Yahaya, 2005; Fraj-Andres, and Martinez-Salinas, 2007). While a high knowledge level has been documented as a positive predictor of environmentally friendly behaviors, the opposite may also be true: low knowledge level regarding impacts of these behaviors has been found to be a barrier to the performance of these behaviors (Connel, 2010). The literature seems to suggest that environmental knowledge is a fundamental determinant of environmentally friendly behavior (Mainieri, Barnett, Valdero, Unipan,

and Oskamp, 1997; Casedesus-Masanell, Crooke, Reinhardt, and Vasishth, 009). Therefore, examining the relationship between knowledge level and purchase intentions for organic cotton apparel is necessary to differentiate between those more willing to purchase organic cotton apparel and those that are not. For the purpose of this study specifically, knowledge level is defined as knowledge of environmental impacts associated with the production and manufacture of organic versus conventional cotton apparel products.

The determinants for purchasing organic products like organic food or organic cotton apparel are complex and involve more than just one component. Attitudes toward organic food consumption have also been used in prior research in order to explain and predict purchase intentions. Several studies have employed Ajzen's (1985) Theory of Planned Behavior (TPB) to better understand the reasons behind organic food consumption (Vermeir, Verbecke, 2006; Vermeir, Verbecke, 2004; Sparks, Shepherd, 1992). The TPB has also been used to predict the engagement in various other pro-environmental behaviors (Terry, Hogg, and White, 1999; Cheung, Chang, and Wong, 2000; Heath, and Gifford, 2002; De Groot and Steg, 2007). The TPB states that intentions best predict behavior and that attitudes, subjective norms, and perceived behavioral control are the antecedents to intention (Ajzen, 1985). While attitudes appear to be an important element in the purchase of sustainable products such as

organic cotton apparel, based on the studies mentioned previously, they are not the soul determinant.

Values are another component that have been used in the process of understanding the consumption of eco-friendly goods. “Values are a motivational construct; they represent broad goals that apply across contexts and time” (Rokeach, 1973; Schwartz, 1997; Schwartz and Bilsky, 1987, 1990; Bardi and Schwartz 2003). The Social Science Dictionary (2008) defines values as cultural standards held by individuals or groups of people about what is good, bad, right or wrong that serve as general guidelines in life. With either definition, the concept of values has played an important role in understanding environmentally friendly behavior. Studies have shown that particular values are present within individuals who engage in pro-environmental behaviors (Hopper and Nielsen, 1991; Vining and Ebreo, 1992; Stern, Dietz, and Kalof, 1993; Clark, Kotchen and Moore, 2003). Stern, Dietz, and Kalof (1993) conclude that there are three value bases for environmental concern: egoistic (self-interest), social-altruistic, and biospheric concerns. Stern et al.’s (1993) work expanded Schwartz’s (1977) norm-activation model that consisted of only the humanistic altruism concept. Stern et al (1993) believed that environmental behaviors could extend beyond the human species to include concern for other species or the biosphere itself. Much of the literature surrounding values and environmentalism focus on value categories referred to as Self-Transcendence, Openness to Change, Conservation, and Self-Enhancement

(Schwartz, 1992). Self-Transcendence is seen as positively related to pro-environmental behaviors (Stern and Dietz, 1994; Grunert and Juhl, 1995; Stern, Dietz, Kalof, and Guagnano, 1995; Karp, 1996; Stern, Dietz, and Guagnano, 1998; Schultz, Gouveia, Cameron, Tankha Schmuck, and Franek, 2005). Stern et al. (1998) administer a shortened version of Schwartz's (1992) values scale which included 56 value items, the 4 previously mentioned value categories, and 10 value types. This shortened version has been tested and shown to be reliable to that of Schwartz's (1992) longer scale.

Environmental issues have been approached as both a social and a temporal dilemma, encompassing short versus long-term collective interests (Milfont and Gouveia, 2006). Joireman, Lasane, Bennett, Richards, and Solaimani (2001) suggest, along with previous literature, that pro-environmental behaviors usually involve delayed consequences (i.e. the consequences from acting pro-environmentally do not necessarily have immediate outcomes). Rather, these types of behaviors and their associated consequences occur at a future date and time. The Consideration of Future Consequences (CFC) scale (Strathman, Gleicher, Boninger, and Edwards, 1994) measures individual differences in the importance of these immediate versus delayed future consequences. Strathman et al. (1994) indicate that individuals low in CFC are more likely to focus on the immediate outcomes and immediate needs whereas those high in CFC are more influenced by the future consequences of their actions. Research on pro-environmental behavior and temporal orientation (CFC) has found that those who score

higher in CFC are more likely to act pro-environmentally (Strathman et al., 1994; Ebreo and Vining, 2001; Joireman et al. 2001; Joireman, Van Lange, and Van Vugt, 2004). Based on these previous studies and their findings, it can be assumed that individual differences in the orientation toward immediate versus future consequences (CFC) will be important in assessing individual differences in purchase intention for organic cotton apparel.

The purpose of this present study is to examine the predictors or motivations behind purchase intention of organic cotton apparel items. Using knowledge level, attitudes, values, and the consideration of future consequences this study aims to expand on already existing research regarding individual's participation in environmentally friendly consumptive behaviors. Specifically, this study looks at purchase intention of organic cotton apparel. To the author's knowledge there is no existing research specifically using the TPB to predict organic cotton apparel purchases. There is however, existing literature on the willingness to pay for eco-apparel items (Hustvedt, 2006; Hustvedt and Dickson, 2009; Lin, 2010). This study will attempt to provide additional support for the TPB's success in predicting pro-environmental behaviors. Additionally, the study aims to further support the claims made within value research and the literature regarding individuals' CFC while also identifying the key motivations or predictors for organic cotton apparel purchase intentions.

Knowledge level of environmental impacts of organic cotton and conventional cotton production, as well as labeling requirements will be measured. The relationship between knowledge level and purchase intention will be examined. The TPB will be used to determine relationships between purchase intentions and attitudes, subjective norms, and perceived behavioral control. Value orientations will be assessed using the scale developed by Stern, Dietz, Guagnano (1998) based on Schwartz's (1992) value inventory. And finally, the CFC scale (Strathman et al. 1994; Joireman, Shaffer, Balliet, and Strathman, *in press*) will be implemented to evaluate the relationships between purchase intentions for organic cotton apparel and CFC.

Chapter 2

Literature Review

2.1 Cotton

With increased concern surrounding environmental issues, a move towards sustainability or sustainable consumption has emerged. Defining sustainability is difficult, as there are many interpretations of the term, but the most commonly cited definition is “meeting the needs of the current generations without compromising the ability of future generations in meeting their needs (Brundtland, 1987). Sustainable consumption includes, but is not limited to, the consumption of organic produce, meat, and or dairy products, the purchase or consumption of products made from recycled materials, and the focus of this research paper, the purchase of organic cotton apparel. The word sustainable has also been interchanged with “green,” ”environmentally-friendly” or “eco-friendly” consumption throughout the literature. One specific form of a sustainable consumption option is organic cotton apparel. Organic cotton apparel is recognized by some as more sustainable because of the absence of toxic insecticides and pesticides used in production and the strict standards that must be met by producers, processers, and manufacturers involved in order to be labeled organic.

Cotton is the most preferred or purchased natural fiber, but it also uses many harsh, and sometimes toxic chemicals throughout production (Nimon and Beghin, 1999). According to the Organic Consumers Association (OCA), traditional cotton uses 25% of the world's insecticides, and 10% of the world's pesticides, yet is grown on only 3% of the world's farmland. They also state that approximately a third of a pound of chemicals is needed in order to grow enough cotton to produce one t-shirt. Apparel processing and manufacturing also adds to the list of adverse environmental impacts associated with cotton apparel. Myers and Stolton (1999) "there are environmental impacts at each stage of the cotton textile lifecycle which vary according to how the fiber is cultivated, the way the fabric is made and how it is used (p.45)." With that said, organic cotton production, and the manufacturers of organic cotton apparel aim to alleviate some of these adverse environmental impacts. Environmental benefits of organic cotton production include the elimination of toxic chemicals, preservation of the biodiversity, and long-term soil fertility (Lee, 2009).

At the production level, organic cotton crop must meet the standards set by the National Organic Program (NOP). The NOP is part of the USDA, and is responsible for the national standards or requirements for organically produced agriculture. They "assure consumers that the organic agriculture products they purchase are produced, processed and certified to consistent national standards (USDA, 2002). However, the NOP does not cover textile processing or manufacturing standards that employ the use of organic

cotton or other organic fibers. After the production stage of organic cotton is complete and apparel processing and manufacturing begins there are other standards that must also be met in order to be labeled 'organic' or 'made with organic.' The Global Organic Textiles Standards (GOTS) is recognized as the leading processing standard for textiles made from organic fibers worldwide (GOTS, 2010). A USDA (2011) Policy Memo confirms that textile products produced in accordance with the GOTS may be sold as 'organic' in the U.S. though they may not refer to NOP certification or carry the USDA organic seal. This means that a garment that will be labeled organic must consist of organically produced cotton that has met the requirements set by the USDA.

The GOTS (2008) defines a high level of environmental criteria along the entire supply chain of organic textiles and requires compliance with social criteria as well. As mentioned before the standards for labeling begin with organic cotton production. All organic cotton that is to be used in the making of organic cotton apparel must meet NOP requirements. Then it moves down the textile supply chain to the processors and manufacturers, stating that a textile product carrying the GOTS label 'organic' must contain a minimum of 95% certified organic fibers, whereas the 'made with organic' must only contain a minimum of 70% organic fibers. This 70% minimum is the cut off and anything falling below the 70% level will not qualify to carry the GOTS label. Also, the mixing of conventional and organic fibers of the same type is prohibited. Please

refer to the GOTS website for more information regarding standards and certification requirements for textiles.

2.2 Knowledge Level

"Knowledge is fundamental to attitudes and behavior (Mainieri et al., 1997)." Haron et al. (2005) offer support for this claim in their study when they found knowledge to be positively correlated with environmental attitudes, behaviors, and participation. Furthermore, Kaiser, Wolfing, and Fuhrer (1999) find environmental knowledge to be a significant pre-condition to ecological behavior intention. Tanner and Kast (2003) also found knowledge level to be a determinant of eco-conscious consumer behavior. Consumers that are willing to pay more for products that are more environmentally friendly, such as organic cotton apparel, are said to operate from a base of knowledge regarding the environmental practices used to produce those goods (Casadesus- Masanell et al., 2009). Several other studies have found relationships between environmental knowledge and environmentally friendly behavior. Mainieri et al. (1997) found environmental knowledge to be a predictor of green buying. Fraj-Andres and Maritnez-Salinas (2007) find that environmental attitudes have a significant effect on ecological behavior and this is moderated by environmental knowledge. Knowledge, or rather a lack of knowledge, has also been seen as a barrier to the purchase of environmentally friendly products. Knowledge level regarding

environmentally preferable apparel (i.e. organic cotton apparel) has been found to be one internal barrier to acquisition (Connell, 2010). For the present study knowledge level is defined as the level of knowledge surrounding the environmental impacts and labeling information of apparel products, both organic and conventional (non-organic).

Product information regarding environmental practices can be provided to the consumer through the use of labels like fair-trade or organic. It has been shown that consumers are willing to pay a premium for items that are labeled organic and other goods with minimal environmental impacts (Ha-Brookshire and Norum, 2011; Casadesus-Masanell et al., 2009; Guagnano, 2001; Husdvedt and Dickson, 2007; Husdvedt and Bernard, 2008). There still remains confusion even with the addition of these labels. Hoogland, de Boer, Boersema (2006) find that, although consumers recognized the organic logo they would tend to underestimate the distinctive advantage that it represented. It appeared that the logo was not entirely understood but still generated positive beliefs about the product's attributes. Assessing the level of knowledge that consumer's hold regarding environmental impacts of conventional cotton production and apparel manufacturing in contrast to organic cotton apparel, is necessary to better understand the types of consumer's who might purchase organic cotton apparel.

RQ1a: What is the level of knowledge regarding the impacts of conventional cotton production and labeling requirements for organic cotton apparel?

RQ1b: What is the relationship between knowledge level and purchase intention of organic cotton apparel?

H1a: Overall, knowledge level of the impacts environmental impacts of cotton production and labeling requirements will be low.

H1b: Individuals with a higher knowledge level of the impacts associated with cotton production/labeling requirements will tend to express greater purchase intention for organic cotton apparel.

2.3 The Theory of Planned Behavior

Attitudes have long been studied in the field of social psychology and are considered a fundamental construct for most social scientists (Eagly and Chaiken, 1993). There are several different definitions of attitude, but according to Eagly and Chaiken (1993) an *attitude is the psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.* One topic of research in the concept of attitudes is the question of how attitudes impact behavior. In an attempt to better understand the psychological processes by which attitudes might mediate behavior, Fishbein introduced the Theory of Reasoned Action (1975) with the collaboration of Ajzen. This later became what is known as The Theory of Planned Behavior in which an additional component, perceived behavioral control was added to

the two existing components (Ajzen, 1985). Ajzen's Theory of Planned Behavior is the model that will serve as the theoretical framework for this research.

The Theory of Planned Behavior (TPB) is an extension of Fishbein and Azjen's (1975) Theory of Reasoned Action (TRA). The TRA indicates that intentions predict behavioral outcomes, and attitudes and subjective norms are the two basic determinants of intention (Ajzen and Fishbein, 1980). Intentions are motivational factors that influence behavior, and are indications of how much effort an individual will afford to any particular behavior. In general, the stronger the intention, the more likely an individual will perform the behavior in question (Ajzen, 1991). The attitude component consists of behavioral beliefs or beliefs about whether performing that behavior results in positive or negative outcomes. If a person believes a particular behavior will lead to primarily positive outcomes, that person will generally hold a favorable attitude toward that behavior. The second component of the TRA, subjective norms, is a function of normative beliefs. These normative beliefs refer to people close to the individual and whether or not they believe he/she should perform the behavior. If an individual's referents believe that he/she should perform the behavior, and that individual has a strong motivation to comply with these referents, it is highly likely that the individual will experience a perceived social pressure to do so (Ajzen and Fishbein, 1980).

One drawback to the TRA is the idea that some behaviors may or may not be under volitional control and this is not accounted for within the model. Therefore, a construct called perceived behavioral control (PBC) was added to the two original components of the TRA to form the TPB. PBC addresses whether an individual believes that they are capable of performing a particular behavior. It is the perceived ease or difficulty of the behavior and can include past experience as well as anticipated future obstacles (Ajzen, 1991). A person may hold favorable attitudes, and have strong normative beliefs in regards to performing a certain behavior, but it may not be under the individual's volitional control, and therefore the performance of that behavior may be unlikely.

The TPB has been successfully implemented in predicting and explaining various pro-environmental behaviors and has garnered broad support in reviews and meta-analyses (Armitage and Conner, 2001). It has also been shown to be a relevant theory in better understanding consumers' choice for organic food products (Aertsens, Verbecke, Mondelaers, and Huylenbroeck, 2009). To the authors knowledge no prior research has been conducted evaluating organic cotton apparel purchase intention with the TPB specifically. Other studies have incorporated attitudes to determine willingness to pay for organic cotton apparel (Hustdvedt, 2006; Hustvedt and Dickson, 2009; Lin, 2010). There is however, a rather large body of work regarding the TPB and its applications towards a wide-variety of other pro-environmental behaviors. These behaviors range

from recycling (Terry, Hogg, and White, 1999; Cheung, Chang, and Wong, 2000; Boldero, 1995; Chan, 1998), environmental activism (Fielding, McDonald, and Louis, 2008), use of public transport (Heath, and Gifford, 2002) sustainable or organic food consumption (Vermeir, Verbecke, 2006; Vermeir, Verbecke, 2004; Sparks, Shepherd, 1992), fair-trade consumption (Ma, Littrel, and Niehm, 2012) green hotel choice (Han, Hsu, and Sheu, 2010), and carpooling (De Groot, Steg, 2007).

One of the better-researched pro-environmental topics using the TPB is household recycling behavior. Boldero (1995) found attitudes and intentions to be strong predictors of recycling behavior. Chan (1998) had similar findings; attitudes were the strongest predictor of behavioral intentions for recycling followed by PBC and social norms. All three constructs of the TPB were found to be strong predictors of behavioral intention in the Cheung et al (1999) study. Terry et al. (1999) examined the effects of the TPB along with an additional component, self-identity, on recycling behavior. In their analysis, there was some support for the TPB in explaining recycling behavior. Attitudes and PBC were significant predictors of intention, while subjective norms were not. While research using the TPB in the explanation of pro-environmental behavior has differed in the level of significance of each component, most share a common thread; attitudes can often be seen as a strong and significant predictor of behavioral intention.

Attitudes toward organic food consumption is another area in which there is a large body of research on the determinants or motivations behind consumers'

willingness to pay the premium associated with organic food products. Some studies have shown that health-related reasons are strong motivators for the purchase of organic food (Magnusson, Arvola, Hursti, Aberg, and Sjoden, 2001; Chryssohoidis and Krystallis, 2005; Shepherd, Magnusson, and Sjoden, 2005; Chen, 2009). The TPB has been used in several studies to examine the relationships between attitudes, subjective norms, and perceived behavioral control and purchase intentions of organic food. The results indicate that these three components are most often seen as positively related to purchase intention (Sparks and Shepherd, 1992; Tarkiainen and Sundqvist, 2005; Chen 2007). Sparks and Shepherd (1992) use the TPB and self-identification to examine consumer's attitudes towards the consumption of organically produce food. Their findings indicated that all three TBP constructs were significantly related to purchase intention of organic food. Perceived behavioral control had a significant effect in terms of an overall lack of availability of sustainable products. Vermeir and Verbecke (2004) also found a low perceived availability among consumers in their research on sustainable consumption. These authors find that while PCB had no significant effect on intention, subjective norms and attitudes were significant predictors of organic bread and flour purchase intention.

Environmental activism, "the purposeful and effortful engagement aimed at improving or preserving the quality of the environment, and increasing public awareness of environmental issues" has also been researched using the TPB (Fielding et

al., 2008). The TPB was successful in predicting intentions to engage in environmental activism. It was found that those who had more positive attitudes, and a strong sense of normative support, held greater intentions to perform this behavior. PBC did not emerge as a significant predictor contrary to previous TPB predictions.

RQ2a: What is the relationship between attitudes and purchase intention for organic cotton apparel?

RQ2b: What is the relationship between subjective norms and purchase intention for organic cotton apparel?

RQ2c: What is the relationship between perceived behavioral control and purchase intention for organic cotton apparel?

H2a: Attitudes will be positively related to purchase intention for organic cotton apparel.

H2b: Subjective norms will be positively related to purchase intention for organic cotton apparel.

H2c: Perceived behavioral control will be positively related to purchase intention for organic cotton apparel.

2.4 Values

Values, as defined in the Social Science Dictionary (2008), are culturally defined standards held by human individuals or groups about what is desirable, proper,

beautiful, good or bad that serve as broad guidelines for social life. Rokeach (1973) defines values as abstract ideals, global beliefs that transcendentally guide actions and judgments across specific objects and situations. In essence, values serve as a set of standards that guide behavior. The relationship that values have with behavior has been explored in several ways, on both a specific and a more general level. Much research has been done regarding the effect of values on the engagement in various types of pro-environmental behaviors.

Schwartz's (1977) norm-activation model postulates that altruistic (concern for others) behavior occurs when activated by a set of personal norms or obligations attached to that specific behavior. Schwartz noted that, "helping is altruistic only to the extent that it is motivated by internal values." These internal values are the product of the ascribed responsibility and awareness of consequences associated with performing or not performing the behavior. Vining and Ebreo (1992) used elements of Schwartz's (1977) altruism model to successfully predict recycling behavior. Also, Hopper and Nielsen (1991) found that recycling can be seen as a form of altruistic behavior using this model. Clark, Kotchen, and Moore (2003) use the Schwartz norm-activation model to look at participation in a green electricity program and found that altruism and environmentalism appear to be internal variables that influence pro-environmental behaviors.

Stern, Dietz, and Kalof (1993) develop a social-psychological model based on Schwartz's (1977) theory of altruism to examine the topic of environmentalism. They concluded that there are three separate values bases or orientations for environmental concern. The first of these concerns is self-interest (egoistic), the second being social (altruistic) concerns, and lastly, biospheric concerns (Dietz, Fitzgerald, Showm, 2005). Egoism or self-interest concerns are based on the idea that acting in an environmentally friendly manner is in the best interest of the individual. Social-altruistic concern involves the concern for the welfare of other human beings. Finally, biospheric concerns extend beyond the human species to include all species and concern for the ecosystem itself (Stern, Dietz, and Kalof, 1993). Stern et al. (1993, 1994) indicate that all three components predict the intent to engage in environmentalism. De Groot et al. (2007) incorporated altruistic, egoistic, and biospheric concerns into their study in which they examined the TPB and its ability to explain and predict people's intentions to use a park and ride facility in the Netherlands. In this study, it was assumed that environmental concerns could affect behavior-specific attitudes because environmental consequences may serve as part of the behavioral beliefs held by the individual. De Groot and Steg (2007) found that these environmental concerns were directly related to attitudes towards using the park and ride facility.

Rokeach (1973) argued that values are not specific to one situation, but instead they are generalized across many different situations. He developed and tested the

Rokeach Scale of Values (RVS), a 36-item scale consisting of 18 terminal and 18 instrumental values. Terminal values refer to desired end states of being that an individual may wish to achieve during his/her life. Examples of terminal values from RVS are happiness, pleasure, and a world of beauty. Instrumental values refer to preferred modes of behavior, or the ways in which the individual wishes to achieve the terminal values they consider as guiding principles in their life. Some examples of instrumental values from the RVS are self-control, broad-mindedness, and responsibility. In the RVS, participants are asked to rate or arrange the values in "order of importance to you" and as "a guiding principle in your life." Rokeach (1973) found that the Value Survey could successfully differentiate groups of people based on their individual value orientations. Vinson, Munson, and Nakanishi tested the claims of the RVS and found that it is indeed comprised of two value dimensions, terminal and instrumental. They also found that personal values were useful in differentiating between different groups of people (i.e. business-men, students, parents, and the general population), thus confirming Rokeach's (1973) initial findings. Grube, Rokeach, and Getzlaf (1990) use the RVS to distinguish the values between smokers, non-smokers, and ex-smokers. They found that the values of non-smokers were clearly distinct from those of smokers. The RVS has also been used to distinguish the values amongst different groups involved in community forestry (Sinha, and Suar, 2003) and political activism (Mayton and Furnham, 1994).

Schwartz (1992), influenced by Rokeach's work, further developed his theory, to include 56 value items, 10 universal value types, and 4 value categories. These 4 value categories are displayed along a two-dimensional value space. The first dimension is a continuum between Self-Enhancement and Self-Transcendence. This dimension distinguishes between the values of individuals who are more self-interested and those who are more concerned for others. The second dimension is a continuum between Openness to Change and Conservation. This dimension compares the values of individualism, thinking for oneself, to that of following others, and going along with the status quo. Schwartz also notes that within these dimensions there are ten different motivational types. These ten motivational types include:

1. Self-Direction. Independent thought and action; choosing, creating, exploring.
2. Stimulation. Excitement, novelty, and challenge in life.
3. Hedonism. Pleasure and sensuous gratification for oneself.
4. Achievement. Personal success through demonstrating competence according to social standards.
5. Power. Social status and prestige, control or dominance over people and resources.
6. Security. Safety, harmony, and stability of society, of relationships, and of self.

7. Conformity. Restraint of actions, inclinations, and impulses likely to upset or harm others and violate social expectations or norms.
8. Tradition. Respect, commitment, and acceptance of the customs and ideas that traditional culture or religion provide the self.
9. Benevolence. Preserving and enhancing the welfare of those with whom one is in frequent personal contact (the 'in-group').
10. Universalism**.** Understanding, appreciation, tolerance, and protection for the welfare of all people and for nature.

Figure 1 in Appendix A represents the structural relationship of values and the ten motivational types described within Schwartz's theory. The circular shape is said to represent a motivational continuum and the closer any two values are in either direction, the more similar they are in their underlying motivation (Schwartz, 2005). Empirical analysis of the 56 values from 97 samples in 44 countries supports Schwartz's (1992, 1994) postulations of these 10 motivational types found within a 2-dimensional space. Several studies have used Schwartz's value orientations in the examination of pro-environmental behavior. Hansla, Gamble, Juliusson, and Garling (2008) found that value types had direct effects on environmental concerns, as well as indirect relationships through the awareness of consequences beliefs. Schultz, Gouveia, Cameron, Tankha Schmuck, and Franek (2005) found Schwartz Self-Transcendence

values to positively predict environmental behavior. Milfont and Gouveia also found values to be a positive underlying construct for predicting pro-environmental attitudes. This positive effect of values on pro-environmental attitudes has been supported in other studies as well (Nordlund and Garvill, 2002; Stern and Dietz, 1994). Grunert and Juhl (1995) found individuals who held positive attitudes toward the purchase of organic foods were more likely to associate with self-transcendence and openness to change value dimensions.

Due to the length of the Schwartz (1992, 1994) values scale, Stern, Dietz, and Guagnano (1998) administered a shortened version to examine environmental attitudes and behavior. In this compacted version, each of the four value categories were represented with brief, 3-item measures, along with subscales for altruistic and biospheric values which relate closely with Schwartz's benevolence and universalism value types. This brief version proved to be reliable and have predictive success comparable to that of the longer scales. Stern et al. (1998) found that Self-Transcendence, as previously found within the literature (Grunert and Juhl, 1995; Karp, 1996; Stern and Dietz, 1994; Stern, Dietz, Kalof, and Guagnano, 1995), to be a strong and positive predictor of pro-environmental behavior.

RQ3: What is the relationship between values and purchase intention for organic cotton apparel?

H3: Individuals with a more altruistic, biospheric (self-transcendence) orientation will be more likely to express stronger purchase intentions for organic cotton apparel (H3).

2.5 Consideration of Future Consequences

The degree to which an individual is aware of the consequences associated with their behavior as well as the degree to which they are influenced by those consequences is another element related to the topic of pro-environmental behaviors. Consequences, in general, are a key component to understanding why individuals engage in certain behaviors. The consideration of future consequences (CFC) is a personality variable that measures how aware an individual is of immediate, as well as future consequences attached to different behaviors, and how strongly that individual is motivated by the awareness of those consequences (Strathman, Gleicher, Boninger, and Edwards, 1994). Issues surrounding the environment are said to not only to be a social conflict but also a temporal conflict (Joireman, 2005; Joireman, Van Lange, Van Vugt, 2004). Environmental issues propose a short versus long-term interest (Milfont and Gouveia, 2006) in that the impacts certain behaviors have on the environment do not necessarily present with immediate outcomes, but rather the consequences occur well into the future. Studies have supported the claim that pro-environmental attitudes are found to be higher amongst individuals who are more future-oriented. Joireman et al. (2001)

found that those scoring high in CFC expressed stronger pro-environmental intentions, greater involvement in pro-environmental behavior, and a stronger belief in the personal, social and biospheric consequences of environmental conditions. Ebreo and Vining (2001) found individuals with a future orientation were more likely to recycle as well as hold more altruistic views. In another study, Joireman et al. (2004) found that individuals high in CFC were more likely to prefer commuting via public transport. Overall, individuals high in CFC are more likely to support behaviors that benefit the environment and hold positive attitudes towards pro-environmental behavior. Pro-environmental behavior can be influenced by a multitude of other factors including knowledge level of associated environmental impacts, normative beliefs, perceived behavioral control, and value orientations of the individual.

RQ4: What is the relationship between the level of CFC and purchase intention of OCA?

H4: Individuals high in CFC (future oriented) will tend to express greater purchase intentions for organic cotton apparel than those low in CFC.

Chapter 3

Methods

3.1 Participants

Survey responses were collected via a random national panel through an online survey system called MTURK in May of 2012[1]. Comparing our sample to the 2010 U.S Census, our sample is consistent with national statistics. In terms of gender, the percentage of male to female in the U.S was 51% to 49% respectively. The racial distribution for the U.S was also similar to our sample in that approximately 78% were white, 16% were Hispanic, and 13% were African American. The median income in 2010 was $51,914. Approximately 85% of the population were high school graduates and 27.9% had received a Bachelor's degree or higher. The age distribution was also similar, persons between the ages of 18 and 65 were 63% and over the age of 65 was 13.3%. Overall, our sample can be said to be generalizable in comparison to the national statistics (see Table 1.b for our sample demographics)

The survey was designed and written on an online survey system Qualtrics. All participants involved were assured anonymity and asked to read and agree to our informed consent prior to participation. Each of the respondents received remuneration for their participation in the survey. 262 responses were collected. Table 1.b in Appendix

[1] The WSU Internal Review Board qualified this study as exempt prior to release of the online survey.

B provides an overview of the demographic characteristics of the sample. Of those 262 responses, 77% were Caucasian, 7% were Asian, another 7% were African American and 5% were Hispanic or Latino. 55% of the respondents were female and 45% were male. The mean age of participants was 32 years. 9% of the participants received an Associate's degree, 36% received a Bachelor's degree, 11% received a graduate or professional degree and 11% were high school graduates. The majority of respondents fell within the low to moderate income brackets with 31% receiving $20,000 or less annually, 30% receiving $20,001-$40,000, 19% receiving $40,001-$60,000, 11% receiving $60,001-$80,000, 5% receiving $80,000-$100,000 and only 4% receiving more than $100,000 annually.

Prior to survey collection 56% of participants had heard of organic cotton apparel while 46% had not. 25% of those that had heard of organic cotton apparel before the survey had also purchased organic cotton apparel items. The majority of respondents (75%) had not purchased organic cotton apparel prior to completion of the survey. 62% of participants indicated that they typically shop for apparel items in department stores, followed by 18% typically shopping online and 13% indicated thrift-stores or consignment. Table 2 in Appendix B presents all contextual characteristics of the participants.

3.2 Measures

The survey consisted of 6 different sections, including items for knowledge level, Theory of Planned Behavior (TPB) components, values, Consideration of Future Consequences (CFC), demographics, and context specific questions. Table 1.c presents the descriptive statistics for the grouped items in the survey and Table 2.c provides descriptive statistics for all non-grouped items. For the knowledge, TPB, values and CFC sections, respondents were prompted to select along 7-point likert scales ranging from certainly true to certainly false, strongly agree to strongly disagree, extremely important to not at all important, and extremely characteristic to not at all characteristic respectively.[2]

Knowledge

The first section consisted of nine statements that were presented to participants in order to assess knowledge level regarding environmental impacts surrounding the production of conventional cotton and labeling information about organic cotton apparel. Respondents were asked to state how true or false they believed each of the nine statements to be using a 7-point likert scale ranging from

[2] The scales for TPB, Values, and CFC were reversed after data was collected for consistency and data analysis purposes. So after scale transformation a 1 would indicate "Strongly Disagree, Not at all important, Very Characteristic" and a 7 would indicate "Strongly Agree, Very Uncharacteristic, Not at all important" respectively.

"Certainly False" to "Certainly True" where a 1 indicated "Certainly False" and a 7 indicated "Certainly True.[3]" Examples of knowledge statements included: "Organic cotton is grown without the use of toxic and persistent pesticides and synthetic fertilizers," "Apparel made with 95% organic fiber and less than 5% synthetic fibers can be labeled organic." The statements were taken directly, or altered slightly (for false statements) from information provided by the Organic Trade Association (2012) and the Global Organic Textiles Standard (2011) websites. To the author's knowledge no scale exists that has consistently been used to objectively measure consumer knowledge level. Reliability for the knowledge items was extremely low (α=.31) and therefore each question was evaluated separately for descriptive purposes only.

Theory of Planned Behavior

The second section of the survey consisted of statements designed to test attitudes, subjective norms, perceived behavioral control (PBC) and purchase intentions related to organic cotton apparel. Each section of statements was based off of questions found previously in the literature using the TPB to assess intentions to engage in various pro-environmental behaviors (Terry, Hogg, and White, 1999; Cheung, Chang,

[3] The knowledge scale presented to the respondents initially ran from 1 indicating "Certainly True" to 7 indicating "Certainly False." For data analysis purposes the scale for true questions was reversed so each knowledge item could be assessed as correct, incorrect, or unsure. Therefore, after recoding a 5-7 indicated a correct answer, 1-3 indicated an incorrect answer, and 4 indicated unsure.

and Wong, 2000; Boldero, 1995; Chan, 1998 Fielding, McDonald, and Louis, 2008). The statements were then modified to fit the present study's focus of purchase intentions for organic cotton apparel. Each component of the TPB consisted of three to four statements specific to the measurement of attitudes, subjective norms, PBC, and purchase intention. Statements for attitudes included: "Buying organic cotton would be wise/foolish, beneficial/harmful, and good/bad." These statements were rated from 1 to 7, where 1 indicated foolish, harmful, and bad, where as 7 indicated wise, beneficial, and good. Subjective norms, PBC and purchase intentions were all measured using 7-point likert scale formats in which respondents were asked to rate each statement based on their level of agreement, where 1 indicated "Strongly Disagree" and 7 indicated "Strongly Agree." Subjective norms were measured using statements such as: "My family members would want me to purchase organic cotton apparel." PBC statements included: "I believe I have the ability to purchase organic cotton apparel" and "Buying organic cotton apparel is easy." Example statements for purchase intentions included: "I intend to buy organic cotton apparel the next time I go apparel shopping," and "If organic cotton apparel were readily available, I would purchase organic cotton apparel."

Values

The values section of the survey was used to assess the degree to which certain values would be significant in predicting purchase intentions for organic cotton apparel. Values were measured using a 15-item scale adapted from Stern et al.'s (1998) study that examined values and environmentalism. The scale is broken into five sections of values that include 3 items for biospheric, altruistic, conservation, self-enhancement, and openness to change values.[4]

Respondents were asked to "indicate how important each of the following items are as a guiding principle in YOUR life" on a 7-point likert scale where a 1 indicated "Not at all important" and 7 indicated "Extremely important." Examples for each type of the value statements included: "Protecting the environment, preserving nature (biospheric)," "A world at peace, free of war and conflict (altruistic)," "Family, security, safety for loved ones (Conservation)," "Wealth, material possessions, money (self-enhancement)," and "A varied life, filled with challenge novelty and change (openness to change)."

[4] Stern et al. (1998) group biospheric and altruistic values together in their analysis to form the self-transcendence value cluster defined by Schwartz (1992). However, the authors also find that separate 3-item scales for both biospheric and altruistic values to be reliable for predicting environmentalism with α=.84 for biospheric values and α=.73 for altruistic values. Because the impacts of the behavior in question are more environmental in nature we chose to treat biospheric and altruistic values as separate 3-item scales for our analysis.

CFC

The Consideration of Future Consequences scale (Joireman et al. *in press*) was used in order to assess the relationship between individuals' CFC level and purchase intentions for organic cotton apparel. The scale consisted of 14 items, which were broken into two, 7-item subscales that measured individuals' concern with immediate consequences (CFC-immediate) and future consequences (CFC-future).[5] Respondents were prompted to "indicate the degree to which each statement is characteristic or uncharacteristic" ranging from "Very Uncharacteristic" to "Very Characteristic." Example items for CFC-immediate included: "I only act to satisfy immediate concerns, figuring the future will take care of itself" and "My behavior is only influenced by the immediate (i.e. a matter of days or weeks) outcomes of my actions." CFC-future items included: "I consider how things might be in the future and try to influence those things with my day-to-day behavior" and "I am willing to sacrifice my immediate happiness or well being in order to achieve future outcomes."

[5] This two-factor interpretation of CFC differs from that of original scale that averages the future items with reverse-coded immediate items. Also, Strathman et al.'s (1994) CFC scale consisted of only 12 items, whereas Joireman et al.'s (1998) scale, which was utilized in the present study, included two additional items in the future consequences subscale.

3.3 Model Specification

The dependent variables in this study were measured using a 7-point Likert scale. Because this limiting measurement scale creates ordinal (not continuous) data, use of usual regression, presents with several limitations or consequences. Daykin and Moffatt (2002) note three main consequences of interpreting ordinal data using OLS:

1. The interpretation of a linear regression coefficient is in terms of the number of units by which we expect the dependent variable to change in response to a one-unit change in the explanatory variable. Ordinal data cannot be interpreted in the same manner.
2. Use of a linear regression assumes that if two individuals give two identical responses that those two individuals hold the same attitude. Rather, an ordinal response is consistent with a range of attitudes.
3. Responses to each question depend partly on wording, which are not accounted for in a linear model, because responses are modeled directly. Whereas an ordered probit model estimates the parameters of the underlying distribution, rather than the response itself.

Therefore, for this study an ordered probit model was employed for data analysis. Usual regression (OLS) was also used as a point of comparison and because of simplicity of interpretation of the results.

In order to test the hypotheses presented in Chapter 2 the model for this study was generally specified as:

$$PI_i = \sum_{K=1}^{K} \beta_K X_{iK} + \varepsilon_i \tag{3.1}$$

where K represents each of the explanatory variables and I represents each individual in the sample.

The specific formulation of the full model in terms of the variables and hypotheses for this study is[6]:

$$\begin{aligned} PI_i = {} & \boldsymbol{\beta}_1 know1tr + \boldsymbol{\beta}_2 know2 + \boldsymbol{\beta}_3 know3tr + \boldsymbol{\beta}_4 know4tr + \boldsymbol{\beta}_5 know5tr + \\ & \boldsymbol{\beta}_6 know6 + \boldsymbol{\beta}_7 know7tr + \boldsymbol{\beta}_8 know8 + \boldsymbol{\beta}_9 know9 + \boldsymbol{\beta}_{10} att + \boldsymbol{\beta}_{11} sn + \boldsymbol{\beta}_{12} pbc + \\ & \boldsymbol{\beta}_{13} bio + \boldsymbol{\beta}_{14} alt + \boldsymbol{\beta}_{15} con + \boldsymbol{\beta}_{16} se + \boldsymbol{\beta}_{17} oc + \boldsymbol{\beta}_{18} CFCfuture + \boldsymbol{\beta}_{19} CFCimm + \\ & \boldsymbol{\beta}_{20} priorknow + \boldsymbol{\beta}_{21} priorpurch + \boldsymbol{\beta}_{22} price + \boldsymbol{\beta}_{23} quality + \boldsymbol{\beta}_{24} feel + \boldsymbol{\beta}_{25} fit + \\ & \boldsymbol{\beta}_{26} coo + \boldsymbol{\beta}_{27} fibercont + \boldsymbol{\beta}_{28} brand + \boldsymbol{\beta}_{29} variety + \boldsymbol{\beta}_{30} storetype + \boldsymbol{\beta}_{31} gender + \\ & \boldsymbol{\beta}_{32} age + \boldsymbol{\beta}_{33} edu + \boldsymbol{\beta}_{34} income + \boldsymbol{\beta}_{35} race + \varepsilon_i \end{aligned} \tag{3.2}$$

[6] For OLS models avgPi (continuous measure of pi) is used as the dependent variable for the aggregate PI index, but all independent variables are the same.

A compact model[7] was also run for both OLS and ordered probit. The compact model is specified as:

$$PI_i = \beta_4 know4tr + \beta_5 know5tr + + + \beta_8 know8 + \beta_9 know9 + \beta_{10} att + \beta_{11} sn + \beta_{12} pbc + \beta_{13} bio + \beta_{14} alt + \beta_{18} CFCfuture + \beta_{19} CFCimm + \beta_{22} price + \beta_{23} quality + \beta_{26} coo + \beta_{27} fibercont + \varepsilon_i \quad (3.3)$$

However, as noted by Borooah (2002) in equation 3.1, *PI* is a latent variable and equations (3.2, 3.3) are latent regressions which cannot be observed or estimated. The PI level, or level of agreement, however, is able to be observed. So each person (*i*=1….*N*), was assigned to one of seven agreement levels and were associated with one of 7 outcomes (*j*=1, 2….7) such that:

PI_i=1 if Strongly Disagree

PI_i=2 if Disagree

PI_i=3 if Somewhat Disagree

PI_i=4 if neither Agree nor Disagree

PI_i=5 if Somewhat Agree

PI_i=6 if Agree

PI_i=7 if Strongly Agree

[7] The compact model was run in attempts to correct for issues of multi-collinearity. Variables that were insignificant and not hypothesized to be significant were dropped from the equation.

In an ordered probit model, threshold values or "cut points" (δ) for each outcome of PI are also estimated where:

$PI_i = 1$, if $PI_i \leq \delta_1$

$PI_i = 2$, if $\delta_1 \leq PI_i \leq \delta_2$

$PI_i = 3$, if $\delta_2 \leq PI_i \leq \delta_3$

$PI_i = 4$, if $\delta_3 \leq PI_i \leq \delta_4$

$PI_i = 5$, if $\delta_4 \leq PI_i \leq \delta_5$

$PI_i = 6$, if $\delta_5 \leq PI_i \leq \delta_6$

$PI_i = 7$, if $PI_i \geq \delta_6$

So, for example, a person that has a *PI* score/index=4 (neither agree nor disagree), would fall between cut point 3 and cut point 4. For this particular model there were 35 predictor variables used in the effort to determine and explain purchase intentions for organic cotton apparel. When interpreting coefficients and other results from an ordered probit analysis caution must be taken, for it is not the same as an OLS interpretation. Rather, the results indicate and increase (positive coefficient) or decrease (negative coefficient) in the predicted probability of an outcome (purchase intention).

The dependent variable, purchase intention, was represented by 4 different measures of purchase intention. Three individual purchase intention questions, PI1, PI2, and PI3, and an aggregate measure of intended purchase, PI, were used in this paper. The aggregate measure was calculated as the rounded average of the three purchase intention items measured in the survey. The individual purchase intention items and the rounded aggregate item was measured by the integer values, (PI_i=1,2…7). Each of the dependent variables is hypothesized to depend on a number of factors such as attitudes, values, CFC, and individual demographic information as indicated in equation (3.2). Table 2.b in Appendix B provides a description of each variable in the equation and its associated measurement. Results from the ordered probit analysis are presented in the following chapter.

Chapter 4

Data Analysis

4.1 Summary Statistics

The descriptive statistics for all grouped items from the survey are presented in Table 1.c of Appendix C. Due to the inherent grouping of multiple items for each variable (i.e. att, sn, pbc, bio, alt, con, se, oc, CFCfuture, CFCimmed) alpha reliabilities are also reported. The alpha reliabilities for the grouped items were all sufficient, in that previous literature suggests that $\alpha \geq .7$ are acceptable (Cronbach and Shavelson,2004; Cortina. J. M., 1993). All non-grouped items descriptive statistics are presented in Table 2.c of Appendix C. Pair-wise correlations for significant variables from the ordered probit regression and variables hypothesized to be significant were calculated and are presented in Table 3.c of Appendix C . Attitudes (att, r=.5162), subjective norms (sn, r=.5418), biospheric values (bio, r=.5638), and fiber content (fibercont, r=.5110) are all positively and moderately related to the dependent variable, purchase intentions. Based on our hypotheses we would expect to see altruistic values (alt, r=.2875) CFCfuture (r=.2575) to be related to purchase intentions and while they are in fact positive, the relationships are weak at best.

4.2 Results

Ordered probit models were estimated for each of the individual purchase intention items as well as an aggregated index of PI. The three separate items for purchase intentions were analyzed to determine the differences between each due to the differences in wording between the three. Table 2.b in Appendix B provides the specific content of these questions. But for reference, it can be seen that the first PI item was more constricting than the second and third. For example, the second question references an implied encounter and the second implies availability of organic cotton apparel, whereas the first only asks the respondent to indicate whether they plan to purchase, regardless of the situation (i.e. whether they encounter the item or know its availability). The analysis of the differences between these items will provide insight into salient issues surrounding purchase intentions for organic cotton apparel.

An OLS model was also estimated in the same manner for comparison purposes. The OLS model employed the use of a non-rounded average for the aggregate index of PI, creating a continuous variable allowing for interpretation of the OLS results[8]. Model statistics for each of the regressions are presented in the Tables 13.c for OLS and 14.c for the ordered probit. Focusing on the aggregates of the full model we see that for OLS,

[8] OLS was used for comparison between the two models. Some calculations for the ordered probit analysis in order to correctly interpret the coefficients were not calculated in the present research. Therefore, the similarities among significant variables between OLS and the ordered probit models were used for interpretation purposes. However, it the results from the ordered probit models can not be interpreted in the same manner as OLS coefficients. Further analysis is needed.

(N=251) and) the p-value (0.0000) associated with the F-stat (10.23) suggests that the model fits the data well. The R-squared for this model is (.6249) indicating that approximately 62% of the variance of avgPI (see Table 2.b for variable description) is being explained by the model. In the ordered probit, (N=251) and the LRchi2 is (240.09). The pseudo R-square value is (.2776). The pseudo R-squared statistic is not equivalent to the R-squared of an OLS regression, in that it does not measure the proportion of the variance explained by the model. However, Greene (2000) has suggested that as the fit of the model improves the pseudo R-squared increases.

Results for the full models (OLS, Ordered Probit) are also presented in Table 13.c and 14.c, respectively. From the tables we can see that the coefficients for both subjective norms and biospheric values (bio) are positive and significant across all individual Pi items, as well as in the aggregate for both the OLS and ordered probit analysis. Focusing on the OLS coefficients, subjective norms (sn) (avgpi=.280, Pi1=.290, Pi3=.302) are significant at the ($p<.001$) level with the exception of the model for Pi2 (.246), where subjective norms are significant at the ($p<.01$) level. In terms of significance, these results are consistent with the ordered probit analysis except that in Pi2, subjective norms (.312) are now significant at the ($p<.001$) level. So we can see that normative beliefs are impacting Pi in that, the stronger the normative beliefs, the greater the liklihood for stated purchase intentions. Biospheric values (PI=.276, Pi2=.287, Pi3=.293) are also significant at the ($p<.001$) level, where in Pi1 (.244) they are

significant at the (p<.01) level. Individuals that hold environmental values and believe them to be guiding principles in life will be more inclined to have purchase intentions for organic cotton apparel. None of the demographic variables in the full models were significant.

Initially, the models (full models) were run with a large number of predictor variables (see Table 2.b in Appendix B, for full descriptions) in each equation. Due to a lack of significance, most likely caused by multi-collinearity, the model was re-specified to include a limited number of variables. Again, these equations were estimated for the aggregate PI and individual PI items using both OLS and ordered probit. The results for the compacted models are presented in Table 15.c (OLS) and 16.c (Ordered Probit). The main focus of the data analysis will be on the re-specified, compact models. For all significant results from the full models please refer to Table 13.c and 14.c in Appendix C.

Similar to results from the full models, subjective norms and biospheric values emerge as significant predictors across the estimations. In the compact OLS estimation (refer to Table 15.c, Appendix C), the coefficients for the subjective norms variables (avgpi=.194, Pi1=.303, Pi2=.250, Pi3=.321) are all positive and significant at the (p<.001) level. Similarly, the coefficients for the biospheric values variables (avgpi=.264, Pi1=.222, Pi2=.273, Pi3=.293) are also positive and significant at the (p<.001) level. Attitudes emerge as significant predictors in some of the estimations but not others. Attitudes (avgpi= .194 and pi3=.303) are both significant at the (p<.001) level, while in

Pi2 (.172) they are significant at the (p<.05) level and fail to be significant in Pi1. This is an indication that attitudes vary depending upon the situation, as noted by the differences in magnitude of the Pi items.

Another variable that is not consistently significant throughout each of the estimations is perceived behavioral control (pbc). This variable fails to be significant in the aggregate (avgpi), Pi2, and Pi3, and only appears as significant for Pi1 (.224) at the (p<.01) level. It is apparent from these results that availability is a key component when gauging control beliefs about the purchase of organic cotton apparel when referencing the difference between the individual Pi items. Pi1, the only instance where perceived behavioral control emerges as significant is when there is no indication of availability.

Additional variables found to be significant were price, fibercont, and coo. Price was a strong and negative predictor for purchase intentions. Individuals that are less price sensitive will be more likely to express purchase intentions. It appeared significant across all models, with coefficients (avgpi=-.208, Pi1=-.250, Pi2=-.199, Pi3=-.181) significant at the (p<.001) level. When comparing the significant variables across the OLS models, both the full and compact models (Tables 17.c and 19.c, in Appendix C, respectively) we can see that this result differs between the two. In the full model price is only significant for the aggregate (avgpi) and Pi1 whereas in the compact models, price becomes significant for all estimations. Fibercont, fiber content, is positive and significant at the (p<.01) level in the aggregate (.131) and Pi1 (.190), and is significant at

the ($p<.05$) level for Pi2 (.145), while it fails to be significant in Pi3. Coo, country of origin, is positive and significant at the ($p<.05$) level for all estimations (avgpi=.094 Pi1=.104, Pi2=.133) except for Pi3, where it fails to appear significant. This indicates that individuals who express purchase intentions for organic cotton apparel take into consideration what the garment is made of as well as where it was made.

There are some notable differences between some variables that appear significant in the full versus compact OLS estimations (see Table 17.c and 19.c, Appendix C). These differences appear mostly in terms of specific knowledge items. For example, in the full OLS model for PI3, know4tr (.139), know5tr (-.159) and know8tr (-.136) are all significant at the ($p<.05$) level, with know5tr and know8 being negative. Know4tr, know8 and know9tr were all knowledge level items that addressed labeling standards for organic cotton apparel and know5tr assessed knowledge of environmental impacts (see Table 2.b for full descriptions). When looking at the compact model only know5tr (-.130) emerges as significant for Pi3 and know8 (-.105) becomes significant for the aggregate. One other difference is that in the OLS compact, quality (.159) also emerges as a positive and significant predictor for Pi3. This negative sign is not expected and suggests that the more an individual knows about this particular information, the less inclined they are to have purchase intentions for organic cotton apparel.

When looking at the compact ordered probit analysis (Table 16.c), the results appear fairly similar to that of the compact OLS analysis. Subjective norms (sn),

biospheric values (bio), and price are significant for all estimations, where subjective norms and biospheric values appear as positive and significant predictors at the (p<.001) level. Price is negative and significant for the aggregate at the (p<.001) level, and for Pi1, Pi2, and Pi3 at the (p<.05) level. Attitudes, again, vary across the estimations, but are positive and significant for the aggregate (.268) and Pi3 (.331) at the (p<.001) level. Once again, attitudes fail to be significant for Pi1. Perceived behavioral control (pbc) is significant in the aggregate (.130) at (p<.05), as well as (p<.01) for Pi1 (.209). Fibercont is positive and significant for the aggregate (.147) and Pi2 (.140) at the (p<.01) level, and in Pi1 (.180), at the (p<.001) level. Coo is also positive and significant for the aggregate (.098) and Pi1 (.103) at the (p<.05) level, and the (p<.01) level for Pi2 (.131). Both fibercont and coo fail to be significant for Pi3.

When comparing the compacted ordered probit to the full model, there are also some differences between significant variables that appear (see Table 18.c and 20.c, Appendix C). First, perceived behavioral control (pbc) becomes significant in the aggregate estimations, whereas in the full model, it fails to be significant. Second, for Pi3 in the full model, know4tr (.169) at the (p<.05) level and for the compact it does not appear as significant. Also, when comparing the two compact models (Table 19.c, 20.c) there appear to be some more differences as well. For instance, in the OLS estimations, perceived behavioral control is not significant for the aggregate. Also, for Pi3 in OLS, know5tr (-.130, p<.05) and quality (.159, p<.05) are significant, but fail to be so in the

ordered probit analysis. The Consideration of Future Consequences (cfcfuture) and altruistic values failed to be significant in across all models and estimations (full, compact, OLS, ordered probit). Again, for all estimation results please refer to Tables 13.c-16.c in Appendix C. For comparisons of significant variables between models and estimations, please see Tables 17.c-20.c in Appendix C. Due to the differences between the models and estimations our conclusions are limited, but overall, analysis reveals that the subjective norms and biospheric values are consistent, strong and positive predictors of purchase intentions for organic cotton apparel purchases.

To summarize, the results of our analysis indicate that subjective norms and biospheric values are highly significant predictors of organic cotton apparel purchase intentions. Attitudes and perceived behavioral control are also significant but depend upon the circumstance of the individual Pi items. Additional variables found to impact purchase intentions are price, fiber content, country of origin, and quality. Altruistic values and the Consideration of Future Consequences failed to be significant in predicting organic cotton apparel purchase intentions. Each of the previously mentioned variables will be discussed in terms of the importance as well as their implications for application in further detail in the conclusions section. Also, the possible reasons for the insignificance of certain variables will also be discussed.

Chapter 5

Conclusions

Environmental issues have been researched on many levels, and consumers' willingness to purchase goods with less of an environmental impact is one area that has gained much attention. With that in mind, this research sought to provide additional support for using the Theory of Planned Behavior (TPB), values, and the Consideration of Future Consequences' (CFC) ability to predict and explain pro-environmental consumptive behaviors. With the addition of knowledge level, these constructs were used to determine key motivations or reasons for the purchase of organic cotton apparel. Understanding the motives behind these types of purchases as well as understanding the individuals who purchase them is important for the future marketing of these particular products.

Results for the full models indicate that subjective norms and biospheric values are strong, positive predictors of organic cotton apparel purchase intentions. They are consistently significant throughout all models used in the present research. What this suggests is that individuals who carry strong normative beliefs (beliefs of close referents about the purchase of organic cotton) and environmental (biospheric) values are more likely to express purchase intentions for organic cotton apparel[9]. Hypothesis 2b is

[9] OLS analysis was run for comparison purposes, but caution should be taken when interpreting ordered probit coefficient results. The calculations needed to interpret the ordered probit model coefficients

supported. These results are consistent with previous literature that has used either the Theory of Planned Behavior (TPB) or values in the explanation of pro-environmental behaviors. Research using the TPB has found that subjective norms are positive predictors of purchase intention (Sparks and Shepherd, 1992; Fielding et al.,2008; Aertsens et al. 2009). Biospheric values have also been shown to predict the engagement in various pro-environmental behaviors (Stern et al. 1993,1994, 1998; De Groot and Steg, 2007). Most often, the values literature proposes that both biospheric and altruistic values (self-transcendence dimension) should be positive predictors, however our results failed to support altruistic values as a significant determinant of purchase intentions. There could be several possible explanations for this conflicting result. First, organic cotton apparel purchases have primarily environmental impacts. Purchasing organic cotton apparel does not necessarily benefit others and, therefore, is not as salient as biospheric values because of the environmental nature of this particular behavior. With that said, the full models only partially support Hypothesis 3.

As for the other elements of the TPB, some were important in the prediction of organic cotton apparel purchase intentions, while others were not. The finding of differences among significant variables across models is interesting and could have some potentially important implications. Attitudes were significant in the aggregate

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properly were not calculated for the purpose of the present research. The focus here was simply on the magnitude and sign of the coefficients. Further analysis is needed to properly interpret results from the ordered probit models.

model, Pi2, and Pi3. This result may be due to the wording of the items presented in the survey. For instance, looking at Tables (17.c, 18.c), in Pi3, attitudes are a much stronger predictor than compared to Pi2. The purchase intention question for Pi3 was related to "availability" of organic cotton apparel. The item specifically noted "If organic cotton were readily available, I would purchase organic cotton apparel." This suggest that the immediacy or availability (i.e. the ability to go into a store and find organic cotton clothing) of organic cotton apparel could potentially relate to stronger attitudes, increasing the likelihood of purchase intention. Attitudes have typically been found in the TPB literature to be a strong and positive predictor, whereas in our study subjective norms were the most important of the TPB components. Aside from the insignificance of attitudes in Pi1, our results are consistent with previous findings and Hypothesis 2a is supported.

Perceived behavioral control was only significant for Pi1 and not Pi2, Pi3, or the aggregated Pi. This may be due the idea that most individuals from the sample felt as though they possessed the ability to purchase organic cotton apparel when it was available to them. Ajzen (2006) notes that this construct was added to the TPB to account for situations where the individual may not have complete control over the behavior in question. He also states that "a behavior may be said to be under *complete* volitional control if a person can decide at will to perform it or not perform it (Ajzen, 1986)." Perceived behavioral control may not have had a great effect on purchase

intentions because in the present study this particular behavior was believed to be within the individuals' control. Reflecting back on Pi1 from the survey, it states "I intend to buy organic cotton apparel the next time I go apparel shopping." The other items are a little less constricting, for example, Pi2 states: "If I encountered an organic cotton apparel item the next time I went shopping, I would purchase that organic cotton apparel item." This relates back to the idea that availability of organic cotton could be a potential barrier to purchase, in that when organic cotton apparel is available the individuals' control beliefs about purchasing are much stronger, which leads to perceived behavioral control having lesser impact on purchase intentions. Hypothesis 2c was only supported for Pi1.

The Consideration of Future Consequences failed to be significant in any of the models. This conflicts with previous studies that have found a future orientation to be a predictor of pro-environmental behavior (Joireman, 2005; Joireman et al. 2001, 2004; Strathman et al. 1994). However, it may be the case that the environmental values (biospheric) and attitudes towards organic cotton are closely related to the CFC scale and therefore may be capturing some of the variables' effects. Future analysis into these relationships should be conducted to better understand why CFC did not emerge as a significant predictor for purchase intentions.

There were some notable differences between the OLS and ordered probit models that centered particularly around the knowledge items. It was hypothesized that

overall knowledge level would be low, and that those with a greater knowledge level would be associated with an increased likelihood for stating purchase intentions. However, judging from the inconsistencies between the models, an inference into knowledge level as a predictor of organic cotton apparel purchase intentions is difficult. Measuring knowledge level objectively is complicated and no consistent scale for the measurement of knowledge level exists within the literature. However, when evaluating the general level of the respondents, it can be seen that, as hypothesized, overall respondents lacked knowledge regarding environmental impacts and labeling requirements surrounding organic cotton apparel. Interestingly enough, even without a general knowledge base about organic cotton apparel, individuals possessed strong and positive attitudes, strong normative beliefs, as well as environmental values which all impacted their stated purchase intentions. So, inherently, consumers may have beliefs that organic cotton apparel is considered to be less harmful to the environment regardless of an actual knowledge base. This is an interesting finding and contrasts previous literature that has found environmental knowledge to be a positive predictor of pro-environmental behaviors (Mainieri, 1999; Fraj-Andres and Martinez-Salinas) and literature that has found lack of knowledge to be a barrier to environmentally preferable apparel (Connel,2010). Hypothesis 1a is supported while Hypothesis 1b is not.

Additional variables that were found to be significant were price, fiber content, and country of origin. These variables were significant for all models except for that of Pi3. Price was a negative and significant predictor for the aggregate and Pi1, meaning that those who were more price-sensitive were less probable to have purchase intentions for organic cotton apparel. Again, this is not surprising in that "organic" is most often associated with price premiums that could serve as a barrier to those who are highly price sensitive. Fiber content and country of origin were significant positive predictors, meaning that individuals who believed country of origin and fiber content to be important in making apparel decisions were more likely to express purchase intentions for organic cotton apparel. Quality is also significant, but only in Pi3. Again, Pi3 mentions availability, so when in the presence of organic cotton apparel, quality may be more important because they are able to assess an item's level of quality when it is readily available.

Due to a large amount of insignificant variables in our full models, re-specified, compact models were run in an attempt to correct for possible model specification issues. Results from the compact models largely reinforce those from the full models in terms of the significant variables. Subjective norms and biospheric values are significant across all models. Attitudes are significant for the aggregate, Pi2 and Pi3 but not Pi1. Fiber content and country of origin were, again, significant for all but Pi3. Quality was also significant for Pi3, consistent with the full models. However, there were a few

changes to be noted. First, price became significant across all models in both OLS and the ordered probit. Second, perceived behavioral control emerges as significant in the aggregate ordered probit analysis but not OLS. The interpretation of this finding is difficult, and must be taken with caution, but could indicate that perceived behavioral control's effects were being captured by other variables within the model. Finally, knowledge items vary between the models, for instance, knowledge items that were insignificant in the full model become significant while others failed to be significant. Again, this is most likely due to misspecifications within the model, and further research is needed to evaluate knowledge effects.

This study sought to predict and explain purchase intentions of organic cotton apparel while also adding to the literature using TPB, values and the Consideration of Future Consequences to explain different pro-environmental behaviors. Prior to this study there was no research specifically using the TPB to explain organic cotton apparel purchase intention. Willingness to pay for organic apparel has been documented (Hustvedt and Dickson, 2007; Hustvedt and Bernard, 2008), and the TPB has also been used to explain organic food consumption (Sparks and Shepherd, 1992; Vermeir and Verbecke, 2004, 2006) however, little research has been directed toward determining the motivations for organic cotton apparel purhases. Our research provides insight into the next logical question of "why" and "which" consumers are more likely to buy organic cotton apparel.

Both the full and compact models suggest that the most significant and consistent predictor for purchase intentions of organic cotton apparel are subjective norms and biospheric values. Subjective norms consist of normative beliefs, or the individuals' reference groups opinions about the engagement in certain behaviors. The stronger the normative beliefs are within the individual, the more likely they are to express purchase intentions for organic cotton apparel. So, in essence, organic cotton apparel consumers consider and weight the opinions of their close friends and family with importance when deciding to purchase organic cotton apparel. Biospheric values or environmental values, are another key characteristic of the typical organic cotton apparel consumer. The more a consumer holds values regarding the welfare of the environment and other species, the more they will tend to express purchase intentions. The impact of conventional cotton on the environment, and the potential benefit of organic cotton, will most likely affect those who think about or consider these impacts (environmental) when purchasing apparel items. Attitudes and perceived behavioral control also impact purchase intentions but are most salient in situations where availability is inferred.

The findings from the present research present several interesting implications for retailers or marketers interested in the potential of organic cotton apparel. First, marketing plans for organic cotton should center on subjective norms and environmental values. Our research shows that individuals with strong normative

beliefs, or individuals who greatly consider the opinions of their close friends and family are more likely to state purchase intentions for organic cotton apparel. Targeting the individual's subjective norms and environmental values could be a useful avenue for future marketing tactics to attract potential consumers. Our results indicate that consumers of organic cotton apparel hold environmental values as well as consider their friends and family's opinions greatly when purchasing organic cotton. Promotion of this specific product could visually connect potential organic cotton apparel consumers with the image of family or close friends and the happiness they could all share while bettering the environment. This specific information could be displayed through the use of garment labels or through various forms of advertisements.

Another key issue when marketing organic cotton apparel is availability. Attitudes were strongest for organic cotton apparel when availability was implied, suggesting to marketers or retailers that making consumers aware of its availability needs to be a priority. This is further supported by the results pertaining to perceived behavioral control. In cases where availability is mentioned, perceived behavioral control does not appear significant, indicating that they believe the behavior to be within their volitional control. Sparks and Shepherd (1992) also note that perceived behavioral control had significant effects on purchase intentions for organic food in terms of an overall lack of availability of the product itself. So this issue of availability needs to be addressed when considering how to market organic cotton apparel.

Magazine ads may induce positive attitudes about the product, but will not necessarily translate into purchase intentions or actual purchase. Whereas when consumers are in the presence of organic cotton apparel where they can also assess quality, chances of actual purchase would be greater. In this case, large scale window advertisements that let the consumer know that organic cotton apparel is sold within that store may be more useful compared to a magazine advertisements or television commercials. Again the images connected to these ads should address normative beliefs and environmental values.

Lastly, our results concerning knowledge level, suggest that individuals from the sample overall, lacked knowledge about organic cotton apparel but still possessed positive attitudes and beliefs. So the time and effort into educating consumers about environmental impacts and organic labeling requirements may not be necessary in the case of organic cotton apparel. These results are similar to Hoogland et al.'s (2006) study where consumers were confused by information concerning organic labeling requirements. There are many facets involved with labeling and this information can be overwhelming to the average consumer which may be another reason as to why knowledge level did not impact purchase intentions in this study. Even though confusion may exist among consumers, they still positively associated with the idea of "organic" and what that word implied. So when marketers or brands of organic clothing consider the emphasis of certain information regarding this type of garment, providing

knowledge about the environmental benefits of organic apparel, or what it means to be considered organic could actually deter consumers by causing “information overload”. Instead, information about the items fiber content, country of origin, and quality would be more beneficial.

While this study found many interesting implications, there were some limitations that must be acknowledged. First, self-reported behaviors are limited in scope because one cannot actually observe the particular behavior of interest. The Theory of Planned Behavior states that strong intentions would likely lead to the performance of the behavior in question (Ajzen, 1986), but for the present research observing actual behavior was not feasible and therefore the findings presented here are only a general inference into the potential act of buying organic cotton apparel. We recommend that future research provide some measurement of actual behavior in conjunction with a self-reported survey presently done here.

Also, future analysis of mediating and moderating effects of the variables within the model (i.e. structural equation modeling) could potentially create a better fit for the data collected in the present study and is highly recommended. However the results found in the present study provide a good framework for potential future research and can provide some insight to retailers and marketers interested in either marketing or selling organic cotton apparel. The present model had several potential issues. These potential issues include multi-collinearity among the data, as well as a possible

endogeneity problem. Further analysis into better model specification is suggested. However the results found in the present study provide a good framework for potential future research and can provide some insight to retailers and marketers interested in either marketing or selling organic cotton apparel.

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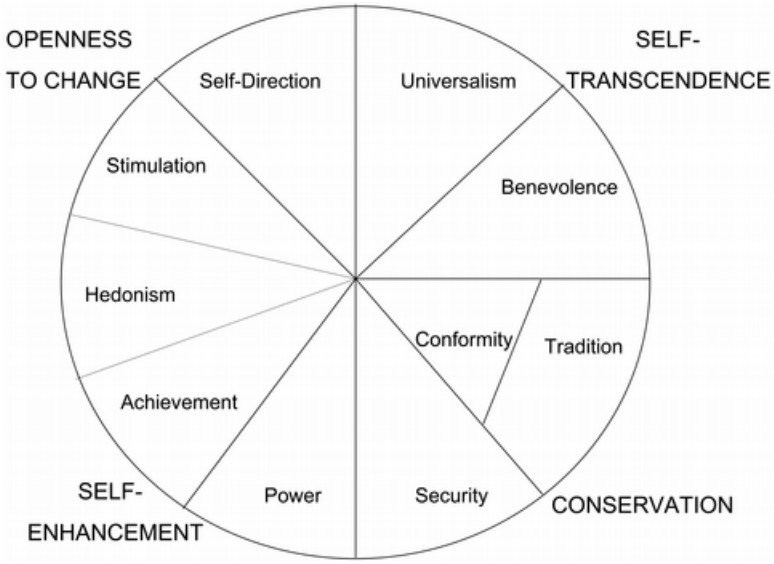
Appendix A



Source: Dietz, T., Fitzgerald, A., and Shwom, R. (2005). Environmental Values. *Annual Review of Environment and Resources.* V.30, 335-372.

Figure A.1: Structural Relationship of Schwartz Value Dimensions

Appendix B
Table 1.b Demographic Characteristics of Participants

Characteristics		n	%
Gender (N=262)	Male	119	45
	Female	143	55
Age (N=259)	18-25	84	32
	26-34	96	37
	35-45	41	16
	46-56	23	9
	57 and above	14	6
Highest education completed (N=261)			
	Less than 12th grade	1	0
	High school graduate	29	11
	Some college (not currently enrolled)	53	20
	Associates	23	9
	Some college (currently enrolled)	33	13
	Bachelors	93	36
	Graduate or Professional Degree	29	11
Race (N=262)			
	American Indian or Alaska Native	1	0
	Asian	19	7
	African American	19	7
	Hispanic or Latino	13	5
	Native Hawaiian or other Pacific Islander	3	1
	White	202	77
	Other	5	2
Income Level (N=262)			
	Less than $20,000	81	31
	$20,001- $40,000	79	30
	$40,001-$60,000	51	19
	$60,001- $80,000	29	11
	$80,001-$100,000	12	5
	Greater than $100,000	10	4

Table 2.b Variable Descriptions:

Variable	Description
1. PI	Aggregate index of three PI items
2. Pi1	I intend to buy organic cotton apparel the next time I go apparel shopping
3. Pi2	It is likely that if I encountered an organic cotton apparel item the next time I went shopping that I would purchase that organic cotton apparel item
4. Pi3	If organic cotton apparel were readily available, I would purchase organic cotton apparel.
5. Know1tr	Statement assessing environmental knowledge regarding organic cotton production. Statement was true and the scale was reversed (Certainly false to Certainly True[10]) so that numbers 5 and above indicated a correct answer, 4 indicated unsure, and numbers less than 4 indicated incorrect.[11] (True statement)
6. Know2	Statement assessing knowledge about labeling requirements for organic cotton apparel. Statement was false so numbers 5 and above indicated a correct answer. (False statement)
7. Know3tr	Statement assessing environmental knowledge regarding organic cotton production. (True statement)
8. Know4tr	Statement assessing knowledge about labeling requirements for organic cotton apparel. (True Statement)
9. Know5tr	Statement assessing environmental knowledge regarding conventional cotton production. (True statement)
10. Know6	Statement assessing knowledge about labeling requirements for organic cotton apparel. (False statement)
11. Know7tr	Statement assessing knowledge about labeling requirements for organic cotton apparel.(True statement)
12. Know8	Statement assessing knowledge about labeling requirements for organic cotton. (False statement)
13. Know9tr	Statement assessing knowledge about labeling requirements for organic cotton apparel. (True statement)
14. Att	Rounded average of the three **attitude** items from survey: 1. Buying organic cotton apparel would be foolish …..wise 2. Buying organic cotton apparel would be harmful…..beneficial 3. Buying organic cotton apparel would be bad….good

[10] This reversal of scale measurements was done for all true statements but not false statements so that all answers could be assessed as to whether they were correct or incorrect.

[11] All answers with a 5 or greater = correct, 4= unsure, less than 4 = incorrect for both true and false statements.

	Where 1=bad and 7=good
15. Sn	Rounded average of the three **subjective norm** items from the survey: 1. My family members would want me to purchase organic cotton apparel. 2. My friends and family members would definitely purchase organic cotton apparel. 3. My close friends would approve of I were to purchase organic cotton apparel. Where 1=Strongly Disagree to 7=Strongly Agree
16. Pbc	Rounded average of the four **perceived behavioral control i**tems from the survey: 1. I believe I have the ability to purchase organic cotton apparel. 2. I have much control over purchasing organic cotton apparel. 3. I am confident in my overall ability to purchase organic cotton apparel. 4. Buying organic cotton apparel Where 1=Strongly Disagree to 7=Strongly Agree
17. Bio	Rounded average of the 3 **biospheric** value items from the survey: 1. Protecting the environment, **preserving** nature. 2. Unity with nature, fitting into nature 3. Respecting the earth, harmony with other species Where 1= Not at all important to 7= Extremely important
18. Alt	Rounded average of the three **altruistic** value items from the survey: 1. A world at peace, free of war and conflict. 2. Social justice, correcting injustice, care for the weak. 3. Equal opportunity for all Where 1= Not at all important to 7= Extremely important
19. Con	Rounded average of the three **conservation** value items from the survey: 1. Honoring parents and elders, showing respect 2. Family security, safety for loved ones. 3. Self-discipline, self restraint, resistance to temptation Where 1= Not at all important to 7= Extremely important
20. Se	Rounded average of the three **self-enhancement** value items from the survey: 1. Authority, the right to lead or command. 2. Influential, having an impact on people and events. 3. Wealth, material possessions, money SE(cont.) Where 1= Not at all important to 7= Extremely important
21. oc	Rounded average of the three **openness to change** value items from the survey: 1. Varied life, filled with challenge, novelty and change.

	2. Varied life, filled with challenge, novelty and change. 3. Curious, interested in everything, exploring Where 1= Not at all important to 7= Extremely important
22. CFCfuture	Rounded average of the seven item subscale for **(future-oriented) items** in the **consideration of future consequences scale**[12]: 1. I consider how things might be in the future, and try to influence those things with my day to day behavior. (F) 2. Often I engage in a particular behavior in order to achieve outcomes that may not result for many years. (F) 3. I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes. (F) 4. I think it is important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years. (F) 5. I think it is more important to perform a behavior with important distant consequences than a behavior with less important immediate consequences. (F) 6. When I make a decision, I think about how it might affect me in the future.(F) 7. My behavior is generally influenced by future consequences.(F) Where 1= Very Uncharacteristic to 7= Very Characteristic
23. CFCimmed	Rounded average of the seven item subscale for **(immediate-oriented) items** in the **consideration of future consequences scale**[13]: 1. I only act to satisfy immediate concerns, figuring the future will take care of itself. (I) 2. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions. (I) 3. My behavior is only influenced by the immediate (i.e., a matter of days or weeks) outcomes of my actions. (I) 4. I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level. (I) 5. I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time. (I) 6. I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date. (I) 7. Since my day to day work has specific outcomes, it is more

[12] Note: the numbers here do not correspond to the actual numbers of future-oriented items in the CFC scale.
[13] See note above

	important to me than behavior that has distant outcomes. (I) Where 1= Very Uncharacteristic to 7= Very Characteristic
24. priorknow	Measured whether each individual had **prior knowledge** of organic cotton apparel before the survey. Where 1=yes, 2=no
25. priorpurch	Measured whether each individual had **purchased** any organic cotton apparel **prior** to the survey. Where 1=yes, 2=no
26. price	Measured how important **price** is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
27. quality	Measured how important **quality** is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
28. feel	Measured how important **feel** or touch is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
29. fit	Measured how important **fit** of the apparel is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
30. fibercont	Measured how important **fiber content** is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
31. coo	Measured how important **country of origin** (type of fiber in the apparel) is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
32. brand	Measured how important **brand name** is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
33. variety	Measured how important **variety** is when making an *ANY* apparel purchasing decisions. 1=not at all important to 7=Extremely important
34. storetype	Indicated which **store type** each individual typically shops in for their apparel items. 1=Department Store, 2= Second-hand stores (consignment/thrift-store), 3=internet, 4=Specialty stores (boutiques), and 5=other please specify.
35. gender	Indicated participants **gender** 1=male, 2=female
36. age	Measured respondents' **age** Continuous variable, range 18-80
37. edu	Measured participants' highest completed **level of education** 1= less than 12^{th} grade, 2=High School Graduate, 3= some college (not

	currently) enrolled, 4= Associates degree, 5=some college (currently enrolled), 6=Bachelors Degree, 7=Graduate or professional degree
38. income	Measured participants' **income level** 1= less than 12th grade, 2=High School Graduate, 3= some college (not currently) enrolled, 4= Associates degree, 5=some college (currently enrolled), 6=Bachelors Degree, 7=Graduate or professional degree (Masters, PhD, MD, 1= less than $20,000, 2= $20,001-$40,000, 3=$40,001-$60,000, 4=$60,001-$80,000JD)
39. race	Measured participants' **ethnicity or racial background** 1=American Indian or Alaska Native, 2=Asian, 3=African American, 4=Hispanic or Latino, 5=Native Hawaiian or other Pacific Islander, 7=other, please specify

Appendix C (Results)

Table 1.c Descriptive Statistics (Grouped items)

Variable	Observations	Mean	Standard Deviation	Min	Max	Alpha
PI	262	4.263359	1.374129	1	7	0.8711
ATT	262	5.683206	1.135809	2	7	0.9241
SN	262	4.568702	1.219672	1	7	0.8122
PBC	261	5.314176	1.074598	2	7	0.8723
BIO	262	5.251908	1.358067	1	7	0.9074
ALT	262	5.927481	1.29488	1	7	0.9078
CON	262	5.744275	1.103576	1	7	0.7449
SE	262	4.39313	1.201065	1	7	0.6995
OC	262	5.442748	1.155764	1	7	0.8898
CFCfuture	262	5.20229	.901847	1	7	0.8525
CFCimmed	262	3.51145	1.120115	1	7	0.8591

Table 2.c Descriptive Statistics (Non-grouped items)

Variable[2]	Observations	Mean	Standard Deviation	Min	Max
PI1	262	3.583969	1.577685	1	7
PI2	262	4.282443	1.489554	1	7
PI3	261	4.984674	1.411408	1	7
Know1tr	262	5.385496	1.400691	1	7
Know2	262	3.541986	1.3491	1	7
Know3tr	261	4.636015	1.085608	1	7
Know4tr	261	5.153257	1.26775	1	7
Know5tr	262	4.526718	1.052843	2	7
Know6	262	3.572519	1.408951	1	7
Know7tr	261	4.429119	1.568854	1	7
Know8	262	3.793893	1.139453	1	7
Know9tr	262	4.156489	1.331297	1	7
Price	261	6.260536	.9162707	2	7
Quality	262	5.984733	1.001797	2	7
Feel	262	5.843511	.9640749	2	7
Fit	261	6.268199	.8753594	2	7
Fibercont	262	4.049618	1.585803	1	7
Coo	262	3.541896	1.65943	1	7
Brand	262	3.603053	1.65943	1	7
Variety	262	5.057252	1.367579	1	7
Storetype	262	1.717557	1.041476	1	5

Table 3.c Correlation Matrix

	pi	att	sn	bio	alt	cfcfut~e	price	coo	fibercont
pi	1.0000								
	261								
att	0.5162	1.0000							
	0.0000								
	261	261							
sn	0.5418	0.4638	1.0000						
	0.0000	0.0000							
	261	261	261						
bio	0.5638	0.3864	0.3452	1.0000					
	0.0000	0.0000	0.0000						
	261	261	261	261					
alt	0.2875	0.2175	0.1542	0.5524	1.0000				
	0.0000	0.0004	0.0126	0.0000					
	261	261	261	261	261				
cfcfuture	0.2575	0.1858	0.2634	0.2619	0.1877	1.0000			
	0.0000	0.0026	0.0000	0.0000	0.0023				
	261	261	261	261	261	261			
price	-0.1632	0.0255	-0.0624	0.0017	0.1222	0.1395	1.0000		
	0.0082	0.6822	0.3149	0.9784	0.0486	0.0242			
	261	261	261	261	261	261	261		
coo	0.3689	0.2383	0.2091	0.2908	-0.0016	0.1883	-0.1012	1.0000	
	0.0000	0.0001	0.0007	0.0000	0.9799	0.0022	0.1029		
	261	261	261	261	261	261	261	261	
fibercont	0.5110	0.3518	0.3561	0.3769	0.1503	0.2193	-0.1325	0.5188	1.0000
	0.0000	0.0000	0.0000	0.0000	0.0151	0.0004	0.0323	0.0000	
	261	261	261	261	261	261	261	261	261

Table 4.c Knowledge Statement 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	201	76.7	76.7	76.7
	Unsure	35	13.4	13.4	90.1
	Incorrect	26	9.9	9.9	100.0
	Total	262	100.0	100.0	

Table 5.c Knowledge Statement 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	43	16.4	16.4	16.4
	Unsure	97	37.0	37.0	53.4
	Incorrect	122	46.6	46.6	100.0
	Total	262	100.0	100.0	

Table 6.c Knowledge Statement 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	112	42.7	42.9	42.9
	Unsure	134	51.1	51.3	94.3
	Incorrect	15	5.7	5.7	100.0
	Total	261	99.6	100.0	
Missing	System	1	.4		
Total		262	100.0		

Table 7.c Knowledge Statement 4

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	172	65.6	65.9	65.9
	Unsure	69	26.3	26.4	92.3
	Incorrect	20	7.6	7.7	100.0
	Total	261	99.6	100.0	
Missing	System	1	.4		
Total		262	100.0		

Table 8.c Knowledge Statement 5

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	109	41.6	41.6	41.6
	Unsure	130	49.6	49.6	91.2
	Incorrect	23	8.8	8.8	100.0
	Total	262	100.0	100.0	

Table 9.c Knowledge Statement 6

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	51	19.5	19.5	19.5
	Unsure	97	37.0	37.0	56.5
	Incorrect	114	43.5	43.5	100.0
	Total	262	100.0	100.0	

Table 10.c Knowledge Statement 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	118	45.0	45.2	45.2
	Unsure	76	29.0	29.1	74.3
	Incorrect	67	25.6	25.7	100.0
	Total	261	99.6	100.0	
Missing	System	1	.4		
Total		262	100.0		

Table 11.c Knowledge Statement 8

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	44	16.8	16.8	16.8
	Unsure	137	52.3	52.3	69.1
	Incorrect	81	30.9	30.9	100.0
	Total	262	100.0	100.0	

Table 12.c Knowledge Statement 9

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Correct	90	34.4	34.4	34.4
	Unsure	104	39.7	39.7	74.0
	Incorrect	68	26.0	26.0	100.0
	Total	262	100.0	100.0	

Table 13.c OLS Model results (Full)

	olsaggpi	*olspi1*	*olspi2*	*olspi3*
know1tr	.00096636	.00064873	-.00288632	.00645274
know2	.05472938	.03603825	.02592188	.10014178
know3tr	.04075407	.10097584	.01061151	.01088162
know4tr	.06448914	-.01074726	.06628847	.13885938*
know5tr	-.07834263	-.04078678	-.03532895	-.15922952*
know6	-.08021449	-.05668661	-.10239317	-.08071775
know7tr	-.06562897	-.08406995	-.03690845	-.07311309
know8	-.09588194	-.08527804	-.0647456	-.13639119*
know9tr	.08483099	.13176236	.06282345	.0587837
att	.17848424**	.10403471	.17046383*	.26302187***
sn	.2798767***	.29029445***	.24637481**	.30224734***
pbc	.06886307	.19562362*	.09535572	-.08977347
bio	.276051***	.24417853**	.2874089***	.2930435***
alt	.06300906	.12956696	.09255384	-.03357188
con	-.0579821	-.02878396	-.09261505	-.05087194
se	-.01997026	.05436692	-.04253764	-.06951412
oc	.0086377	.00845561	.00208132	.01546908
cfcfuture	.0222409	.09218574	-.05183597	.02825662
cfcimm	-.01170653	.05109655	-.04283277	-.04235299
priorknow	.06269904	.03720346	.18862269	-.04200235
priorpurch	-.21214375	-.25398599	-.11327359	-.2663187
price	-.17411563*	-.23368725*	-.15934304	-.13666046
quality	.07305529	-.04564922	.08914464	.16346137
feel	-.03183057	-.04404577	-.01272797	-.02921675
fit	-.07771281	-.11218238	-.06807218	-.05006395
fibercont	.12941335*	.17002061*	.13651813*	.07778104
coo	.12160733**	.13088223*	.15824512**	.07609207
brand	.00195254	-.00814976	.00315049	.01202908
variety	.02986644	.00645373	.01443542	.07075771
storetype	.01585003	-.03090373	-.03163548	.1067179
gender	-.04658796	-.07870308	.00186374	-.05068036
age	-.003019	-.00024714	-.00629773	-.0029074
edu	.01974557	.01762758	-.00054112	.0384499
income	-.02213187	-.04806701	.06629205	-.08435594
race	.05650968	.01537511	.08194427	.0765332
_cons	.61294149	-.15006653	.30548305	1.7159065
Model Stats				
N	251	251	251	250
F stat	10.23	6.88	6.23	8.19
Prob>f	0.0000	0.0000	0.0000	0.0000
R-squared	.6249	.5284	.5033	.5725
Adj.R-squared	.5638	.4516	.4225	.5026
Root MSE	.8909	1.1769	1.1446	1.0103

legend: * p<.05; ** p<.01; *** p<.001

Table 14.c Ordered Probit Model results (Full)

	oprobitaggpi	*oprobitpi1*	*oprobitpi2*	*oprobitpi3*
know2	.09942084	.0187238	.03987429	.12272944
know3tr	.09264249	.06985974	.02198564	.01354372
know4tr	.11936855	.01115801	.08208931	.16935167*
know5tr	-.07720213	-.04256945	-.02118103	-.14856574
know6	-.06179066	-.05901401	-.10111739	-.10229054
know7tr	-.07427	-.07878138	-.04412611	-.09601443
know8	-.09930934	-.0747257	-.05292933	-.12310096
know9tr	.12446524	.15468675*	.06761011	.06284285
att	.25059148**	.12270961	.15491136*	.31162775***
sn	.32636256***	.31182098***	.26433951***	.34668547***
pbc	.10172564	.18771467*	.10062956	-.08209838
bio	.35536177***	.24662922***	.28855057***	.32981144***
alt	.07448833	.13855652	.09880329	-.03956469
con	-.04658557	-.03558209	-.09345826	-.06484119
se	-.01369025	.04661174	-.03566479	-.10127316
oc	.00204503	-.00510211	.00889648	.04721085
cfcfuture	.05400108	.08905491	-.02902704	.04105179
cfcimm	.01699749	.04197365	-.01257002	-.03581838
priorknow	.08007483	-.00262767	.20305971	-.07088782
priorpurch	-.32301778	-.24240144	-.07185812	-.31968987
price	-.23028482*	-.23015486*	-.16824688	-.16547304
quality	.08990759	-.05211165	.1088974	.23662114*
feel	-.03660203	-.03445245	-.00539579	-.0277674
fit	-.08037812	-.12282948	-.08598025	-.09390269
fibercont	.15288867*	.16285064**	.1314786*	.0852506
coo	.13258569*	.12768533*	.16169857**	.08380977
brand	-.01280839	.01197488	-.01165173	-.00494497
variety	.0526283	-.00893765	.01006334	.06749023
storetype	.01219713	-.02974736	-.03777454	.10417779
gender	-.11552477	-.08309844	-.01175078	-.04433941
age	-.00511156	-.00027707	-.00503545	-.00444286
edu	.0438561	-.00153824	-.00503727	.03781
income	-.02761568	-.04172869	.08378181	-.07109514
race	.06244652	.00796922	.07668619	.07245437
cut1 _cons	2.501078	1.5698058	2.1111728	.58481315
cut2 _cons	3.7738372**	2.6609323*	3.0490688*	1.6240528
cut3 _cons	4.9298872***	3.2917071*	3.7936125**	2.1138592
cut4 _cons	6.0672694***	4.3222067**	4.5968715***	3.1172875*
cut5 _cons	7.2287707***	5.2956643***	5.7941396***	4.3942991**
cut6 _cons	8.8411529***	6.1746114***	6.9172084***	5.5583219***
Model Stats				
N	251	251	251	250
LR chi2(35)	240.09	194.95	179.91	211.49
Prob> chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	.2776	.2138	.2011	.2510
L.Likelihood	-312.4421	-358.5403	-357.3769	-315.5998

legend: * p<.05; ** p<.01; *** p<.001

Table 15.c OLS Model results (Compact)

	olsaggpi	*olspi1*	*olspi2*	*olspi3*
know4tr	.04034669	-.01129956	.03645033	.10010617
know5tr	-.04473196	.00165979	-.00785415	-.12947263*
know8	-.10538947*	-.11705521	-.08171829	-.11703491
know9tr	.06459832	.10924235	.05082427	.03540662
att	.19430884***	.11319116	.17207416*	.30294377***
sn	.29175432***	.30276086***	.24992141***	.32146147***
pbc	.08108999	.224064**	.09908543	-.08421676
bio	.26388898***	.22169315**	.2726432***	.29310393***
alt	.03707518	.09078328	.04902258	-.02769617
cfcfuture	.01883662	.06472495	-.0300876	.02404521
price	-.20827578**	-.24994244**	-.19883292*	-.18112571*
quality	.04702441	-.0877456	.06191551	.15930912*
fibercont	.1305391**	.18975287**	.14457154*	.05442964
coo	.09435538*	.10448748*	.13326508*	.04733467
_cons	-.00019894	-.68215057	-.16381402	.91190987
Model Stats				
dF				
N	259	259	259	258
F stat	25.68	17.56	15.78	18.69
Prob> F	0.0000	0.0000	0.0000	0.0000
R-squared	0.5957	0.5018	0.4752	0.5185
Adj.R-squared	0.5725	0.4732	0.4451	0.4907
Root MSE	.87524	1.1496	1.115	1.0122

legend: * p<.05; ** p<.01; *** p<.001

Table 16.c Ordered Probit Model results (Compact)

	oprobitaggpi	*oprobitpi1*	*oprobitpi2*	*oprobitpi3*
know4tr	.08863697	.0053144	.0418412	.10615771
know5tr	-.03311839	-.0125369	.00738558	-.10542491
know8	-.10498082	-.10422757	-.06987807	-.09601097
know9tr	.106136	.12324517*	.05544604	.02245118
att	.2683553***	.1179605	.15631928*	.33146363***
sn	.33639088***	.31575923***	.25962369***	.35218655***
pbc	.12951654*	.20851156**	.09843443	-.07168313
bio	.32925326***	.21455385**	.26543708***	.31890059***
alt	.04043853	.09975863	.05115115	-.0359319
cfcfuture	.05549511	.06791393	-.0178805	.04284234
price	-.26244222**	-.25270114**	-.19479505*	-.20256532*
quality	.0644565	-.09675727	.06642285	.19001695
fibercont	.14714966**	.1799059***	.13969455**	.06092815
coo	.09816967*	.10278797*	.13090082**	.03650811
cut1 _cons	2.809308**	2.4468049**	2.1950825**	1.7105557
cut2 _cons	4.0282857***	3.5467757***	3.1064066***	2.7067682**
cut3 _cons	5.1624841***	4.1485342***	3.8591987***	3.1790806***
cut4 _cons	6.2521782***	5.1786766***	4.6332119***	4.079497***
cut5 _cons	7.3981296***	6.1052405***	5.797798***	5.3313553***
cut6 _cons	8.9334424***	6.9337531***	6.895612***	6.4319892***
Model Stats				
N	259	259	259	258
LR chi2 (14)	229.17	187.57	170.62	188.07
Prob> chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.2578	0.1999	0.1854	0.2173
L.Likelihood	-329.9406	-375.4505	-374.8843	-338.7907

legend: * p<.05; ** p<.01; *** p<.001

Table 17.c Significant Variables: OLS (full)

Aggregated Pi (avgpi)		Pi1		Pi2		Pi3	
Att	(.178**)	**Sn**	**(.290***)**	Att	(.170*)	Know4tr	(.139*)
Sn	**(.280***)**	Pbc	(.196*)	**Sn**	**(.246**)**	Know5tr	(-.159*)
Bio	**(.276***)**	**Bio**	**(.244**)**	**Bio**	**(.287***)**	Know8	(-.136*)
Price	(-.174*)	Price	(-.234*)	Fibercont	(.137*)	Att	(.263***)
Fibercont	(.129*)	Fibercont	(.170*)	Coo	(.158**)	**Sn**	**(.302***)**
Coo	(.122**)	Coo	(.131*)			**Bio**	**(.293***)**

Table 18.c Significant Variables: Ordered Probit (full)

Aggregated Pi (PI)		Pi1		Pi2		Pi3	
Att	(.251**)	Know9tr	(.155*)	Att	(.155*)	Know4tr	(.169*)
Sn	**(.326***)**	**Sn**	**(.312***)**	**Sn**	**(.264***)**	Att	(.312***)
Bio	**(.355***)**	Pbc	(.188*)	**Bio**	**(.289***)**	**Sn**	**(.347***)**
Price	(-.230*)	**Bio**	**(.247***)**	Fibercont	(.131*)	**Bio**	**(.330***)**
Fibercont	(.153*)	Price	(-.230*)	Coo	(.162**)	Quality	(.237*)
Coo	(.133*)	Fibercont	(.163**)				
		Coo	(.128*)				

Table 19.c Significant Variables: OLS (Compact model)

Aggregated Pi (avgpi)		Pi1		Pi2		Pi3	
Know8	(-.105*)	**Sn**	**(.303***)**	Att	(.172*)	Know5tr	(-.130*)
Att	(.194***)	Pbc	(.224**)	**Sn**	**(.250***)**	Att	(. 303***)
Sn	**(.292***)**	**Bio**	**(.222**)**	**Bio**	**(.273***)**	**Sn**	**(.321***)**
Bio	**(.264***)**	**Price**	**(-.250**)**	**Price**	**(-.199*)**	**Bio**	**(.293***)**
Price	**(-.208**)**	Fibercont	(.190**)	Fibercont	(.145*)	**Price**	**(-.181*)**
Fibercont	(.131**)	Coo	(.104*)	Coo	(.133*)	Quality	(.159*)
Coo	(.094*)						

Table 20.c Significant Variables: Ordered Probit (Compact model)

Aggregated Pi (PI)		Pi1		Pi2		Pi3	
Att	(.268***)	Know9tr	(.123*)	Att	(.156*)	Att	(.331***)
Sn	**(.336***)**	**Sn**	**(.316***)**	**Sn**	**(.260***)**	**Sn**	**(.352***)**
Pbc	(.130*)	Pbc	(.209**)	**Bio**	**(.265***)**	**Bio**	**(.319***)**
Bio	**(.329***)**	**Bio**	**(.215***)**	**Price**	**(-.195*)**	**Price**	**(-203*)**
Price	**(-.262**)**	**Price**	**(-.253*)**	Fibercont	(.140**)		
Fibercont	(.147**)	Fibercont	(.180***)	Coo	(.131**)		
Coo	(.098*)	Coo	(.103*)				

Appendix D

Organic Cotton Apparel Survey

Q1 (Informed Consent) WASHINGTON STATE UNIVERSITY CONSENT FORM Researchers Dr. Vicki McCracken, Associate Director and Professor for the School of Economic Sciences, Washington State University. Email: mccracke@wsu.edu and Nicole Cummings, Masters Student in the School of Economic Sciences, Washington State University. Email: nicole.cummings@wsu.edu Study Title Consumer Purchasing Intention for Organic Cotton Apparel Researchers' Statement We are asking you to be in a research study. The purpose of this consent form is to give you the information you will need to help you decide whether to be in the study or not. Please read the form carefully. You may ask questions about the purpose of the research, what we would ask you to do, the possible risks and benefits, your rights as a volunteer, and anything else about the research or this form that is not clear. When we have answered all your questions, you can decide if you want to be in the study or not. This process is called 'informed consent.' You are encouraged to print out a copy of this form for your records. Purpose, Benefits, and Procedures In today's session, we will ask you to complete several different sections, including several scales assessing your beliefs, attitudes, and values regarding purchase intention of organic cotton apparel. Risks While we believe there are few risks associated with this study, it is possible that you may feel uncomfortable answering certain questions. Please remember that you may leave any question unanswered without penalty. Other Information Your participation in this study is completely voluntary. Furthermore, your responses will remain confidential. Your participation in this survey should take about 10 minutes. A complete survey will greatly facilitate our analyses. However, you can choose to leave unanswered any questions you may find objectionable and you may quit the study at any time without penalty. We realize that participating in studies takes time and effort, and we would like to thank you in advance for your willingness to complete these initial surveys. Your participation in these studies helps us learn more about important aspects of human behavior and marketing. Participant's Statement This study has been explained to me. I volunteer to take part in this research. I have had a chance to ask questions. If I have general questions about the research, I can ask the researcher listed above. If I have questions regarding my rights as a participant, I can call the WSU Institutional Review Board at (509)335-3668. This project has been classified as exempt by the WSU IRB. If you agree to participate, please hit the button titled "agree to participate" which will take you directly into the study. If you would prefer not to participate, you may complete the article summary option to receive credit (described in you course syllabus). Thank you.

- ❍ Agree to Participate (1)
- ❍ Do Not Agree to Participate (2)

Q2 Please indicate how true or how false you believe the following statements to be:

	Certainly True (1)	True (2)	Somewhat True (3)	Unsure (4)	Somewhat False (5)	False (6)	Certainly False (7)
Organic cotton is grown without the use of toxic and persistent pesticides and synthetic fertilizers (1)	❍	❍	❍	❍	❍	❍	❍
If an apparel manufacturer blends 70% organic cotton with 30% conventional cotton they are able to label the apparel as organic (2)	❍	❍	❍	❍	❍	❍	❍
(Conventional) Cotton covers 2.5% of the world's cultivated land, yet uses 16% of the world's insecticides, more than any other single major crop. (3)	❍	❍	❍	❍	❍	❍	❍
Apparel made with 95% organic fiber and less than 5% synthetic fibers can be labeled organic. (4)	❍	❍	❍	❍	❍	❍	❍

Q3 Please indicate how true or how false you believe the following statements to be:

	Certainly True (1)	True (2)	Somewhat True (3)	Unsure (4)	Somewhat False (5)	False (6)	Certainly False (7)
It takes almost 1/3 pound of synthetic fertilizer to grow one pound of raw cotton in the U.S. (1)							
Currently there is a single trade association responsible for setting the standards for labeling organic textiles, including organic cotton. (2)							
Genetically modified cotton is not allowed to be labeled as organic. (3)							
The Global Organic Textiles Standard covers only packaging and labeling standards for organic cotton. (4)							
Blending conventional and organic fibers of the same type in the same product is not permitted and cannot be labeled organic. (5)							

Q4 Buying organic cotton apparel would be:

	1 (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7 (7)
Wise:Foolish (1)	❍	❍	❍	❍	❍	❍	❍
Beneficial:Harmful (2)	❍	❍	❍	❍	❍	❍	❍
Good:Bad (3)	❍	❍	❍	❍	❍	❍	❍

Q5 Please indicate the degree to which you agree or disagree with the following statements:

	Strongly Agree (1)	Agree (2)	Somewhat Agree (3)	Neither Agree nor Disagree (4)	Somewhat Disagree (5)	Disagree (6)	Strongly Disagree (7)
My family members would want me to purchase organic cotton apparel. (1)	❍	❍	❍	❍	❍	❍	❍
My friends and family members would definitely purchase organic cotton apparel. (2)	❍	❍	❍	❍	❍	❍	❍
My close friends would approve if I were to purchase organic cotton apparel. (3)	❍	❍	❍	❍	❍	❍	❍

Q6 Please indicate the degree to which you agree or disagree with the following statements:

	Strongly Agree (1)	Agree (2)	Somewhat Agree (3)	Neither Agree nor Disagree (4)	Somewhat Disagree (5)	Disagree (6)	Strongly Disagree (7)
I believe I have the ability to purchase organic cotton apparel. (1)	❍	❍	❍	❍	❍	❍	❍
I have much control over purchasing organic cotton apparel (2)	❍	❍	❍	❍	❍	❍	❍
I am confident in my overall ability to purchase organic cotton apparel (3)	❍	❍	❍	❍	❍	❍	❍
Buying organic cotton apparel is easy. (4)	❍	❍	❍	❍	❍	❍	❍

Q7 Please indicate the degree to which you agree or disagree with the following statements:

	Strongly Agree (1)	Agree (2)	Somewhat Agree (3)	Neither Agree nor Disagree (4)	Somewhat Disagree (5)	Disagree (6)	Strongly Disagree (7)
I intend to buy organic cotton apparel the next time I go apparel shopping (1)	❍	❍	❍	❍	❍	❍	❍
It is likely that if I encountered an organic cotton apparel item the next time I went shopping that I would purchase that organic cotton apparel item (2)	❍	❍	❍	❍	❍	❍	❍
If organic cotton apparel were readily available, I would purchase organic cotton apparel. (3)	❍	❍	❍	❍	❍	❍	❍

Q8 Please indicate how important each of the following items are as a guiding principle in YOUR Life:

	Extremely Important (1)	Very Important (2)	Somewhat Important (3)	Neither Important nor Unimportant (4)	Somewhat Unimportant (5)	Very Unimportant (6)	Not at all Important (7)
Protecting the environment, preserving nature (1)	❍	❍	❍	❍	❍	❍	❍
Unity with nature fitting into nature (2)	❍	❍	❍	❍	❍	❍	❍
Respecting the earth, harmony with other species (3)	❍	❍	❍	❍	❍	❍	❍
A world at peace, free of war and conflict (4)	❍	❍	❍	❍	❍	❍	❍
Social justice, correcting injustice, care for the weak (5)	❍	❍	❍	❍	❍	❍	❍
Equality, equal opportunity for all (6)	❍	❍	❍	❍	❍	❍	❍
Honoring parents and elders, showing respect (7)	❍	❍	❍	❍	❍	❍	❍
Family security, safety for loved ones (8)	❍	❍	❍	❍	❍	❍	❍

Q9 Please indicate how important each of the following items are as a guiding principle in YOUR Life:

	Extremely important (1)	Very Important (2)	Somewhat Important (3)	Neither Important nor Unimportant (4)	Somewhat Unimportant (5)	Very Unimportant (6)	Not at all Important (7)
Self-discipline, self-restraint, resistance to temptation (1)							
Authority, the right to lead or command (2)							
Influential, having an impact on people and events (3)							
Wealth, material possessions, money (4)							
A varied life, filled with challenge, novelty and change (5)							
A varied life, filled with challenge, novelty and change (6)							
Curious, interested in everything, exploring (7)							

Q10 For each of the statements below, please indicate the degree to which the statement is characteristic or uncharacteristic of you.

	Very Characteristic (1)	Characteristic (2)	Somewhat characteristic (3)	Neither Characteristic nor Uncharacteristic (4)	Somewhat Uncharacteristic (5)	Uncharacteristic (6)	Very Uncharacteristic (7)
I consider how things might be in the future and try to influence those things with my day-to-day behavior (1)	❍	❍	❍	❍	❍	❍	❍
Often I engage in particular behavior in order to achieve outcomes that may not result for many years. (2)	❍	❍	❍	❍	❍	❍	❍
I only act to satisfy immediate concerns, figuring the future will take care of itself. (3)	❍	❍	❍	❍	❍	❍	❍
My behavior is only influenced by the immediate (i.e. a matter of days or weeks) outcomes of my actions. (4)	❍	❍	❍	❍	❍	❍	❍
My convenience is a big factor in the decisions I make or the actions I take. (5)	❍	❍	❍	❍	❍	❍	❍

Q11 For each of the statements below, please indicate the degree to which the statement is characteristic or uncharacteristic of you.

	VeryCharacteristic (1)	Characteristic (2)	Somewhat Characteristic (3)	Neither Characteristic nor Uncharacteristic (4)	Somewhat Uncharacteristic (5)	Uncharacteristic (6)	Very Uncharacteristic (7)
I am willing to sacrifice my immediate happiness or well being in order to achieve future outcomes (1)	❍	❍	❍	❍	❍	❍	❍
I think it is more important to take warnings about negative outcomes seriously even if the negative outcome will not occur for many years. (2)	❍	❍	❍	❍	❍	❍	❍
I think it is more important to perform a behavior with important distant consequences than a behavior with less important immediate outcomes. (3)	❍	❍	❍	❍	❍	❍	❍
I generally ignore warnings about possible future problems because I think	❍	❍	❍	❍	❍	❍	❍

the problems will be resolved before they reach crisis level. (4)							
I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time. (5)	❍	❍	❍	❍	❍	❍	❍

Q12 For each of the statements below, please indicate the degree to which the statement is characteristic or uncharacteristic of you.

	Very Characteristic (1)	Characteristic (2)	Somewhat Characteristic (3)	Neither Characteristic nor Uncharacteristic (4)	Uncharacteristic (5)	Somewhat Uncharacteristic (6)	Very Uncharacteristic (7)
I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later date. (1)	❍	❍	❍	❍	❍	❍	❍
Since my day-to-day work has specific outcomes, it is more important to me than behavior that has distant outcomes (2)	❍	❍	❍	❍	❍	❍	❍
When I make a decision, I think about how it might affect me in the future. (3)	❍	❍	❍	❍	❍	❍	❍
My behavior is generally influenced by future consequences. (4)	❍	❍	❍	❍	❍	❍	❍

Q13 Before this survey had you ever heard of organic cotton apparel?

- ❍ Yes (1)
- ❍ No (2)

Q14 Have you ever purchased organic cotton apparel before?

- ❍ Yes (1)
- ❍ No (2)

Q15 Please indicate the importance of the following on your decisions to purchase any type of apparel items

	Extremely Important (1)	Very Important (2)	Somewhat Important (3)	Neither Important nor Unimportant (4)	Somewhat Unimportant (5)	Very Unimportant (6)	Not at all Important (7)
Price (1)	❍	❍	❍	❍	❍	❍	❍
Appearance of Quality (2)	❍	❍	❍	❍	❍	❍	❍
Touch or feel (3)	❍	❍	❍	❍	❍	❍	❍
Fit (4)	❍	❍	❍	❍	❍	❍	❍
Fiber Content (5)	❍	❍	❍	❍	❍	❍	❍
Country of Origin (6)	❍	❍	❍	❍	❍	❍	❍
Brand (7)	❍	❍	❍	❍	❍	❍	❍
Variety/Choice (8)	❍	❍	❍	❍	❍	❍	❍

Q16 Where do you most typically shop for your apparel items?

- ❍ Department Stores (1)
- ❍ Second-hand stores (Consignment/Thrift Stores) (2)
- ❍ Internet (3)
- ❍ Specialty Stores (Boutiques etc.) (4)
- ❍ Other, Please specify (5) _____

Q17 Are you male or female?

- ❍ Male (1)
- ❍ Female (2)

Q18 Please indicate your age

Q19 What is the highest level of formal education you have completed?

- ❍ Less than 12th Grade (1)
- ❍ High School Graduate (2)
- ❍ Some college (not currently a student) (3)
- ❍ Associates Degree (4)
- ❍ Some college (currently enrolled) (5)
- ❍ Bachelors (6)
- ❍ Graduate or Professional Degree (e.g. Masters, PhD, MD, JD) (7)

Q20 Which income range are you in?

- ❍ Less than $20,000 (1)
- ❍ $20,001-$40,000 (2)
- ❍ $40,001-$60,000 (3)
- ❍ $60,001-$80,000 (4)
- ❍ $80,001- $100,000 (5)
- ❍ Greater than $100,000 (6)

Q21 Which of the following best describes your race/ethnic background?

- ❍ American Indian or Alaska Native (1)
- ❍ Asian (2)
- ❍ African American (3)
- ❍ Hispanic or Latino (4)
- ❍ Native Hawaiian or other Pacific Islander (5)
- ❍ White (6)
- ❍ Other, Please Specify (7) _____