All or Nothing: An Investigation of the Interconnection between Social and Environmental Sustainability

Stacie F Waites

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All or nothing: An investigation of the interconnection between social and environmental sustainability

By

Stacie F. Waites

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All or nothing: An investigation of the interconnection between social and environmental sustainability

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Marketers have made attempts to understand the disconnect between consumers’ expressed desire to engage in sustainable behavior and their lack of adoption of sustainable products with ambiguous results. Because companies that engage in sustainability initiatives often focus on either environmental or social sustainability, the broader impact of sustainability is not always understood. When a company makes a promise to be socially sustainable, consumers may also think that the company is environmentally sustainable and vice versa. Moreover, consumer evaluations of companies that make promises to be either socially or environmentally sustainable may be different if the company later delivers a success along the same versus the other dimension of sustainability. A success along a sustainability dimension that matches the initial sustainability promise is referred to here as a paired success. Alternatively, complementary successes incorporate both sustainability dimensions, where a company first promises to be sustainable along one dimension of sustainability but later delivers a successful outcome along the other sustainability dimension. Attitudes are expected to be enhanced when a company delivers a complementary because the company has
accounted for consumers’ interconnection of the sustainability dimensions. A failure to be sustainable along either dimension is predicted to diminish consumer evaluations of the company.

Four experiments were conducted to explore the interconnection between social and environmental sustainability and its effect on consumer evaluations of the company. Study 1 first examines the prediction that consumer perceptions of social and environmental sustainability are interconnected in consumers’ minds. Study 2 then examines how consumers’ attitudes towards companies that make either social or environmental sustainability promises compare to companies that do not make sustainability promises. Additionally, study 2 investigates how consumer attitudes towards companies are impacted by paired and complementary successes and sustainability failures. Study 3 explores the psychological mechanisms of perceived sincerity and competence. Finally, study 4 is a behavioral choice experiment used to generalize the findings to actual behavior, exploring how the interconnectedness of social and environmental sustainability influence consumer product choices. The findings from these studies offer insights into how consumers perceive companies that consider both the social and environmental dimensions of sustainability.
DEDICATION

This dissertation is dedicated to my husband and best friend, Rusty. Thank you for supporting and loving me through this journey. Without you none of this would be possible. Life with you is a great adventure. On to our next one!
ACKNOWLEDGEMENTS

My co-chairs were instrumental in guiding me through this dissertation process. They both devoted so much of their time to help me, and I am forever grateful for their energy, dedication, and all of the knowledge they shared with me. To Dr. Adam Farmer, a wonderful mentor and friend, thank you for always having an open door and a “few minutes” for me as I worked on this (and many other) projects. I have learned so much from you in the past four years. You have always pushed me past the limits I set for myself, encouraging me to be better and better. To Dr. Joel Collier, thank you for being a very scary professor who I never wanted to disappoint. I am grateful for all you have taught me and the time you have devoted to helping me through this entire doctoral program. A special thanks for deciding that you would not be reading this dissertation again!

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CHAPTER I
INTRODUCTION

Over the past few decades, the concept of sustainability has become increasingly important to consumers. For example, a recent survey of global consumers found that 91% expect companies to go beyond simply making a profit to operating responsibly and addressing social and environmental issues (Cone 2015). Research suggests that millennials are more likely to engage in sustainable consumption than older generations of consumers (Barber, Taylor, and Strick 2010). Specifically, 66% of millennials indicate that a company’s commitment to sustainability influences their purchasing decisions (Neilsen 2015), signaling that consumer interest in sustainability should only increase in the coming years. The continued growth of consumer attention to their long-term impact on society and the environment makes it imperative for both companies and marketers alike to understand the complexities of sustainability in the marketplace.

In response to consumer’s shift to a sustainable focus, companies have begun to take on sustainability initiatives. For instance, Ford has implemented an environmental conservation program that includes using recycled, renewable, and recyclable materials and eliminating harmful substances in the manufacturing of their vehicles (Ford 2015). Beyond this, some companies have begun to include sustainability efforts as part of their core business promises to consumers. Companies like Green Mountain Coffee Roasters, Patagonia, New Belgium Brewing Company, and Seventh Generation make explicit
promises to consumers to care for society or the environment (Adams 2014). These companies have made their sustainability concerns an inseparable aspect of their business structure in order to address consumers’ sustainability concerns.

Sustainability can be thought of in terms of three dimensions consisting of environmental, social, and economic sustainability (DesJardins 2007). This conceptualization of sustainability is referred to as the “triple bottom line” (Elkington 1997; Elkington 2004). The three dimensions of sustainability cover a wide array of topics. For instance, environmental sustainability may address efforts to reduce pollution or increase recycling. Social sustainability can include fair trade and equitable treatment of workers or donation behavior of companies and individuals. Moreover, examples of economic sustainability include topics such as profit generation or market instability. Economic sustainability is not often explicitly emphasized as a sustainability initiative to consumers because it is heavily associated with company profitability and economic growth (Porter 1985; Bansal 2005). These competing sustainability dimensions can elicit confusion because it causes the term “sustainability” to mean a variety of things to different people (Marcus, MacDonald, and Sulsky 2011; Simpson and Radford 2014).

When considering sustainability as a core business initiative, companies often isolate the social or environmental dimension of sustainability and overlook the interdependence between the dimensions (Van der Byl and Slawinski 2015). For example, BedStu shoe company has recently launched a campaign highlighting the environmental sustainability of their shoes using phrases such as, “Made in a pre-industrial old world environmentally safe manner” and “Our glues are primarily water based, solvent free, and used sparingly” (BedStu 2016). However, they fail to mention
their social sustainability impact. Further, some companies only focus on the social
dimension of sustainability without considering their environmental impact. For instance,
Fairhills, a South African wine company, touts numerous social benefits including
helping local communities launch housing renovation, adult literacy, and alcohol
rehabilitation programs (Fairhills 2017). However, environmental sustainability
initiatives are not mentioned.

Research examining social and environmental sustainability separately has
offered varied and contradictory results. Specifically, both social (Sen and Battacharya
2001; Lichtenstein et al. 2004; Kang, Germann, and Grewel 2016) and environmental
(Gershoff and Frels 2015; Griskevicius, Tybur, and Van den Bergh 2010; Rivera-Camino
2007) sustainability initiatives have been evaluated positively by consumers. However,
prior research also suggests that consumers do not consistently make socially or
environmentally sustainable choices (Aaker et al. 2010; Luchs et al. 2010; Mănescu
2010; Peattie 2010; Sen and Bhattacharya 2001). Thus, it may be that consumers are not
satisfied by a singular focus on only one dimension of sustainability. Companies may
need to consider their broad sustainability impact, including attention to both society and
the environment. This is because social and environmental sustainability may be more
linked in consumers’ minds than previous research suggests. For example, a recent
survey from Neilsen suggests that consumers care about both social and environmental
sustainability (Neilsen 2015). Specifically, roughly an equal percentage of the consumers
surveyed indicated that their purchase choices are influenced by a company’s
commitment to the environment and a focus on either social value or the consumer’s
community (i.e. social sustainability). These findings provide evidence of significant overlap between consumers concern for social and environmental sustainability.

Thus, when a consumer perceives a company to be sustainable along one dimension, their perceptions of the other sustainability dimension may be enhanced. Moreover, this interconnectedness of social and environmental sustainability may ultimately lead to enhanced consumer evaluations of a company when the company promises to be sustainable along one dimension and later considers both of these dimensions. Alternatively, because these dimensions seem interconnected, failing to act sustainably along either dimension may negatively impact consumer attitudes towards the company. Thus, there is a need to explore how consumers may evaluate companies that consider (or fail to consider) both the social and environmental dimensions of sustainability alongside one another.

**Significance of Study**

Marketers have spent a great amount of effort on sustainability research that attempts to address the lack of consistencies between consumer attitudes and behaviors with regard to sustainable products (Carrington and Attalla 2001; Carrington, Neville, and Whitwell 2014; Castaldo et al. 2009; Luchs et al. 2010). Specifically, there is a propensity for consumers to express concern for both social and environmental sustainability issues but not follow through on engaging in sustainable actions and purchases. Simultaneously, the study of sustainability is often siloed, meaning that its dimensions are addressed in isolation. For instance, Leonidou, Katsikeas, and Morgan (2013) focus exclusively on the environmental dimension of sustainability in their exploration of consumer sustainable product preferences, finding that green product and
distribution programs positively affect companies' product-market performance. However, no mention of social sustainability was included in the study. Additionally, Koschate-Fischer, Huber, and Hoyer (2016) ignore the environmental sustainability dimension in their evaluation of social sustainability’s impact on perceptions of price fairness and purchase intentions and find that consumer evaluations of these outcomes are positively impacted by a company’s donation efforts. From a company perspective, the singular focus on one dimension is also prominent, as is evidenced in the examples about BedStu and Fairhills’ respective focus on environmental and social sustainability and countless others.

Though even a singular focus on a sustainability dimension is a noble company endeavor, what companies are currently providing in terms of sustainability initiatives seems to be missing the mark. That is, a focus on only one sustainability dimension is emphasized when consumers realistically may care about sustainability in a more holistic way. The existing literature on sustainability does not offer an adequate examination of how the social and environmental dimensions of sustainability are linked (e.g. Chabowski et al. 2011). Thus, a more comprehensive view of sustainability is needed.

From a theoretical perspective, the multiple pathway anchoring and adjustment (MPAA) model (Cohen and Reed 2006) is used to explain how the social and environmental dimensions of sustainability impact consumer attitudes toward the company. MPAA is a model that integrates prior research on attitudes to explain how attitudes are both formed and changed (Cohen and Reed 2006; Lynch 2006). Specifically, this theory suggests that attitudes can be formed through internal or external stimuli, and this distinction impacts how these attitudes are later retrieved. That is, once attitudes are
formed they may later be retrieved and updated based on an individual’s evaluation of novel stimuli. Thus, this model is well-suited for examining how consumer attitudes towards companies are impacted when promises made along the social and environmental dimensions of sustainability are followed by the delivery of successful or failed sustainability outcomes.

**Statement of Purpose**

The purpose of this dissertation is to investigate how the connection between the social and environmental dimensions of sustainability impact consumer evaluations. First, the link in consumers’ minds between social and environmental dimensions of sustainability is explored. That is, are the social and environmental dimensions of sustainability interconnected such that promising one dimension enhances consumer perceptions of the other dimension? For example, if a company makes a promise to be environmentally sustainable, do consumers also believe the company is more socially sustainable and vice versa?

Next, consumer attitudes toward companies that make social or environmental sustainability promises are examined. Prior research suggests that when companies make either a social or environmental sustainability promise, consumer evaluations of the company can be enhanced (Cotte and Trudel 2009; Du, Bhattacharya, and Sen 2007; Sen and Bhattacharya 2001). Thus, are both social and environmental sustainability important to consumers? Specifically, are consumers’ evaluations of companies that make either social or environmental sustainability promises higher than evaluations of companies that do not make sustainability promises?
The idea that social and environmental sustainability complement each other to increase consumer attitudes toward the company are also be examined. Specifically, how do consumers respond when a company makes a sustainability promise along one dimension of sustainability and then successfully delivers on a different dimension of sustainability? For instance, a company that offers a sustainability promise along the social sustainability dimension then later delivers an outcome along the environmental sustainability dimension may receive increased evaluations over a company that only considers social sustainability. Likewise, a company that offers an environmental sustainability promise and later delivers along the social sustainability dimension may see increased attitudes over a company that only considers its environmental impact. If these two dimensions are so linked in consumers’ minds, it may be that companies that make promises along one dimension of sustainability may be evaluated more positively by also delivering along a separate dimension. Even though this additional dimension is not an explicit part of their original promise to consumers, considering both social and environmental sustainability may imply a more holistic focus on sustainability.

Companies that fail to act sustainably after making a sustainability promise along either the social or environmental sustainability dimension are also be examined. That is, do consumers have reduced evaluations of a company that fails to act sustainability? Again, if the social and environmental dimensions of sustainability are interconnected, failing to act sustainably along either dimension may lead to negative evaluations from consumers, despite the dimension of the original promise.

Moreover, it is important to understand the constructs that drive these effects. That is, what are the psychological mechanisms that explain how the relationship
between sustainability promises and subsequent sustainability successes or failures impact consumer attitudes? Specifically, consumer perceptions of sincerity and competence are predicted to explain the relationship between sustainability promise and sustainability success or failure onto consumer evaluations of the company. Perceptions of sincerity address the issue of whether the company means what they promise (Macintosh 2002), an important attribute when considering social and environmental sustainability promises. Additionally, competence perceptions give the consumer confidence that the company is actually able to follow through on their given sustainability promise (e.g. Coulter and Coulter 2002). Thus, consumer perceptions of the company’s sincerity and competence may be important in explaining why companies that consider both the social and environmental dimensions of sustainability may have enhanced consumer evaluations of the company. Additionally, these constructs may help to explain why consumer evaluations might be diminished after a company that promised to be sustainable fails to do so.

**Organization**

To examine the interconnection between social and environmental sustainability, a review of the literature regarding sustainability and its dimensions is conducted. Specifically, sustainability is first discussed broadly followed by a more detailed review of the literature on each dimension. Next, the theoretical foundation for the studies is discussed. Multiple pathway anchoring and adjustment (MPAA) theory is used to support the changes in consumer attitudes that may occur when companies utilize social and environmental sustainability dimensions in their promises and deliveries to customers. A conceptual model is then presented which outlines the research predictions. Finally, four
experiments are conducted to empirically examine the relationships discussed in the conceptual model.

Study 1 focuses on answering the question of whether or not promising to be sustainable along one dimension of sustainability makes people think that the company is also sustainable along the other dimension. For example, a company that promises to be socially sustainable may also be perceived to be environmentally sustainable, or a company that promises to be environmentally sustainable may also be perceived as socially sustainable. To explore this relationship between social and environmental sustainability, two distinct product categories are examined. Study 1A examines consumers’ perceptions of a headphone company depicted in advertisements as making either a social, environmental, or no sustainability promise. Study 1B then replicates study 1A using the context of a chocolate company to increase the generalizability of the findings across product categories.

Study 2 further investigates the interconnection between social and environmental sustainability by exploring how these dimensions impact consumer attitudes toward the company. That is, this study examines whether or not making a promise to be sustainable along either the social or environmental dimension results in more positive attitudes toward the company over a company that does not make a sustainability promise. Additionally, study 2 is used to gain an initial understanding of how attitudes are impacted when sustainability promises along one dimension are followed by successful sustainability outcomes along the same or the other dimension of sustainability. For example, consumer attitudes may be impacted differently when the dimension of the original promise matches the dimension of the success versus when the dimension of the
original promise does not match the dimension of the success. Moreover, this study examines how consumer attitudes are impacted when a company that makes either a social, environmental, or no sustainability promise later fails to deliver a sustainable outcome along the social dimension.

Study 3 extends the findings from studies 1 and 2 by identifying the underlying mechanisms driving the above effects. Specifically, this study explores how the relationship between sustainability promises and sustainability successes or failures influence perceptions of sincerity and competence, ultimately impacting consumer attitudes. Study 3 follows a similar design as study 2. However, the social sustainability success or failure is replaced with an environmental sustainability success or failure to further investigate the link between the two dimensions. By changing the dimension of the success or failure from social to environmental, study 3 more fully explores how consumers evaluate companies based on the dimension of the initial sustainability promise and the dimension of the subsequent sustainability success or failure. Additionally, study 3 increases the generalizability of findings from study 2 by examining sustainability promises using the product context from study 1B, chocolates.

Finally, study 4 builds on the findings from studies 1-3 by capturing actual behavior. This study takes place in a laboratory setting and explores how consumers’ choices are impacted by receiving information about the successful or failed sustainability outcomes of companies that make social or environmental promises. To accomplish this goal, study 4 is a behavioral experiment that examines consumer’s product choice after exposure to a sustainability promise followed by a subsequent sustainability success or failure. Additionally, this study further generalizes the results to
a new context, an office supply company. Sticky notes are used as the specific product context. Results of this study provide insights into how consumers’ actual choices are impacted by a company’s sustainability successes and failures.

Taken together, the results of these four studies offer a more complete conceptualization of how consumers evaluate companies that make sustainability promises and how the social and environmental dimensions influence one another. After presenting studies 1-4 results, a general discussion along with theoretical and practical implications are presented. Finally, research limitations and a future research agenda are outlined.
CHAPTER II
LITERATURE REVIEW

Sustainability

More and more companies are adopting sustainability initiatives into their business models as a means of meeting the needs of their various customers (Cone 2015; Neilsen 2015). However, the meaning of sustainability and its impact on businesses is not well understood. Sustainability is an intellectually diverse construct that has been studied across many disciplines, including economics (Hobbs and Schneller 2012; Nakai, Yamaguchi, and Takeuchi 2013), law (Heinämäki 2009; Keay 2008), biology (Engen 2007; Renton et al. 2011), accounting (Adams and Whelan 2009; Gray 2006), psychology (Margetts and Kashima 2017; Schultz 2001; Yoon, Gürhan-Canli, and Schwarz 2006), marketing (Gleim et al. 2013; Luchs et al. 2010; Peloza and White 2013), and management (Hahn et al. 2014; Porter and Siggelkow 2008; Shrivastava 1995). As such, sustainability has been defined in many different ways and can mean a variety of things to different people (e.g. Hoffman and Bazerman 2007). In an attempt to encompass sustainability’s role in these various disciplines, researchers have proposed broad definitions for sustainability. For instance, Farrell and Hart (1998) define sustainability as the capacity of both rich and poor to enhance their own welfare while at the same time preserving the environment. Other definitions have simply defined sustainability as an issue of human flourishing (Ehrenfeld 2004). The most popular definition from

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sustainability literature defines sustainability broadly as “meeting the needs of the present without compromising the ability of future generations to meet their own needs” (Brundtland 1987, p. 8).

However, some researchers have found these definitions too imprecise to meaningfully represent the nuanced topics often studied in the context of sustainability. For instance, a variety of terms including corporate social responsibility (Brown and Dacin 1997; Luo and Bhattacharya 2006), green marketing (Peattie and Charter 2003), environmentalism (Banerjee et al. 2003; Menon and Menon 1997), and corporate sustainable development (Bansal 2005) have been used to describe sustainability initiatives. Each of these conceptualizations touches on different sustainability topics. Thus, more narrow definitions of sustainability have been offered up in place of the broad sustainability definitions to more precisely represent these specific contexts. For example, Pfeffer (2010) defined sustainability as efforts to conserve natural resources and avoid waste in company operations. Similarly, Goldsmith (2010) refers to sustainability as consumption choices that impact the environment and take into account the earth’s finite resources. These definitions limit sustainability to a focus on the environmental dimension not considering the social impact. Other definitions have focused solely on the social sustainability dimension. For instance, Biart (2002) suggests that sustainability refers to efforts to identify the challenges that may hinder society’s function and development in the long run. This definition focuses only on social impact ignoring the importance of the environmental dimension. Overall, these narrow definitions represent an overcorrection to a limited view of sustainability, focusing on one dimension at a time and missing a larger impact of sustainability.
Sustainability should be defined broadly so that it can cover the wide range of topics that fall under its domain. However, the definition of sustainability should not be so broad as to lack any specificity and become only a vague conceptualization. The triple bottom line conceptualization of sustainability accounts for these various aspects of sustainability by offering a framework to support research along each dimension (Elkington 1997; Elkington 2004; Simpson and Radford 2012). Because the triple bottom line places importance on each dimension of sustainability (Daub and Ergenzinger 2005; Ozanne et al. 2016), research along any dimension works towards the goal of maintaining and improving society, the environment, and the economy for future generations. That is, triple bottom line sustainability considers each dimension to be both distinct and necessary to the future success of companies and society in general. Under a triple bottom line conceptualization, sustainability clearly consists of three dimensions: social, environmental, and economic (Jackson 2006; National Research Council 1999; Sheth, Sethia, and Srinivas 2011). Specifically, triple bottom line allows companies to not only focus on economic results, but also take into account social and environmental impacts as well (Elkington 1997). Thus, to reconcile this vast and fragmented sustainability literature stream, sustainability is defined here as meeting the needs of the present without compromising the ability of future generations to meet their own needs for society, the environment, and the economy. This definition draws on the concept of the triple bottom line (Elkington 1997) which allows for a focus on specific topics within the individual dimensions of sustainability while at the same time maintaining the broad nature of Brundtland’s definition.
Without the economic dimension of sustainability, the benefits the company may receive from social and environmental sustainability might be short lived. However, in the traditional sense of sustainability the economic dimension is often studied in conjunction with the environmental and social dimensions (Collins et al. 2007; Kirchgeorg and Winn 2006), where positive economic outcomes are a benefit of these initiatives. While consumers appreciate that companies need to stay in business, economic factors may not be a part of their consideration set when making sustainable consumption choices. Thus, sustainability is examined from a consumer’s perspective, where the focus is primarily on the social and environmental dimensions of sustainability. Despite this emphasis on the social and environmental sustainability dimensions, a brief overview of the literature on economic sustainability is given as it falls under the triple bottom line conceptualization of sustainability.

**Environmental Dimension**

Environmental sustainability specifically refers to a company’s activities relative to natural resources and efforts to protect and preserve the environment (Hart 1995). Efforts to achieve environmental sustainability include minimizing environmental impacts, reducing resource consumption and waste, and exercising caution in human development activities (Gibson 2001). Although sustainability consists of three dimensions, research has typically focused on one dimension of sustainability at a time, ignoring their interconnection (Van der Byl and Slawinski 2015). A majority of the current marketing research on sustainability has focused on its environmental dimension (Cronin et al. 2011; Griskevicius et al. 2012; Luchs et al. 2010; Peloza and Shang 2011). Specifically, the term sustainability is often used in the literature without clarification that
the sustainability mentioned is actually environmental sustainability (Frame and Newton 2007; McDonald et al. 2009). Marketing’s focus on the environmental aspect of sustainability is perhaps rooted in early work on green marketing (i.e. environmentally sustainable marketing) which primarily concentrated on concepts of ecological marketing and the ecological consumer. These early works proposed marketing activities as the potential remedy for environmental problems related to overconsumption such as pollution and resource depletion (Henion and Kinnear 1976; Kardash 1974).

Companies are often inclined to engage in environmental sustainability practices because they can positively impact the company’s reputation (Miles and Covin 2000), financial performance and market share (Menguc and Ozanne 2005; Siegel 2009), and employee commitment (Maignan and Ferrell 2001). However, even across companies within the same industry, there is significant variation in commitment to environmental sustainability (Closs, Speier, and Meacham 2011). This variation in company participation in environmental sustainability has been previously attributed to the lack of consistency between attitudes toward green products and actual purchasing behavior that is often the motivation for green research (e.g. Gleim and Lawson 2014; Green and Peloza 2014; Luchs et al. 2010; Phipps et al. 2013). That is, though there is a general consensus among consumers that environmentally sustainable consumption is desirable, this does not always translate into green consumption behavior (Prothero et al. 2011).

There is increasing pressure from the public for companies to care about the environment (Gershoff and Frels 2015; Kotler 2011; Rivera-Camino 2007). Consumers now favor products that cause less pollution and use fewer natural resources (Gilg, Barr, and Ford 2005; Luchs et al. 2011). This is evidenced by research stating that consumers
are willing to pay more for green products and services versus nongreen rival products (Griskevicius, Tybur, and Van den Bergh 2010; Kotler 2011; Laroche, Bergeron, and Barbaro-Forleo 2001). For example, Cotte and Trudel (2009) found that consumers were willing to pay significantly more for an environmentally sustainable t-shirt over a t-shirt that was not made from environmentally friendly materials. Similar results were found from an experiment comparing consumer willingness to pay a premium for environmentally certified wood products versus the same wood products without an environmental certification (Vlosky, Ozanne and Fontenot 1999). Consumers were willing to pay a higher price for the environmentally friendly wood products. These results suggest that across product categories consumers are often willing to pay more for environmentally sustainable products, indicating that consumers value environmentally sustainable products.

However, research also suggests that consumers do not always favor green products and services. For example, Luchs et al. (2010) found a “sustainability liability” for environmentally friendly products (cleaning products) valued for strength attributes, where consumers see them as gentle and thus less powerful. Moreover, Lin and Chang (2012) found that even when consumers are willing to buy green products valued for their strength attributes, they use more of the product to make up for the perceived inferiority. Some research has attempted to understand how to mitigate these negative associations consumers have with environmentally sustainable products. For example, increasing consumer perceptions of the products’ credibility diminishes consumers’ propensity to use more of the sustainable product over a non-sustainable product (Lin and Chang 2012; Shin, Park, and Moon 2015).
Considering motives for green behavior further, environmental sustainability research has often focused on creating a profile for the typical green consumer (Laroche, Bergeron, and Barbaro-Foleo 2001; Schlegelmilch, Bohlen, and Diamantopoulos 1996; Shrum, McCarty, and Lowrey 1995). A consumer’s level of environmental consciousness, or the degree to which a person has concern for the environment (Dunlap and Jones 2002), varies depending on their socio demographic characteristics (Diamantopoulos et al. 2003). For example, gender can have an impact on choosing to engage in environmentally sustainable behavior, indicating a green-feminine stereotype due to the male desire to preserve their masculine image (Brough et al. 2016). Men are found to be less likely than women to engage in environmentally friendly attitudes, choices, and behaviors (Dietz, Kolaf, and Stern 2002; Lee and Holden 1999), littering more (Kallgren, Reno, and Cialdini 2000) and recycling less (Zelezny, Chua, and Aldrich 2000) than their female counterparts. Additionally, age is often considered an important factor driving green behavior. Millennials are more likely to be green than consumers belonging to Baby Boomers and Generation X generations (Barber, Taylor, and Strick 2010). This generational difference in environmental concern is attributed to the fact that older people may not live to benefit from the long-term gains associated with preserving resources (Carlsson and Johansson-Stenman 2000).

Beyond demographics, status motives can promote pro-environmental behavior. There is an increased desire for green products when shopping in public versus in private and when green products cost more than nongreen products (Griskevicius, Tybur, and Van den Bergh 2010). Further, consumers’ personal norms and attitudes toward the protection of the environment contribute to green purchasing behavior (Bamberg and
Moser 2007; Gupta and Ogden 2009; Moser 2015;). The “warm glow,” or emotionally charged moral satisfaction, experienced when engaging in pro-environmental behavior significantly contributes to participation in green activities (e.g. recycling; Giebelhausen et al. 2016). However, research also suggests that some consumers simply exhibit a pro-environmental orientation (Collins, Steg, and Koning 2007; Kaiser, Wolfing, and Fuhrer 1999; Lin and Chang 2012), suggesting that some consumers engage in green behavior purely because they care about the well-being of the planet and its inhabitants. Overall, this research suggests that consumers find environmental sustainability a valuable attribute that influences their attitudes towards companies.

**Social Dimension**

The second dimension of sustainability is social sustainability. In general, social sustainability references a long-term impact on society and the welfare of communities and people, enhancing their ability to grow and thrive in the future (Elkington 1997). For example, social sustainability practices often include such varied topics as fair trade, charitable work, and even employee health and wellness. Moreover, social sustainability often includes managing the company in such a way as to strengthen relationships with and improve the quality of life of various consumers (Chow and Chen 2012). Reduction of social inequality is often a primary focus of social sustainability efforts. Companies that practice social sustainability provide value to society and “give back” to the community (Alhaddi 2015). This suggests that achieving social sustainability includes protecting and advancing human rights, especially for those who are disadvantaged, through both ethical and moral actions (Reichert 2011). Thus, the overall goal of social
sustainability is to maintain positive social values and improve human well-being (Marcus, Macdonald, and Sulsky 2015).

In marketing literature, the term social sustainability is rarely used. Instead, corporate social responsibility (CSR; Lichtenstein, Drumwright, and Braig 2004; Closs, Speier, and Meacham 2011; Robin and Reidenblach 1987) is one of the most frequently used expressions of the social dimension of sustainability (Peloza and Shang 2011). Though CSR can frequently include environmental sustainability efforts, CSR refers to company actions that advance social good beyond what is required by the law (e.g. McWilliams and Siegel 2001). That is, CSR is a company-level initiative that describes a company’s focus on the needs of society (Lichtenstein et al. 2004; Smith 2003) and often results in an enhanced relationship with consumers (Folse, Niedrich, and Grau 2010; Homburg, Stierl, and Bornemann 2013; Vlachos et al. 2009).

Social sustainability initiatives, including CSR activities, are linked to a number of positive outcomes, including differentiation from competition (Fombrun and Shanley 1990), creating an emotional bond between companies and consumers (Menon and Kahn 2003; Sen and Battacharya 2001), and countering negative publicity (Vanhamme and Grobben 2009). Furthermore, consumers view companies that engage in socially responsible activities as warmer, more compassionate, and more trustworthy (Aaker, Vohs, and Molinger 2010; Hansmann 1981; Lichtenstein et al. 2004). This indicates a view that these socially responsible companies are more ethical overall (Hoeffler and Keller 2002). Moreover, social sustainability efforts have been linked to positive consumer attitudes toward the company. For example, Marlen, Papantoniou, and Morfitou (2017) asked consumers about their desire to buy from companies that support
the elimination of famine and poverty. Results of the survey found overwhelmingly positive attitudes towards such activities.

Despite positive associations with socially sustainable companies (Sen and Bhattacharya 2001; Wigley 2008), a company’s motives for engaging in socially responsible behavior are often called into question by consumers (Chernev and Blair 2015). Prior research suggests that a company may not realize the full benefits of CSR initiatives when consumers perceive the company’s actions to be motivated more by self-interest instead of sheer benevolence (Wagner, Lutz, and Weitz 2009; Yoon, Gurnhan-Canli, and Schwarz 2006). That is, consumers respond more positively to companies engaging in social sustainability initiatives when they feel that the company’s motives are sincere. There are also costs associated with ignoring social sustainability responsibilities. For example, consumer backlash against child labor, lack of fair wages, and working conditions has a negative impact on company performance and reputation (Knorringa 2009).

One of the most prevalent topics under the CSR branch of social sustainability is cause-related marketing (CM; Chang 2008). CM refers to efforts companies take to donate to a cause each time a consumer buys their products or services (Varadarajan and Menon 1988, p. 80). CM campaigns are attempts by companies to gain favor from consumers by investing in communities through donations to causes. Because the donation is triggered by a transaction, CM campaigns are not purely altruistic (Fine 1990). That is, companies often engage in CM campaigns to enhance consumer evaluations of the company and increase sales (Barone, Norman, and Miyazaki 2007). However, these campaigns often have at least one, and often more, non-economic
objectives related to social welfare (Drumwright and Murphy 2001, p. 164). For example, Yoplait yogurt ran a very successful CM campaign from 1998-2016 where 10 cents were donated to fight breast cancer every time a customer sent in a special pink lid from one of its yogurt cups (Hessekiel 2017). Not only did Yoplait donate more than 50 million dollars to fight breast cancer (Hessekiel 2017) and bring greater attention to the problem in general, but also consumers responded positively to Yoplait’s campaign, resulting in increased sales and brand recognition from the campaign (Sulik 2010). Thus, CM campaigns can be used by companies to donate money to help solve social problems thereby enhancing society for future generations while at the same time increasing consumer engagement with the company.

Taken together, prior research suggests that consumers consider social sustainability to be extremely important. That is, engaging in such socially sustainable practices has a positive impact on company financial performance (Hillman and Keim 2001; Hull and Rothenburg 2008; Kang, Germann, and Grewal 2016), where consumers are less price sensitive and more brand loyal to socially sustainable companies (Marin, Ruiz, and Rubio 2009). Thus, disregarding social sustainability may negatively affect performance of the company in the long run.

**Economic Dimension**

Economic sustainability’s primary objective is to remain in the market for a long period of time (Baumgartner and Ebner 2010). This is often accomplished through activities that create value and enhance financial performance for the company (Bansal 2005). In practice, the economic viability of the company is essential to its survival (Simpson and Radford 2012; Steurer et al. 2005). Thus, economic sustainability has
focused on the relationship between marketing resources, capabilities, assets, and performance (Chabowski, Mena, and Gonzalez-Padron 2011). Drawing from the resource based view of the company (RBV; Barney 1991) and resource-advantage theory (Hunt and Morgan 1995), marketing research has long focused on how companies can achieve superior performance and, thus, a competitive advantage as a means of thriving long term as an organization (Hult 2011; Luo, Sivakumar, and Liu 2005; Menguc and Auh 2006). That is, economic sustainability pertains to the ability of the economy to survive and grow into the future (Spangenberg 2005), where there is a distinct focus on an organization’s ability to prosper and provide support for future generations (Alhaddi 2015; Sheth et al. 2011).

Consumers may care about the economic sustainability of companies as the economic success of companies impacts an organization’s ability to grow and provide jobs and support for future generations (Choi and Ng 2011; Spangenberg 2005). However, in studying sustainability promises to consumers, economic sustainability benefits to the company are not typically considered by consumers. Economic sustainability benefits are instead viewed as a positive outcome companies receive for their social and environmental sustainability efforts (Ameer and Othman 2012; Spary 2015). Because economic sustainability is primarily tied to company profit maximization and economic growth (Bansal 2005), economic sustainability benefits are not often marketed to consumers in the same way as environmental and social sustainability initiatives. For example, Green Mountain Coffee company specifically describes their coffee as socially sustainable using terms such as “Fair Trade Certified” and “sourced with integrity” (Green Mountain Coffee 2017). However, no mention is made of the
company’s economic sustainability. For this reason, economic sustainability is not considered in studying how sustainability impacts consumer evaluations of the company. Instead, only the interconnectedness of social and environmental sustainability are examined.

**Interdependence of Sustainability Dimensions**

Most research on sustainability has investigated only a single dimension at a time (e.g. Barone, Norman, Miyazaki 2007; Luchs et al. 2010; Newman, Gorlin, and Dhar 2014; Xie, Bagozzi, and Grønhaug 2015). When multiple dimensions of sustainability are examined, social and environmental sustainability are often combined so that consumers can only evaluate these dimensions of sustainability simultaneously (e.g. Moser 2015; Pirsch et al. 2007). For example, Singh, Salmones Sanchez, and Rodriguez del Bosque (2008) attempted to examine how social sustainability, corporate ethics, and company image impact consumer evaluations of well-known companies (i.e. Danon, Coca-Cola, Kelloggs, and Colgate). However, environmental concerns were included in the company’s description of social sustainability. Thus, the comparative importance of each of these two dimensions is unknown.

Similarly, research on CSR and sustainability often pulls from the Kinder, Lydenberg, and Domini (KLD) database (Lenz, Wetzel, and Hammerschmidt 2017; Mishra and Modi 2016; Servaes and Tamayo 2013). This database holds information about companies with sustainability strengths and concerns across multiple important domains including corporate governance, employee relations, diversity, environment, and community and human rights. Thus, it covers both the social and environmental dimensions of sustainability. However, because there is no differentiation between the
dimensions, the relative impact of each is impossible to assess. This is an understandable approach considering that many companies make both social and environmental claims. However, using such a blended approach may cause problems for sustainability research as the actually separate dimensions of sustainability are not kept distinct from one another. Thus, the impact of the sustainability dimension being researched is not isolated.

Moreover, research also exists that simply interchanges social and environmental sustainability dimensions across studies without exploring the impact these two dimensions may have on each other (e.g. Bolton and Mattila 2015; Cotte and Trudel 2009; Peloza, White, and Shang 2013). For example, Peloza et al. (2013) use four experiments to explore situational factors that heighten consumers' self-accountability and lead to increased preferences for ethical products. In three of the studies the focus is on environmental sustainability. Consumers were asked about their buying preferences for green products (i.e. apple juice, granola bars, and coffee that have low environmental impact). However, in one of the four studies, the focus shifts to social sustainability, and consumers are asked about their preference for fair trade tea that is sourced to ensure fair wages for tea producers in developing nations. Though it is promising that both social and environmental sustainability initiatives led to increased preferences for sustainable products, the interdependence of the two dimensions is left unexplored.

There are a few notable exceptions where attempts have been made to look at sustainability more holistically (Choi and Ng 2011; Marcus et al. 2015; Ozanne et al. 2016). For example, several researchers have attempted to understand which elements of sustainability are most important to consumers and the success of the corporation (Catlin, Luchs, and Phipps 2014; Collins et al. 2007; Simpson and Radford 2012; Simpson and
Simpson and Radford (2012) used a free elicitation study to understand consumer reactions to the word “sustainability” and determine if consumers are aware of the three pillars of sustainability (i.e. social, environmental, and economic). Results indicate that consumer perceptions of sustainability are heavily linked to the environmental dimension of sustainability with over 75% of participants enacting concerns for resources, the environment, and waste.

Additionally, Catlin et al. (2014) used construal level theory (Trope and Liberman 2010) to examine the differences in psychological distance for social versus environmental sustainability. Specifically, a study was conducted to examine psychological distance perceptions of an environmental chocolate bar described as either environmentally responsible (e.g. minimizing pollution, efficient energy use) or socially responsible (e.g. using fair labor practices, supporting local communities). Results suggest that consumers see social sustainability as more psychologically concrete and environmental sustainability as more psychologically abstract. Moreover, a meta-analysis of over 80 papers conducted by Tully and Winer (2014) examined differences in willingness to pay for products that are either environmentally sustainable versus socially sustainable. Findings indicate that consumers are willing to pay a 16.8 percent premium for products labeled environmentally or socially sustainable. Interestingly, results of the meta-analysis also suggest that consumers are, on average, willing to pay more for products that are labeled socially sustainable compared to environmentally sustainable.

Overall, research on social and environmental sustainability offer some ambiguous results. That is, consumers may think more about environmental sustainability (Simpson and Radford 2012; Simpson and Radford 2014), but they are willing to pay
more for socially sustainable products (Tully and Winter 2014). Taken together, these results suggest that both dimensions are seen as valuable to consumers, making it important to understand how they impact one another.

To more comprehensively examine sustainability’s presence within marketing literature, a search of the recent sustainability research was conducted using the Scopus database for the following journals: *Journal of Marketing, Journal of Marketing Research, Journal of the Academy of Marketing Science, Journal of Consumer Research, Journal of Retailing, Journal of Consumer Psychology*, and *Journal of Public Policy and Marketing*. Specifically, the keywords *sustainability, green marketing, corporate social responsibility, socially responsible, and environmental impact* were used to search titles, keywords, and abstracts for sustainability related manuscripts. The search resulted in total of 70 articles. Only empirical articles were included in the analysis. Conceptual articles and articles where sustainability was not the primary topic of the article were discarded, resulting in a final count of 43 articles. The majority of the conceptual articles that were excluded were from a 2011 special issue on sustainability published in *Journal of the Academy of Marketing Science* as these articles primarily focused on conceptually reviewing and offering future research agendas for sustainability. The results of this review are presented in table 2.1.

Results of this literature review confirm that marketing literature has primarily focused on environmental sustainability initiatives. Specifically, 24 of the 43 articles focus exclusively on environmental sustainability, 12 of the articles focus exclusively on social sustainability, and 7 focus on more than one dimension of sustainability. Moreover, the research on environmental sustainability has primarily focused on
understanding consumer reactions to and the adoption of green products. Specifically, 12 of the 24 articles devoted to environmental sustainability focus on the context of green products. The research reviewed here on social sustainability has primarily focused on the context of charitable donations. Specifically, 11 of the 12 articles devoted to social sustainability are primarily focused on philanthropy and charitable donations. Of these 43 articles, none focused on economic sustainability.

In reviewing the 7 articles in the analysis that focus on both social and environmental sustainability, most of the articles were found to either examine the two dimensions in isolation across studies (Bolton and Mattila 2015; Peloza, White, and Shang 2013; Zane, Irwin, and Reczek 2016) or combine the dimensions (Lenz, Wetzel, and Hammerschmidt 2017; Mishra and Modi 2016; Wagner, Lutz, and Weitz 2009). When the dimensions are examined in isolation across studies, only one dimension is examined at a time within an individual study. For example, studies 1, 2, and 3 may focus on environmental sustainability while study 4 focuses on social sustainability. When the two dimensions are blended together within a study, both dimensions are examined simultaneously. However, there is no way to determine the relative impact of either dimension because they cannot be separated. In either scenario, the impact of the two dimensions onto each other is not explored.

Overall, research examining the connection between the dimensions of sustainability has been limited and is in need of exploration. Though both social and environmental sustainability are considered to be positive company attributes by consumers, examining each dimension in isolation may not be enough to accurately understand consumer perceptions of sustainability. Here, it is suggested that a more
inclusive approach to sustainability research may be a better. Specifically, consumers may respond more positively to companies that take into consideration both social and environmental aspects of sustainability. For instance, though a company may focus on sourcing their products using a fair trade, a socially sustainable business model, they must still consider their environmental impact. The opposite may also be true, where companies that promise to act in an environmentally responsible manner must also take into account their social sustainability impact. Thus, the focus here is on examining the interconnectedness between social and environmental sustainability and the impact these two dimensions have on consumer evaluations of the company.
Table 2.1  Review of Recent Literature

<table>
<thead>
<tr>
<th>Authors</th>
<th>Sustainability Dimension</th>
<th>Study Context</th>
<th>Notable Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barone, Norman, and Miyazaki (2007)</td>
<td>Social</td>
<td>Charitable Donations</td>
<td>Retailer-cause fit's effect on consumer evaluations of the retailers' cause-related marketing strategy is moderated by consumer perceptions of the retailer's motive for engaging in cause-related marketing.</td>
</tr>
<tr>
<td>Wagner, Lutz, and Weitz (2009)</td>
<td>Social and Environmental - Combined</td>
<td>Company CSR Efforts</td>
<td>Proactive communication strategies (when the company's CSR statements precede conflicting observed behavior) lead to higher levels of perceived hypocrisy than reactive communication strategies (when the company's CSR statements follow observed behavior). Perceived hypocrisy damages consumer's attitudes toward the company.</td>
</tr>
<tr>
<td>Vlachos et al. (2009)</td>
<td>Social</td>
<td>Charitable Donations</td>
<td>Trust mediates the relationship between consumer perceptions of the company's motives for engaging in CSR activities and repatronage intentions.</td>
</tr>
<tr>
<td>Luchs et al. (2010)</td>
<td>Environmental</td>
<td>Buying Green Products</td>
<td>Sustainability enhances preferences for products valued for their gentleness-related attributes but decreases preferences for products valued for their strength-related attributes.</td>
</tr>
<tr>
<td>Folse, Niedrich, and Grau (2010)</td>
<td>Social</td>
<td>Charitable Donations</td>
<td>Amount of company donation to a charitable cause is positively linked to consumer perceptions of the company.</td>
</tr>
</tbody>
</table>
Shanahan, Hopkins, and Carlson (2010) | Social | Charitable Donations | Consumers experience stronger emotional connections and greater perceptions of social responsibility when public service announcements used by nonprofits use real victims versus actors. The stronger emotional connection and perception of social responsibility increase intent to donate to the nonprofit.

Phipps and Brace-Govan (2011) | Environmental | Wasteful Consumption | Changes to public policy can help consumers shift their perspective on water consumption from a right to consume to a view that it must be consumed responsibly.

Robinson, Irmak, and Jayachandran (2012) | Social | Charitable Donations | Consumer support is higher when consumers are allowed to choose the cause that receives a donation from the company versus when the company chooses the cause.


Lin and Chang (2012) | Environmental | Green Product Usage | Consumer perceptions of product effectiveness significantly affect the amount of product they choose to use. Consumers consider green products to be less effective than regular products and use more to make up for the perceived inferiority.
Table 2.1 (continued)

<table>
<thead>
<tr>
<th>Study</th>
<th>Environment</th>
<th>Activity</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Kronrod, Grinstein, and Wathieu (2012)</td>
<td>Environmental</td>
<td>Recycling; Pollution; Economizing Water</td>
<td>Consumer responses to assertive green messages depends on the importance placed on the issue at hand. Responses to pushy ads are positive when the consumer views the domain as important.</td>
</tr>
<tr>
<td>Peter and Honea (2012)</td>
<td>Environmental</td>
<td>Wasteful Consumption</td>
<td>Guilt, hope, pride, and optimism lead to an increased intent to reduce wasteful consumption. Optimism motivates people to adopt and maintain this behavior over time.</td>
</tr>
<tr>
<td>Gleim et al. (2013)</td>
<td>Environmental</td>
<td>Green Cleaning Products</td>
<td>Altering the number and form of informational product cues can help overcome barriers to green consumption.</td>
</tr>
<tr>
<td>Leonidou, Katsikeas, and Morgan (2013)</td>
<td>Environmental</td>
<td>Green Products</td>
<td>Green product and distribution programs positively affect companies' product-market performance. Green pricing and promotion practices are positively related to companies' return on assets.</td>
</tr>
<tr>
<td>Peloza, White, and Shang (2013)</td>
<td>Environmental (S1; S3; S4); Social (S2)</td>
<td>Buying Green Products (S1; S3; S4); Buying Fair Trade Products (S2)</td>
<td>Situational factors that heighten consumers' self-accountability (i.e. activation of their desire to live up to their self-standards) lead to increased preferences for ethical products.</td>
</tr>
<tr>
<td>White and Simpson (2013)</td>
<td>Environmental</td>
<td>Grasscycling; Composting</td>
<td>The effectiveness of the appeal type (injunctive, descriptive, or benefit) depends on whether the individual or collective level of the self is activated.</td>
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Table 2.1 (continued)

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<thead>
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<th>Authors</th>
<th>Category</th>
<th>Attribute</th>
<th>Summary</th>
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<tbody>
<tr>
<td>Olson (2013)</td>
<td>Environmental</td>
<td>Buying Green Products</td>
<td>When tradeoffs between green product attributes and conventional attributes are not apparent, consumers show a strong preference for green products. This preference for green products is not as strong when more conventional green attributes are available.</td>
</tr>
<tr>
<td>Kidwell, Farmer, and Hardesty (2013)</td>
<td>Environmental</td>
<td>Recycling</td>
<td>The congruence between a consumer's political ideology and persuasive appeals enhance consumer's acquisition, usage, and recycling intentions and behaviors.</td>
</tr>
<tr>
<td>Catlin and Wang (2013)</td>
<td>Environmental</td>
<td>Recycling</td>
<td>Consumers increase resource usage when a recycling option is available versus when a recycling option is not available.</td>
</tr>
<tr>
<td>Olsen, Slotegraaf, and Chandukala (2014)</td>
<td>Environmental</td>
<td>Green New Products</td>
<td>Depending on the brand's category and positioning, the introduction of green new products can improve brand attitudes.</td>
</tr>
<tr>
<td>Newman, Gorlin, and Dhar (2014)</td>
<td>Environmental</td>
<td>Buying Green Products</td>
<td>Consumers are less likely to purchase a green product if it appears that the company intentionally made the product better for the environment as a opposed to an unintended side effect.</td>
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<tr>
<td>Study</td>
<td>Category</td>
<td>Meta-Analysis</td>
<td>Summary</td>
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<tr>
<td>Tully and Winer (2014)</td>
<td>Social and Environmental</td>
<td>Meta-Analysis</td>
<td>Consumers are willing to pay a 16.8 percent premium for sustainable products in general. Willingness to pay is greater for products that are socially sustainable (i.e. benefit humans) compared to environmentally sustainable.</td>
</tr>
<tr>
<td>Karmarkar and Bollinger (2015)</td>
<td>Environmental</td>
<td>Reusable grocery bags</td>
<td>Bringing one’s own grocery bag to shop for groceries increases purchases of both environmentally friendly and indulgent foods.</td>
</tr>
<tr>
<td>Bolton and Mattila (2015)</td>
<td>Social (S1); Environmental (S2 &amp; S3)</td>
<td>Charitable Donations (S1); Energy efficiency, pollution, and waste control (S2 &amp; S3)</td>
<td>CSR is more effective under communal (vs. exchange) relationship norms, but ineffective if consumers perceive company CSR motives as self-serving. CSR can help companies to recover customers when service failure occurs.</td>
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<tr>
<td>Authors</td>
<td>Domain</td>
<td>Type</td>
<td>Description</td>
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<td>Xie, Bagozzi, and Grønhaug (2015)</td>
<td>Environmental</td>
<td>Environmental responsibility of overall company actions</td>
<td>Corporate non-green actions effect on negative emotional reactions is moderated by individual difference characteristics (i.e. empathy, moral identity), which leads to negative consumer responses (negative WOM, complaints, and boycotting). For corporate green actions, empathy moderates the positive effect on gratitude, which influence consumer positive responses.</td>
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<tr>
<td>Gershoff and Frels (2015)</td>
<td>Environmental</td>
<td>Buying Green Products</td>
<td>Products with identical environmental benefits are judged as more or less green depending on whether the product benefit stems from central or peripheral attributes.</td>
</tr>
<tr>
<td>Peloza, Ye, and Montford (2015)</td>
<td>Social</td>
<td>Charitable Donations</td>
<td>Consumers underestimate the calorie content of food products marketed by companies with strong CSR reputations.</td>
</tr>
<tr>
<td>Joireman et al. (2015)</td>
<td>Environmental</td>
<td>Conservation</td>
<td>Consumers are less likely to get angry and spread negative word of mouth after a service failure when a company engages in high levels of environmental CSR. However, this result only holds for consumers who are high in environmental concern.</td>
</tr>
<tr>
<td>Kuo and Rice (2015)</td>
<td>Social</td>
<td>Charitable Donations</td>
<td>The relatedness of perceptual attributes (i.e. color) can enhance the effectiveness of CRM campaigns by increasing perceptions of overall fit.</td>
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<td>Study</td>
<td>Environment/Category</td>
<td>Activity/Concept</td>
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<tr>
<td>Hensen et al. (2016)</td>
<td>Environmental Green Products</td>
<td>Store managers' actions positively influence sales associates' perceptions of store environmental stewardship.</td>
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<tr>
<td>Giebelhausen et al. (2016)</td>
<td>Environmental Recycling</td>
<td>Consumers are more satisfied with a service experience if they choose to participate in the provider's voluntary green program.</td>
<td></td>
</tr>
<tr>
<td>Brough et al. (2016)</td>
<td>Environmental Buying Green Products (lamp, backpack, batteries, cleaning products)</td>
<td>The concepts of greenness and femininity are cognitively linked. People who engage in green behaviors are stereotyped as more feminine and perceive themselves as more feminine. This can be attenuated by accompanying men's masculinity or by using masculine rather than green branding.</td>
<td></td>
</tr>
<tr>
<td>Trudel, Arg, and Meng (2016)</td>
<td>Environmental Recycling</td>
<td>When an everyday product is linked to a consumer's identity, it is less likely to be trashed and more likely to be recycled. As the link between identity and the product is strengthened, likelihood of recycling increases.</td>
<td></td>
</tr>
<tr>
<td>Mishra and Modi (2016)</td>
<td>Social and Environmental - Combined Company CSR Efforts (KLD database)</td>
<td>The effects of CSR efforts on stock returns and idiosyncratic risk are only significant in the presence of a marketing capability.</td>
<td></td>
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Table 2.1 (continued)

<table>
<thead>
<tr>
<th>Study Authors</th>
<th>SR/OE/PI</th>
<th>CSR Efforts</th>
<th>Effect</th>
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<tr>
<td>Habel et al. (2016)</td>
<td>Social Philanthropy</td>
<td>Company CSR engagement increases perceived price fairness for high levels of customers’ intrinsic CSR attribution through a perceived CSR benefit. Company CSR reduces perceived price fairness for low levels of intrinsic CSR attribution through a perceived CSR price markup.</td>
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<td>Zane, Irwin, and Reczek (2016)</td>
<td>Social (S1 &amp; S2); Environmental (S3); Child Labor (S1 &amp; S2); Recycling (S3)</td>
<td>Consumers who willfully ignore ethical product attributes are judgmental of ethical product consumers. This judgement arises from self-threat associated with negative social comparison of those who chose to act ethically.</td>
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<td>Lenz, Wetzel, and Hammerschmidt (2017)</td>
<td>Social and Environmental - Combined</td>
<td>Company CSR Efforts (KLD database)</td>
<td>CSR’s positive effect on company value is significantly attenuated by the presence of Corporate Social Irresponsibility.</td>
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<tr>
<td>Sadovnikova and Pujari (2017)</td>
<td>Environmental Pollination</td>
<td>Announcements of green marketing partnerships have an immediate positive effect on shareholder value. Announcements of green technology partnerships produce an immediate negative effect. Green technology partnerships can accrue positive returns over a longer time-period (1 year).</td>
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CHAPTER III
THEORETICAL DEVELOPMENT

The multiple pathway anchoring and adjustment model (MPAA) is used to examine how the interconnection of social and environmental dimensions of sustainability impact consumer evaluations of the company. MPAA is an attitude model created by Cohen and Reed (2006) that integrates prior research on attitude formation and change with research on attitude retrieval, judgement, and behavior. Specifically, MPAA attempts to incorporate a range of well-known attitude models including the accessibility-diagnosticity model (Lynch 2006; Lynch, Marmorstein, and Weigold 1988), the dual attitudes perspective (Wilson, Lindsey, and Schooler 2000), the Fishbein model (Fishbein and Ajzen 1975), and the elaboration likelihood model (Petty and Cacioppo 1986) to create a comprehensive framework of consumer attitudes.

The MPAA model builds from the idea that attitudes are formed at various points in time through a variety of mechanisms such as personal experiences, transmitted information, and reasoning (Cohen and Reed 2006, p. 7). That is, attitude variance is explained by having different focal thoughts toward an object at a given time. This model suggests that attitudes can be formed in one of two ways, inside-out or outside-in. Inside-out attitude formation suggests that attitudes are formed internally from held values and social identity (Cohen and Reed 2006). Individual attitudes based on inside-out formation influence preferences and judgements based on memories and prior knowledge. For
example, environmental sustainability literature suggests that some consumers exhibit a preference for environmentally friendly products simply based on their value systems and personal norms (Collins et al. 2007; Gupta and Ogden 2009; Kaiser et al. 1999; Moser 2015). Additionally, consumers have shown a preference for socially sustainable items because such social purchases are self-expressive and enhance consumers’ desired social identity (Choi and Ng 2011; Sen and Bhattacharya 2001). This research is consistent with the inside-out attitude formation because it reflects attitudes that are formed from internal thoughts and past experiences.

Alternatively, outside-in attitude formation suggests that attitudes are formed based on external stimuli (Cohen and Reed 2006). That is, preferences and judgements are based on external objects. For example, research suggests that consumers’ evaluations of a company often shift after the introduction of innovative product attributes (Nowlis and Simonson 1996; Mukherjee and Hoyer 2001). Consistent with these findings Olsen, Slotegraaf, and Chandukala (2014) found that the introduction of new green products can enhance consumers’ perceptions of a brand. Additionally, Hasford and Farmer (2016) found that when consumers were primed to learn about a company’s sustainability from an outside source they exhibited negative evaluations of non-sustainable competitors. These more negative evaluations were not found when consumers were primed to think about the sustainability of a company from an inside-out perspective. Thus, consumers’ attitudes can be shaped based on external stimuli.

Moreover, MPAA offers an explanation for how attitudes are retrieved and adjusted for use in assessment of information. Similar to the accessibility-diagnosticity model of attitudes, MPAA suggests that consumers will often rely on an attitude because
it is readily accessible in their mind (Cohen and Reed 2006; Lynch 2006). Specifically, retrieved attitudes will first be tested for “representational sufficiency,” which refers to the consistency between the new information and the previously held attitude and the ease with which the attitude is retrieved (Cohen and Reed 2006; Lynch 2006; Rucker et al. 2013). If an attitude is not readily accessible or is deemed inauthentic or insufficient for the context, new information will be recruited and a new attitude will be formed. Alternatively, if the attitude is found to be representationally sufficient, it will then be tested for “functional sufficiency” (Cohen and Reed 2006; Lynch 2006; Rucker et al. 2013). A test of functional sufficiency answers the question of whether or not there is enough information available for the consumer to make a judgement or take action. If the answer to this question is yes, then attitudes will guide judgements and behavior. If the answer is no, consumers will then attempt to adjust their attitudes to resolve the internal conflict initiated by the information presented (Lynch 2006). Thus, attitudes are adjusted to meet the demands of individual situations based on the external stimuli to which the consumer is exposed (Cohen and Reed 2006).

Here, MPAA is used to explore how consumer attitudes are impacted by company promises to be sustainable along the social or environmental dimensions, where these sustainability promises represent outside-in attitude formation. Further, attitude changes based on the delivery of sustainability successes and failures (external stimuli) along either the same or different dimensions of the promise are examined. As new external stimuli are presented to consumers in the form of sustainability successes or failures, consumers attitudes may be updated. For example, consumers’ attitudes may be updated by exposure to a sustainability success that is on a different dimension than the original
sustainability promise because this new information does not meet representational sufficiency. The sustainability success information (or external stimuli) is not consistent with the originally formed attitude because the dimension of the promise is different than the dimension of the delivery. Therefore, the consumer is forced to reassess and update their attitude toward the company.

**Hypothesis Development**

**Interconnectedness of Social and Environmental Sustainability Dimensions**

Consumers often base their evaluations of companies on the promises that are made to them by the company. Here, a sustainability promise refers to the propensity for companies to make their sustainability initiatives expressly known to the public as a focal aspect of their business model. Typically, a sustainability promise is made along the social (e.g. fair trade or community involvement) or environmental (e.g. environmentally friendly processes or only recycled materials used) dimensions of sustainability. For example, Fair Trade Winds, a fair trade apparel company, makes a socially sustainable promise to empower impoverished people in the third world by giving them jobs that will improve their lives and communities (Fair Trade Winds 2016). Additionally, Pepsico has recently made an environmental sustainability promise to consumers to minimize their water, packaging, and energy waste in order to reduce their overall environmental impact (Pepsico 2017). So instead of simply making clothing and sodas, these companies’ promise to care about the well-being of people (i.e. social sustainability) or the planet (i.e. environmental sustainability) becomes a part of their core promise to consumers.

As companies make promises to be either socially or environmentally sustainable, it may be important to understand how consumers relate these two dimensions of
sustainability. Recently, it has been suggested that the differences between the social and environmental dimensions of sustainability may be subtle (Chabowski et al. 2011). For instance, there is evidence that suggests that as consumers care about social sustainability they may also show concern for environmental sustainability and vice versa. Specifically, prior research indicates that there may be positive correlations between environmental sustainability and prosocial attitudes (e.g. Prothero et al. 2011; Stern et al. 1999).

Prosocial attitudes are considered to be efforts to prioritize the needs and welfare of other people both now and in the future (Côté et al. 2011). Because of this focus on the welfare of people, prosocial attitudes are inherently consistent with social sustainability. Thus, the positive correlations between prosocial attitudes and environmental sustainability may suggest a positive link between social and environmental sustainability.

Recent research examining the environmental sustainability of food consumption seems to reinforce this connection between the two dimensions. Specifically, Farmer et al. (2017) found that environmental sustainability semantically primes prosocial attitudes, where prosocial attitudes were suggested to be linked in consumers’ long term memories. This connection is in line with MPAA which suggests that consumers may form evaluations of objects based on its similarity to other objects (Cohen and Reed 2006; Fiske and Neuberg 1990; Gregan-Paxton and Roedder John 1997). That is, information about similar attitude objects is often brought to mind when making judgements about the specific attitude object. For example, Cohen and Reed (2006) relate this to a consumer who is unfamiliar with Thai food and associate it to what is perceived to be a similar type of food (i.e. Schezuan Chinese food). Similarly, consumers may see social and
environmental sustainability as similar attitude objects, thus connecting them in their minds.

The connection that consumers make between these dimensions may be based on the overarching goals of sustainability in general. For instance, an overarching concern of sustainability is to preserve and enhance society and the environment for the future (Brundtland 1987; Elkington 1997; Elkington 2004; Hart 1995). Though social sustainability focuses on enhancing society long-term by helping people and communities thrive into the future (Chow and Chen 2012; Elkington 1997), it could be that a promise to be socially sustainable may enhance consumers long-term concern for the natural environment because future generations will need the natural resources to thrive socially. Similarly, even as environmental sustainability is primarily a focus on care for the natural environment (Hart 1995), consumers may actually perceive environmental sustainability as a long term promise to help people and communities by preserving the environment for future generations to enjoy. Thus, though social and environmental sustainability are distinct from one another, they may be more connected in consumers’ minds because both focus on creating a lasting future for all. Taken together, it seems that social and environmental sustainability should be deeply connected in consumers’ minds such that a promise to be sustainable on one dimension will increase consumer perceptions of the other sustainability dimension. Therefore,

**H1:** Environmental and social sustainability are interconnected where a promise on one dimension enhances perceptions of the other dimension.
Sustainability Promises and Attitude Toward the Company

Prior research examining the social and environmental sustainability dimensions separately provides evidence that both can have a positive impact on consumer evaluations of companies. Considering first environmental sustainability in isolation of social sustainability, research suggests that environmental sustainability initiatives are evaluated positively by consumers. Specifically, green marketing programs have been found to increase consumer purchase intentions (Whelan and Fink 2016) and willingness to pay for products (Bang et al. 2000; Griskevicius, Tybur, and Van den Bergh 2010). For instance, consumers are more likely to purchase green products in public than in private because of the perceived status boost they may receive from sustainable purchasing (Griskevicius et al. 2010).

These positive associations with environmentally friendly products may be due to the importance consumers place on nonproduct attributes, such as environmental benefits. That is, when making evaluations of green products, the environmental benefits may add intrinsic value to the product (Bhattacharya and Sen 2003; Mohr and Webb 2005). For example, Montoro-Rios et al. (2006) performed an experiment using the context of laundry detergent to examine the importance of ecological product attributes versus functional attributes. Their findings indicate that the presence of environmental associations, such as ecological benefits, can have a positive effect on brand attitudes.

Similarly, social sustainability initiatives in isolation of environmental sustainability may have a positive effect on consumer attitudes. Research suggests that consumers favor a company’s products when it engages in social sustainability initiatives (Baghi et al. 2009; Lichtenstein et al. 2004). For example, De Pelsmacker, Driesen, and
Rayp (2006) found consumers were willing to pay on average 10% more for coffee labeled as fair trade over traditional coffee labeling. Additionally, Sen and Battacharya (2001) found that company social sustainability initiatives, such as taking a stand against sweatshop labor and supporting purchases from women and minority groups, relate positively to consumers’ evaluation of the company. These positive evaluations of socially sustainable initiatives may be attributed to consumer perceptions of congruence between themselves and the company. Specifically, consumers often incorporate the actions of the company into their own identity, using the company’s action for self-enhancement and self-expression (e.g. Choi and Ng 2011; Pratt 1998).

Considering that consumers respond positively to both social and environmental sustainability when they are examined in isolation of one another, it seems that both dimensions are valuable to consumers thereby increasing evaluations of companies. However, some prior research seems to suggest the importance of one dimension over the other. For example, environmental sustainability initiatives have been found to be more salient in consumers’ minds (Simpson and Radford 2014), indicating that consumers may prefer companies that promise environmental sustainability over the other dimensions. These findings could be attributed to the green marketing campaigns that have increased the number of green products and services on the market over the last decade. For instance, the number of new food and beverage products labeled environmentally friendly alone has more than tripled since 2009 (USDA 2016). Additionally, research on social sustainability suggests that consumers are willing to pay a premium for products that are socially sustainable (Tully and Winer 2014). This is attributed to the social sustainability’s greater focus on benefits to people and communities.
Overall, either social or environmental sustainability initiatives can enhance consumer evaluations of the company resulting in better reputations and increased loyalty (Du, Bhattacharya, and Sen 2007; Ng et al. 2014). Here, both social and environmental dimensions of sustainability are examined to determine if a promise to be sustainable along either the social or the environmental sustainability dimension will increase evaluations of a company. Research suggests that consumers often show more positive evaluations of companies that make social or environmental sustainability promises over companies that do not make sustainability promises (Cotte and Trudel 2009; De Pelsmacker et al. 2006; Olsen et al. 2014). Thus, a promise to be socially or environmentally sustainable should result in higher attitudes toward the company compared with a company that does not make a sustainability promise. Therefore,

H2: Consumer attitudes towards a company that makes a a) social or b) environmental sustainability promise will be higher than attitudes towards a company that makes no sustainability promise.

Sustainability Promises and Sustainability Outcomes

Once a company makes any sort of promise to their consumers, such as a promise to be sustainable, customers will expect them to follow through on that promise (Lee, Conroy, and Motion 2009). A company’s sustainability actions after making a promise to be sustainable are referred to here as a sustainability outcomes and can manifest as either a sustainability success or a sustainability failure. A sustainability failure occurs when a company meets the needs of the present while compromising the ability of future
generations to meet their own needs. For instance, a social sustainability failure might be using sweatshop labor in a manufacturing facility or engaging in gender salary inequity. An environmental sustainability failure might be failing to dispose of chemical waste in an environmentally friendly manner, neglecting to conserve water and energy during the manufacturing process, or using excessive and environmentally unfriendly packaging material.

Alternatively, a sustainability success occurs as a company meets the needs of the present without compromising future generation’s ability to meet their own needs. The dimension of the sustainability success may or may not match the dimension of the original sustainability promise. Take for example a company that makes an environmental promise to manufacture its product using only recycled materials and later succeeds along the environmental dimension by making every effort to reduce waste and save energy in its processes. The sustainability dimension of the promise matches the sustainability dimension of the success but does not directly confirm the original promise. This type of success is formally defined here as a “paired success” as both the promise and the success occur along the same sustainability dimension.

On the other hand, the company may achieve a sustainability success on a sustainability dimension that does not match the dimension of the original sustainability promise made to consumers. For instance, the company that makes an environmental promise to manufacture its product using only recycled materials and later succeeds along the social dimension by hiring workers from an impoverished community and paying them a fair wage. When a company makes a sustainability promise to consumers on one sustainability dimension and then succeeds on a separate dimension of sustainability not
directly confirming the original sustainability promise, it is referred to as a “complementary success” as the dimension of the promise is complemented by the dimension of the success.

Consumer evaluations of the company may vary depending on if the type of success is paired or complementary. When a company makes a promise along the social or environmental sustainability dimension, consumers form attitudes based on either their internal perspectives of sustainability (inside-out) or the sustainability information provided (outside-in). Once these attitudes have been formed they are readily available to be retrieved. These formed attitudes can be changed through the activation of a different set of information than was considered at the time that the initial attitude was formed (Bohner and Dickel 2011). Under MPAA, this additional information represents an external stimulus (outside-in attitude formation; Cohen and Reed 2006; Lynch 2006). Research suggests that attitude-congruent information can increase perceptions of attitude certainty (Haddock et al. 1999) which is the sense of confidence or correctness a person has about an attitude (Clarkson, Tormala, and Rucker 2008; Gross, Holtz, and Miller, 1995; Tormala and Rucker 2007). For a paired success, consumers make an initial evaluation based on the sustainability promise that was made to them. Later, that evaluation is reinforced when the company delivers a sustainable result along the same dimension as the original promise. Because attitude-congruent information offers no new information that can be used to change the attitude, it meets representational sufficiency (Cohen and Reed 2006) and increases consumer’s confidence that their initial evaluation was correct, causing attitudes to persist (Bassili 1996; Mourali and Yang 2013). Thus, when no new information is given by a sustainability success that occurs along the same
dimension as the original sustainability promise (i.e. paired success), attitudes of the company are unchanged.

Alternatively, when a company delivers a success along a different dimension from the original promise (i.e. complementary success), the context of the attitude changes. The consumer evaluates the new information and adjusts the originally formed attitude. That is, novel information receives more attention and requires more cognitive processing (Petty, Wegener, & Fabrigar 1997; van Dijk et al. 2012). For example, unexpectedly exceeding customers’ initial beliefs about a company has been found to increase consumer’s commitment to the company and their re-purchase intentions (Bowden 2009). When a complementary success occurs, consumers are presented with information that does not match their original evaluation of the company. Thus, it does not meet representational or functional sufficiency thereby initiating attitude adjustment (Cohen and Reed 2006; Lynch 2006; Rucker et al. 2006). Specifically, consumers make an initial evaluation of the company based on information about one-dimension of sustainability. When a success occurs along an additional sustainability dimension, consumers should pay more attention to the new, external sustainability information, causing them to update their initial attitudes. The valence of the new information will impact the direction of the attitudinal change (Schwarz and Bohner 2001).

Moreover, MPAA suggests that evaluations of similar attitude objects are often based on a relatively small number of internal values (Cohen and Reed 2006). As it is predicted here that consumers connect social and environmental sustainability in their minds, the social sustainability values of consumers are likely interconnected to their environmental sustainability values. Considering this, making an environmental
sustainability promise to consumers is linked to a promise to care about social sustainability and vice versa. Thus, in the case of a complementary success, it is predicted that attitudes will be enhanced because the company is more comprehensively accounting for the connected values of consumers who care for social or environmental sustainability.

Under MPAA, when a company fails to act sustainably along either dimension, the consumer is faced with information that does not match the information that was given to them when they originally formed the attitude. Thus, the new information (i.e. external stimuli; Cohen and Reed 2006) about the failure does not meet representational sufficiency and causes the consumer to update their attitudes. However, because sustainability takes into account the well-being of individuals, communities, and the environment (Daly 1996; Elkington 2004), it is a unique construct that may provoke more extreme consequences for failure. Considering again the prediction that social and environmental sustainability are connected in consumers’ minds, companies may be held accountable for acting sustainably along both dimensions because a promise to be one increases consumer thoughts of the other. Thus, a sustainability failure should decrease attitudes toward the company, regardless of the type of sustainability promise made to consumers.

Moreover, a company’s motives for acting in a responsible manner are sometimes more important to the consumer than the responsibility act itself (Gilbert and Malone 1995). The prevalence of greenwashing, or the act of deceiving consumers about the sustainability practices of a company (e.g. Siano et al. 2017), has increased consumer skepticism of companies that engage in sustainability initiatives (Aji and Sutikno 2015;
Specifically, consumers feel that many corporations do not really act sustainably; they simply make sustainability claims in order to capitalize on the good reputation and financial gains they can get from being associated with sustainability (Aras and Crowther 2009; Siano et al. 2017). Thus, motives for the sustainability promises may be called into question by sustainability failures. Consumers may see the failure as another case of a company saying that it is sustainable in order to reap the benefits from the association but not actually committed to being sustainable.

Consumers’ evaluations of companies can be greatly impacted by failures to act socially or environmentally responsible (Choi and Ng 2011; Cotte and Trudel 2009). For example, Mohr and Webb (2005) performed an experiment that involved giving companies hypothetical best or worst CSR ratings from a credible outside party. Poor CSR ratings were found to significantly reduce evaluations and purchase intent over high CSR ratings. Additionally, Hasford and Farmer (2016) found that when a company’s CSR attributes are emphasized consumer evaluations of the company’s direct competitors are negatively impacted. These results are linked to the notion that, overall, consumers are caring more and more about social and environmental sustainability as a company attribute (Cone 2015; Janssen et al. 2014; Nielson 2015). Consumers are beginning to expect environmental and social responsibility, and companies are often penalized when they ignore sustainability (Carrigan and Attalla 2001; Creyer and Ross 1996). Specifically, companies that fail to act sustainability are often subject to negative word of mouth and consumer boycotts (Green and Peloza 2014), among other negative outcomes.
For instance, there was widespread public backlash over Nike’s social sustainability failure of using sweatshop labor in the 1990’s and early 2000’s (Nisen 2013).

Taken together, it is predicted that a sustainability promise’s impact on consumer evaluations of the companies is moderated by sustainability success and failure. Specifically, paired successes, or successes where the initial dimension of the sustainability promise matches the dimension of the subsequent sustainability success, are not expected to impact overall consumer attitudes because the success is on the same dimension of sustainability as the promise. That is, no new information is given to consumers that would enhance their overall evaluation of the company. Complementary successes, on the other hand, should enhance overall consumer evaluations of the company. When the dimension of the ultimate sustainability success is different from the initial sustainability promise, attitudes should increase because the company has taken both dimensions of sustainability into consideration. Thus, new, favorable information is provided which should increase the consumers’ overall evaluations of the company. Moreover, because of the link between the two sustainability dimensions in consumers’ minds, sustainability failures should decrease evaluations of the company, regardless of whether the dimension of the initial sustainability promise matches the dimension of the failure. Thus,

**H3:** The effect of a sustainability promise onto consumer attitude is moderated by a sustainability outcome such that attitudes are a) enhanced for a complementary success and b) diminished for a failure.
Sustainability, Sincerity, and Competence

Consumer perceptions about the company’s sincerity and competence may explain how the interaction between sustainability promise and sustainability outcome impact customer evaluations of the company. Sincere companies are described as down to earth, honest, wholesome, and cheerful while competent companies are reliable, intelligent, and successful (Aaker 1997). Both competence and sincerity have been previously linked as two constructs that can enhance and diminish consumer attitudes (Ang and Lim 2006; Eisend and Stokburger-Sauer 2013; Lievens 2007; Lievens and Highhouse 2003; Sung and Kim 2010). When considering a sustainability success, consumer perceptions of the company’s sincerity and competence may be impacted differently.

Sincerity is defined as the extent to which consumers perceive a company as honest and having an intent to fulfill their promises (Aaker, Benet-Martinez, and Garolera 2001; Macintosh 2002). Research suggests that consumers often form sincerity judgements about companies in terms of the company’s intentions (Fournier and Alvarez 2012). When a company makes a sustainability promise of any kind to its customers, initial perceptions of the company’s sincerity will likely be high. That is, simply promising to engage in sustainability efforts is suggested to cause consumers to feel that a company is sincere because consumers view the people behind the brand as more caring and genuine (Aaker, Vohs, and Mogilner 2010; Bolton and Mattila 2015; Hoeffler and Keller 2002). When a paired success occurs, the company has proven that it is honest and will keep its promises. The company made a sustainability promise along one dimension of sustainability and then ultimately delivered along that same dimension. Thus,
consumer perceptions of the company’s sincerity should remain high. However, simply proving that the company is willing to do what it said it would do may not be enough to increase consumer perceptions of sincerity from the initial sincerity evaluation. Research suggests that positive experiences with companies that meet expectations may only reinforce strong sincerity associations with the brand (Maehle, Otnes, and Supphellen 2011). Therefore, when a paired success occurs, consumer perceptions of sincerity are not expected to increase from initial evaluations of sincerity.

When a complementary success occurs, the company makes a sustainability promise on one dimension of sustainability, which results in high perceptions of sincerity. Again, this initially high sincerity perception is driven by consumers’ belief that sustainable companies are more sincere overall (Aaker, Vohs, and Mogilner 2010; Bolton and Mattila 2015; Hoeffler and Keller 2002). The company then goes above and beyond the initial promise by delivering a sustainable success along the other dimension of sustainability. Previous research suggests that when a company makes an effort to go the extra mile, as is the case with a complementary success, it indicates a genuine commitment to the company’s stated cause, resulting in enhanced perceptions of sincerity (Eisend and Stokburger-Sauer 2013; Kyoum Kim, Jae Ko, and James 2011; Rifon et al. 2004; Olsen 2010). For example, Yoon, Gürhan-Canli, and Schwarz (2006) found that consumers perceived greater sincerity from companies when they spent more on CSR initiatives than on advertising. This effect was attributed to consumer’s belief that spending money on the voluntary CSR initiatives required a greater sacrifice (i.e. “pain of giving”) on the part of the company than did spending money on an advertising campaign (Yoon et al. 2006, pg. 388). In the case of a complementary success, doing more than
what is required, or even what has been promised, when it is not necessary to achieve the goals of the company, should lead to enhanced perceptions of sincerity.

Paired and complementary successes may impact consumer perceptions of competence differently than sincerity. Competence is defined as the degree to which consumers perceive that a company possesses the required skills and knowledge to provide a product or service (Coulter and Coulter 2002). Initial perceptions of competence after a sustainability promise are likely to be conservative. This is because the company has not yet demonstrated if it can do what it says it will do. That is, because competence evaluations are often tied to perceptions about the company’s ability to act on its intentions (Cuddy, Fiske, and Glick 2008), competence is a harder evaluation to make because it often requires proof (e.g. Thompson and Ince 2013). For example, new companies often suffer from lower competence perceptions than more established companies (Brown and Dacin 1997; Hess et al. 2016). Thus, when a company makes a sustainability promise, consumers will make an initial competence evaluation based on the information that they have about the company. However, this initial competence evaluation will likely be conservative until consumers can make an evaluation of the company’s abilities.

When a paired success occurs, it demonstrates that the company is capable of doing what it said it would do, thus fulfilling the company’s stated intent. Prior research suggests that perceptions of competence may be increased by meeting or exceeding customer expectations (Berry 2016; Maehle et al. 2011). That is, following through on the initial promise allows consumers to reevaluate and increase their initial competence evaluation because they now have a solid basis on which to judge the company’s
competence (e.g. Aaker et al. 2010; Bolton and Matilla 2015; Cuddy et al. 2008).
Similarly, when a complementary success occurs consumers should have increased
perceptions of competence because the initial evaluations of the company are bolstered
by the presence of a capability along the other sustainability dimension (e.g. Aaker,
Garbinsky, and Vohs 2012; Lui and Aaker 2008). That is, consumers gave the company
an initial competence rating based on the sustainability promise made to them along one
dimension of sustainability. The company then delivers a sustainability success along an
additional dimension of sustainability. Evaluations of the company’s competence should
increase because the company has demonstrated the ability to behave sustainably, even if
on a different dimension from the promise. Overall, competence evaluations are expected
to be enhanced for both paired and complementary successes as, in both cases, consumers
have received more information than just a promise on which to judge the company’s
competence.

Beyond sustainability successes, sustainability failures may also effect consumer
perceptions of the company’s sincerity and competence. By committing a sustainability
failure, companies fail to keep their promise (to be socially or environmentally
sustainable) to consumers. Such behavior has been suggested to decrease both sincerity
and competence perceptions (Maehle et al. 2011). Specifically, for sincerity, company
motives may be called into question when consumers become suspicious of the
company’s underlying reasons for promising to act altruistically (Campbell and Kirmani
2000; Yoon et al. 2006). When a company makes a promise to act sustainably but later
blatantly fails to act in a sustainable manner, consumers may suspect that the company
was not sincere in its promise to care about society and the environment. As is in the case
with greenwashing, it may appear that the company is only attempting to cash in on the goodwill that sustainability promises can offer them (Aras and Crowther 2009; Siano et al. 2017). Such negative perceptions of the company may reduce consumer perceptions of the company’s overall sincerity. Moreover, because competence is tied to consumer perceptions about the company’s ability to perform as it promises (Aaker 1997; Aaker et al. 2010; Cuddy, Fiske, and Glick 2002; Cuddy et al. 2008), failing to follow through on a sustainability promise along either dimension may be perceived as lack of capability to do so in general. Thus, when a company makes a sustainability promise then commits a sustainability failure, the company’s overall knowledge and skill level will be called into question, decreasing consumer perceptions of the company’s overall competence.

Moreover, the changes in consumer perceptions of sincerity and competence caused by sustainability promises and outcomes may alter previously formed attitudes toward the company. Previous research suggests that both sincerity and competence influence how consumers evaluate companies (Crosby, Evans, and Cowles 1990; Speed and Thompson 2000; Sung and Kim 2010). For example, a recent meta-analysis of brand personality antecedents and consequences found that sincerity and competence have the strongest influence on brand attitudes (Eisend and Stokburger-Sauer 2013). This is because sincere and competent brands are seen as more honest and capable of fulfilling their promises.

However, it may take both sincerity and competence to increase overall attitudes towards the company. This is because research suggests that sincerity and competence may impact attitudes differently. For instance, Sung and Kim (2010) found a difference in how brand personality traits influence brand-related outcomes. In their study, both
sincerity and competence relate positively to brand trust and brand affect thereby positively influencing customer loyalty. However, sincerity was found to have a stronger influence on brand trust than did competence (Sung and Kim 2010). A similar study provides further evidence for sincerity’s dominant influence. Specifically, sincerity’s effect on both attitudinal and behavioral loyalty was stronger than that of competence (Zentes, Morschett, and Schramm-Klein 2008). Additionally, Folse, Netemeyer, and Burton (2012) examined the effect of sincerity and competence on consumer attitudes towards spokescharacters. Results of their study suggest that spokescharacters designed to evoke greater perceptions of sincerity have a stronger impact on trust and brand attitude over spokescharacters designed to evoke greater competence. Considering these findings, it is predicted that when consumer perceptions of only competence are enhanced, as is the case with a paired success, attitudes will not be significantly impacted. Thus, it is predicted that when a complementary success or a sustainability failure occurs, the interaction between sustainability promise and sustainability outcome onto consumer evaluations of the company is mediated by both sincerity and competence.

As perceptions of sincerity and competence increase, overall attitudes toward the company should be enhanced. Alternatively, as perceptions of sincerity and competence decrease, evaluations of the company should diminish. Thus,

**H4:** The interaction of sustainability promise and sustainability outcome for a paired success will increase perceptions of competence.
**H5:** The interaction of sustainability promise and sustainability outcome onto consumer attitudes for a *complementary success* is mediated by a) perceptions of competence and b) perceptions of sincerity such that each are increased, thereby increasing attitudes.

**H6:** The interaction of sustainability promise and sustainability outcome onto consumer attitudes for a *sustainability failure* is mediated by a) perceptions of competence and b) perceptions of sincerity such that each are decreased, thereby decreasing attitudes.

The various relationships represented by these hypotheses are shown in figure 3.1. Additionally, an infographic of the hypotheses’ directionality is depicted in figure 3.2.

![Conceptual Model of Sustainability Promises and Outcomes onto Consumer Evaluations of the Company](image)

**Figure 3.1** Conceptual Model of Sustainability Promises and Outcomes onto Consumer Evaluations of the Company
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Figure 3.2   Infographic of Hypotheses’ Directionality
CHAPTER IV
METHODOLOGY AND STUDIES

Overview of the Experiments

Four studies are conducted to examine the interconnectedness of social and environmental sustainability and the impact of this connection on consumer evaluations of a company. Study 1 gains an initial understanding of the connection between the social and environmental sustainability dimensions, investigating if consumers link the two dimensions in their minds. Specifically, this study examines if making a sustainability promise along one dimension effects perceptions of the company’s sustainability on the other dimension. For example, a company that makes a promise to be socially sustainable may also be seen as environmentally sustainable because the two dimensions are interconnected in consumers’ minds. Study 1A first examines consumer perceptions of a company’s social and environmental sustainability using a headphone company. Three versions of an advertisement were created to represent the headphone company. The advertisements depict the company as making either an environmental, social, or no (control) sustainability promise. Participants were randomly assigned to view one of the promises and then answer questions about their perceptions of the company’s level of social and environmental sustainability. Study 1B then replicates study 1A using a new product context, chocolates, to extend the generalizability of the findings.
Study 2 examines consumer attitudes towards companies that make social or environmental sustainability promises. Specifically, making a promise to be sustainable along either dimension is proposed to enhance consumer attitudes. Additionally, study 2 explores how the interaction between a sustainability promise and sustainability outcome impacts consumer attitudes toward the company. The results of this study indicate that the relationship between a sustainability promise and evaluations of the company is moderated by sustainability outcome. Attitudes towards the company are enhanced for a complementary success (i.e. environmental promise and social success), unchanged for a paired success (i.e. social promise and social success), and diminished for a failure, regardless of the dimension of the sustainability promise. The same headphone company from study 1A is used in this experiment. Specifically, participants were randomly assigned to view one of the three promises depicting the headphone company as making either a social, environmental, or no (control) sustainability promise to consumers. Participants were then asked to evaluate the company. Next, participants imagined that they had purchased headphones from the company. Participants were then randomly assigned to read information describing either a social sustainability failure or success of the headphone company and asked to evaluate the company again.

Study 3 follows a similar design as that of study 2. Study 3 replaces the social sustainability outcome from study 2 with an environmental sustainability outcome to further explore the nuances of how consumers evaluate companies based on the dimension of the sustainability promise and the dimension of the subsequent sustainability outcome. The study context changes from headphones to the chocolate company examined in study 1B to ensure the findings generalize across product
categories. Importantly, the mediating variables of perceived sincerity and competence are introduced to explain the relationship between the interaction of sustainability promise and sustainability outcome onto consumer evaluations of the company.

Finally, study 4 extends the findings from studies 1-3 by capturing actual behavior. Specifically, participants in this study made an actual product choice. Where the previous studies examine attitudes, study 4 explores how consumers’ actual choices are affected by sustainability promises and subsequent sustainability outcomes. To accomplish this goal, a behavioral choice experiment is conducted in a laboratory setting. Further, this study generalizes the results to a new product context, an office supply company. Sticky notes are used as the product to further examine consumer reactions to sustainability promises and subsequent sustainability outcomes across a new product category.

Participants in study 4 were randomly assigned to view an advertisement for an office supply company depicted as making either a social, environmental, or no (control) sustainability promise. After reading the promise, participants were asked to evaluate the company. After the initial evaluation, participants read information describing a sustainability success, failure, or no (control) outcome. At the end of the study, the participants were given a choice to receive a single pack of sticky notes from the company they evaluated during the study or two packs of an alternative brand of sticky notes as a gift for participation in the experiment. Two packs of the alternative brand of sticky notes were offered to mitigate concerns about the perceived higher value of sustainable products over non-sustainable products (Skirbol and Nelson 2015). The
results of this study offer insights into how consumer choices are impacted by sustainability outcomes across the dimensions of sustainability.

**Study 1**

Study 1 examines the interconnection between the social and environmental dimensions of sustainability. Specifically, the purpose of this study is to test the hypothesis that perceptions of environmental sustainability and social sustainability are interconnected. For instance, a company that makes a promise to be environmentally sustainable may also be perceived by consumers as socially sustainable (and vice versa) as these two dimensions are predicted to be linked in consumers’ minds. This hypothesis is tested across two product categories, chocolates and headphones, to ensure generalizability of the findings. Study 1A examines consumer perceptions of a headphone company depicted as making either an environmental, social, or no (control) sustainability promise. Participants were randomly assigned to view one of the promises and then answer questions about their perceptions of the company’s level of social and environmental sustainability. Study 1B replicates study 1A using chocolates.

**Study 1A**

**Procedure**

Participating for partial course credit, 118 undergraduate business students were recruited to participate in this study. The average age of the participants was 22, and the sample was approximately 59% male. Advertisements were created depicting a headphone company as making either a social (n = 39), environmental (n = 40), or no (control; n = 39) sustainability promise (see figures 4.1, 4.2, and 4.3). Participants were
randomly assigned to view one of the headphone promises and asked to rate the degree to which they perceived the company they saw in the advertisement as environmentally sustainable and socially sustainable. Additionally, items measuring perceived quality of the company’s products and overall company aesthetics were collected to ensure that no confounds were present across promises.

**Manipulations and Measures**

*Sustainability Promise Manipulations*

The environmental sustainability promise describes the headphones as made from sustainably sourced woods in facilities that run on renewable energy. Additionally, all metals and plastics used in the headphones are made from 100% recycled materials as the company is committed to reducing waste and environmental impact. The social sustainability promise provides information that the headphones are made by poverty-stricken artisans. Additionally, the company is described as committed to making a difference in vulnerable communities around the world by paying their workers a fair wage and ensuring completely ethical working conditions. The no sustainability promise (control) represents a headphone company that is committed to superior sound performance by providing high quality sound and a unique looking product.
Simply sustainable.

Our primary mission is to design headphones that support a clean environment.

Here are some ways we achieve that goal:

• Manufactured in facilities that run on renewable energy from sustainably sourced woods
• 100% of metals and plastics are from recycled products
• All headphones are completely recyclable to eliminate pollution of landfills
• Committed to reducing waste and environmental impact

With these headphones, you can enjoy a more natural sound without compromising your earth-friendly values. Try our headphones made from eco-friendly materials!

Figure 4.1  Headphone Company – Environmental Sustainability Manipulation

Simply responsible.

Our primary mission is to design headphones that support a socially responsible world.

Here are some ways we achieve that goal:

• Manufactured by poverty-stricken artisans who have struggled to earn a sustainable income
• All products manufactured under completely ethical working conditions
• Artisans are fairly paid for 100% of their work
• Committed to making a difference in vulnerable communities around the globe

With these headphones, you can enjoy your sounds while creating dignified jobs for people who need them. Try our headphones made to change lives around the world!

Figure 4.2  Headphone Company – Social Sustainability Manipulation
Environmental Sustainability

Consumer perceptions of the company’s environmental sustainability were measured using a 3-item scale from Klein and Dawar (2004). These items assess consumer beliefs that the company is less harmful to the environment, better for the environment, and more environmentally friendly than other companies ($\alpha = .92$). This scale was assessed on a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

Social Sustainability

No scales fitting the context of the study were found to appropriately measure social sustainability. Thus, these items were developed for use in this study. The scale consists of 5-items that assess consumer perceptions of the company’s care for human
rights, concern about the welfare of poverty stricken people, aim to build up vulnerable communities, want to help people in need, and concern for the development of people and communities (٠ = .٨٧). Social sustainability was assessed on a 7-point Likert scale ranging from ١ = strongly disagree to ٧ = strongly agree.

**Confound Checks**

A 5-item scale taken from Kaufman, Jayachandran, and Rose (2006) was used to assess the quality of the company’s products (٠ = .٨٥). Product quality was assessed on a 7-point Likert scale ranging from ١ = strongly disagree to ٧ = strongly agree. Additionally, participants’ perceptions of the company’s aesthetics were measured using a 3-item scale from Lam and Mukherjee (2005; ٠ = .٨٩). The aesthetics scale was assessed using a 7-point semantic differential. Specific scale items can be found in the appendix.

A preliminary assessment of the validity of the measurement model was performed. Specifically, an exploratory factor analysis was conducted using a maximum likelihood with a varimax rotation. All items loaded onto their respective construct with minimal cross-loadings, providing initial evidence of convergent and discriminant validity.

**Results**

First, analyses were conducted to assess perceptions of the environmental and social sustainability of the promises. Controlling for gender, results of a one-way ANOVA indicate significant differences in perceptions of environmental sustainability across the social, environmental, and no (control) sustainability promises ($F(2, 114) =$
The effect of gender onto environmental sustainability perceptions was also significant \( (F(1, 114) = 5.68, p = .02) \). The environmental sustainability company \( (M = 5.81; SD = 1.17) \) is perceived to be more environmentally friendly than both the social sustainability company \( (M = 4.27; SD = 1.19; t(77) = 5.78; p < .01) \) and the control \( (M = 3.53; SD = 1.45; t(77) = 7.69; p < .01) \). The socially sustainable company is perceived as more environmentally sustainable than the control \( (t(76) = 2.48; p = .02) \). Therefore, participants have enhanced environmental sustainability perceptions of the company making the social sustainability promise even though no environmental claims were ever made by the company.

Again controlling for any gender affects, results of a one-way ANOVA examining perceptions of social sustainability across the three promises indicate a significant difference across the three promises \( (F(2, 114) = 29.72, p < .01) \). Gender also has a significant effect onto social sustainability perceptions \( (F(1, 114) = 9.89, p < .01) \). The social sustainability company \( (M = 5.47; SD = 1.21) \) is perceived as more socially sustainable than either the environmental company \( (M = 4.83; SD = .91; t(77) = 2.65; p = .01) \) or the control \( (M = 3.65; SD = 1.19; t(76) = 6.68; p < .01) \). Furthermore, results of the analyses suggest that the two dimensions are interconnected as the environmental sustainability company is perceived as more socially sustainable than the control \( (t(77) = 4.94; p < .01) \). Even though the company never made any socially sustainable claims, participants perceive the environmental company to be more socially sustainable than the company that does not make any sustainability promises. Additionally, consumer perceptions of quality and aesthetics were examined. One-way ANOVAs indicate that neither consumer perceptions of the quality \( (F(2, 115) = 1.17, p = .31) \) nor aesthetics
were different across companies, alleviating concerns about potential confounds in the manipulations. The pattern of these results does not change when gender is removed as a covariate.

These results provide evidence that participants perceived the environmental and social headphone promises to successfully represent their respective dimensions of sustainability. Moreover, participants perceived the socially sustainable promise to also be environmentally sustainable and the environmentally sustainable promise to be socially sustainable versus no sustainability promise. These results provide support for H1. Specifically, social and environmental sustainability appear to be interconnected in consumers’ minds such that a promise to be sustainable along one dimension increases consumer perceptions of the other dimension. See figure 4.4.

Figure 4.4   Study 1A: Environmental and Social Sustainability Perceptions Between Sustainability Promises
Study 1B

Procedure

Study 1B follows the same procedure as study 1A. However, this study utilizes chocolates instead of headphones to increase the generalizability of the findings from study 1A to a new product category. Participating for partial course credit, 120 undergraduate business students were recruited to participate in this study. The sample was approximately 57% male, and the average respondent age was 22. Advertisements depicting a chocolate company as making either a social (n = 41), environmental (n = 39), or no (control; n = 40) sustainability promise were created for this study (see figures 4.5, 4.6, and 4.7). Participants were randomly assigned to view one of these three promises. After viewing the promise, participants were asked to rate the degree to which they perceived the company as environmentally sustainable and socially sustainable. Additionally, participants were again asked to complete quality and aesthetics measures as a check for confounds across the three promises.

Manipulations and Measures

Sustainability Promise Manipulations

The environmental sustainability promise focuses on reducing waste and their environmental impact by manufacturing in facilities run on 100% renewable energy. Additionally, the environmentally sustainable company sources all their cocoa beans from farmers who are committed to processes that protect against rainforest deforestation. The social sustainability promise describes the company as offering fair wages to help improve the lives of impoverished farmers who grow the cocoa beans. The socially sustainable company strives to make a difference in the world by helping to end poverty
in the vulnerable communities where cocoa beans are grown. The no sustainability promise (i.e. control) focuses on the taste of the chocolate and blending a variety of cocoa beans to create balanced flavor.

**Simply sustainable.**

*Our company’s primary mission is to create chocolate candies using completely environmentally sustainable processes.*

**Here are some ways we achieve that goal:**

- Manufactured in facilities that run on 100% renewable energy
- Cocoa beans are harvested using pollution free processes
- All cocoa beans are sourced from farmers who are committed to processes that protect rainforest deforestation
- Committed to reducing waste and environmental impact

**You can enjoy your chocolates without compromising your earth-friendly values. Try our chocolates made to be better for the environment!**

Figure 4.5 Chocolate Company - Environmental Sustainability Manipulation
Simply responsible.

Our company’s primary mission is to create chocolate candies using socially responsible values.

Here are some ways we achieve that goal:

• Cocoa beans sourced from poverty-stricken farmers who have struggled to earn a sustainable income
• Increasing cocoa bean farmers’ standard of living is a top priority
• All products manufactured under completely ethical working conditions – Artisans are fairly paid for 100% of their work
• Committed to making a difference in vulnerable communities around the globe

You can enjoy your chocolates while creating dignified jobs for people who need them. Try our chocolates made to change lives around the world!

Figure 4.6 Chocolate Company - Social Sustainability Manipulation

Simply delicious.

Our company’s primary mission is to create chocolate candies that are crafted with care and attention.

Here are some ways we achieve that goal:

• Designed to deliver a distinctive taste experience
• Manufactured with skill, patience, and respect for traditional chocolate making methods
• All chocolates made using a blend of cocoa beans to create a balanced chocolate flavor
• Committed to investing attention and time to every batch of chocolates

You can enjoy your chocolates knowing that your experience is without equal. Try our chocolates made in a variety of delicious flavors!

Figure 4.7 Chocolate Company - No Sustainability Manipulation
Sustainability Measures and Confound Checks

As in study 1A, participants completed the 5-item measure of social sustainability (α = .96) and the 3-item measure of environmental sustainability (α = .97). Also, the 5-item quality measure (α = .82) and the 3-item aesthetics measure (α = .89) from study 1A were collected.

Results

As in study 1A, a one-way ANOVA was conducted. Controlling for gender, results indicate a significant difference in perceptions of environmental sustainability across the social, environmental, and no (control) sustainability promises (F(2, 115) = 23.36, p < .01). The effect of gender onto environmental sustainability perceptions was not significant. Specifically, the environmental sustainability company (M = 5.79; SD = 1.12) is perceived to be more environmentally friendly than both the social sustainability company (M = 4.72; SD = 1.32; t(78) = 3.04; p < .01) and the control (M = 3.81; SD = 1.40; t(77) = 6.95; p < .01). Providing support for the prediction that social and environmental sustainability are interconnected, the socially sustainable company is again perceived as more environmentally sustainable than the control (t(79) = 3.04; p < .01). That is, participants’ environmental sustainability perceptions are heightened for the social company despite never receiving any environmental sustainability information about the company.

Similarly, a one-way ANOVA was conducted to examine perceptions of social sustainability across the three promises. Again controlling for any gender affects, the ANOVA showed a significant difference across the three groups (F(2, 115) = 25.28, p < .01). Gender does not have a significant impact on social sustainability perceptions. The
social sustainability company ($M = 5.67; SD = 1.09$) is perceived to be significantly more socially sustainable than either the environmental company ($M = 4.76; SD = 1.13; t(78) = 3.60; p < .01$) or the control ($M = 3.66; SD = 1.56; t(79) = 6.70; p < .01$). Again, indicating that the two sustainability dimensions are interconnected, the environmental sustainability company is perceived as significantly more socially sustainable than the control ($t(77) = 3.59; p < .01$). Additionally, one-way ANOVAs indicate that perceptions of both the quality of the company’s products ($F(2, 117) = .56, p = .57$) and aesthetics ($F(2, 117) = 1.91, p = .15$) are not significantly different across the three promises, mitigating concerns about potential confounds in the manipulations. The pattern of results does not change when gender is removed as a covariate.

As in study 1A, these results indicate that the social and environmental sustainability promises for the chocolate company successfully manipulate their respective dimensions of sustainability. Also, consumer perceptions of the social sustainability of the environmental chocolate promise and the environmental sustainability of the social chocolate promise were examined. Results of these analyses again provide support for H1. Social and environmental sustainability appear interconnected such that making a promise to be socially sustainable enhances perceptions of environmental sustainability. Likewise, when a company makes a promise to be environmentally sustainable, consumers also perceive them to be more socially sustainable. See figure 4.8.
Discussion

Results of studies 1A and 1B provide evidence that the promises for social and environmental sustainability successfully manipulate their intended sustainability dimension for both companies. Across both product categories consumer perceptions of social and environmental sustainability appear to be interconnected. Specifically, when a company makes a promise to be socially sustainable, consumer perceptions of the company’s environmental sustainability are also significantly affected even though no environmental claims were ever made. The reverse is also true. A company that makes a promise to be environmentally sustainable is perceived to be more socially sustainable than a company that makes no sustainability claims even though the environmental company also made no social claims. These results offer support for H1. Overall, these
findings indicate that the social and environmental sustainability dimensions are significantly interconnected in consumers’ minds, where a promise to be sustainable along one dimension increases consumer’s thoughts about the company’s sustainability along the other dimension.

**Study 2**

Study 2 first tests the hypothesis that consumers have heightened attitudes towards a company that makes a sustainability promise (either social or environmental) compared to a company that does not make a sustainability promise. Next, this study examines how these initial attitudes might be enhanced or diminished following a sustainability success or failure. Specifically, the effect of a sustainability promise (social or environmental) onto consumers’ evaluations of the company is predicted to be moderated by a sustainability outcome. A social sustainability outcome is examined in study 2, and an environmental outcome is examined in later studies.

When a paired success (a sustainability success along the same dimension as the original sustainability promise) occurs, no new information is given to consumers that would enhance their overall attitude toward the company. Thus, consumers attitudes are not predicted to change after a paired success. Attitudes are expected to be enhanced when a complementary success (a sustainability success along a dimension that does not match the dimension of the original sustainability promise) occurs because the company has taken both dimensions of sustainability into consideration. That is, new, favorable information is provided which should increase the consumers’ overall attitudes. Because of the interconnection between the two sustainability dimensions in consumers’ minds, sustainability failures should result in diminished attitudes, regardless of whether the
dimension of the initial sustainability promise matches the dimension of the failure. To
test these hypotheses, a 3 (social, environmental, and no sustainability promise) x 2
(social sustainability success or failure) between-subjects x 2 (pre-outcome or post-
outcome) within-subjects mixed measures design is employed. This study utilizes the
headphone promises from study 1A.

Procedure

A sample of 334 respondents were recruited via an online panel to participate in
the study. Twenty-five of these participants were removed from the data set as they failed
an instructional attention check, leaving a final sample of 309. The average age of the
participants was 38, and the sample was approximately 51% female. Participants of the
study were told that a company is creating a new line of headphones and were asked to
carefully evaluate the information about the company and provide their opinions. Next,
participants were randomly assigned to view either the social (n = 106), environmental (n
= 102), or no sustainability (control; n = 101) promise for the headphone company from
study 1a (see figures 3a, 3b, and 3c). After reading the promise, participants were asked
to answer questions measuring their attitude toward the company and their perceptions of
the company’s social and environmental sustainability from study 1.

Next, participants were asked to imagine that they have decided to purchase a pair
of headphones from the company. They were then randomly assigned to read about either
a social sustainability success (n = 153) or failure (n = 156) in the delivery of the product.
The sustainability success describes the company as donating a portion of its profits to a
local charity, while the failure describes the company as using unethical labor practices.
After reading the scenarios describing the social sustainability success or failure,
participants were asked to indicate their attitudes toward the company again. Finally, participants completed a manipulation check to assess the success of the social sustainability success and failure.

**Manipulations and Measures**

**Sustainability Promise Manipulations**

The sustainability promise manipulations were the same as those used in study 1A. The manipulations describe a headphone company that makes either an environmental, social, or no (control) sustainability promise.

**Social Sustainability Outcome Manipulations**

The social sustainability success was adapted from a leading environmentally friendly headphone company. The social success describes the company as providing additional service to communities by donating a significant portion of its profits to a local charity organization. The social sustainability failure describes the company as having recently been discovered to be using child labor in its factories, an issue that is common internationally (Barboza 2014; Moulds 2017).

**Social Sustainability Success**

The company from the scenario you just saw recently announced that they will donate 50% of their profits each year to a nonprofit organization that provides hearing aids to people in the poverty-stricken communities where the company’s headphones are manufactured. The company stated that community development is an investment in long-term success.
**Social Sustainability Failure**

The company from the scenario you just saw was recently discovered to be employing young children from the poverty-stricken communities where the company’s headphones are manufactured. The company stated that the children want to work in the factory and typically work 8 hour shifts with 2 days off per week instead of attending school.

**Sustainability Perceptions**

To assess perceptions of social sustainability ($\alpha = .97$), participants completed the 5-item measure of social sustainability. Additionally, the 3-item measure of environmental sustainability ($\alpha = .97$) was collected.

**Attitude Toward the Company**

Consumer attitudes toward the company were measured using a 6-item scale from Speed and Thompson (2000). These items were measured using a 7-point semantic differential. Specifically, this scale assesses consumers’ overall impression of the company as bad/good, unfavorable/favorable, negative/positive, untrustworthy/trustworthy, unpleasant/pleasant, and dislike/like (pre-outcome $\alpha = .98$; post-outcome $\alpha = .99$).

As in study 1, an exploratory factor analysis was conducted using maximum likelihood with a varimax rotation to assess the validity of measurement model. All items loaded onto their respective construct with minimal cross-loadings, providing initial evidence of convergent and discriminant validity.
Results

Sustainability Interconnection

As in study 1, results of a one-way ANOVA indicate significant differences in perceptions of environmental sustainability across the social, environmental, and no (control) sustainability promises ($F(2, 306) = 96.54, p < .01$). As expected, environmental sustainability perceptions are greater for the environmentally sustainable company ($M = 6.06; SD = .84$) compared to the socially sustainable company ($M = 4.30; SD = 1.53; t(206) = 10.30; p < .01$) and the control ($M = 3.70; SD = 1.32; t(201) = 15.30; p < .01$). An examination of the interconnection between the two sustainability dimensions again reveals that the socially sustainable company is perceived as more environmentally sustainable than the control ($t(205) = 3.02; p < .01$).

Results of a one-way ANOVA also reveal significant differences in social sustainability across the three promises ($F(2, 306) = 111.72, p < .01$). Participants perceive the socially sustainable company ($M = 6.05; SD = 1.20$) as more socially sustainable than both the environmentally sustainable company ($M = 4.16; SD = 1.13; t(206) = 11.70; p < .01$) and the control ($M = 3.79; SD = 1.18; t(205) = 13.63; p < .01$). Further, the environmental sustainability company is perceived as more socially sustainable than the control ($t(201) = 2.27; p = .02$). These results provide additional support for H1. Social and environmental sustainability appear to be interconnected such that a promise to be sustainable along one dimension enhances perceptions of the other dimension. See figure 4.9.
Figure 4.9  Study 2: Environmental and Social Sustainability Perceptions Between Sustainability Promises

*Sustainability Promises & Attitude Toward the Company*

To test H2, consumers’ attitudes toward the company prior to the exposure of a social sustainability outcome were examined. Results of a one-way ANOVA indicate that consumer attitudes toward the headphone company are significantly different across the social, environmental, and no sustainability promises ($F(2, 306) = 38.00, p < .01$).

Compared to when no sustainability promise (control; $M = 4.77; SD = 1.04$) was made, attitudes toward the company were significantly enhanced after either a social ($M = 5.89; SD = 1.13; t(205) = 7.46; p < .01$) or environmental ($M = 5.85; SD = .95; t(201) = 7.72; p < .01$) sustainability promise. Attitudes toward companies that make social or environmental sustainability promises are heightened when compared to companies that do not make sustainability promises. Additionally, no significant difference in attitudes
was found between the social and environmental sustainability promises ($t(206) = .31; p = .76$), indicating no differences in attitude evaluations across the two promises. These results suggest that consumers place value on both the social and environmental dimensions of sustainability as it related to the overall attitude toward the company.

**Sustainability Outcomes**

H3 was examined using a 3 (social, environmental, and no sustainability promise) x 2 (social sustainability success or failure) between-subjects x 2 (pre-outcome or post-outcome) within-subjects repeated measures ANOVA. Results of this analysis indicate a significant three-way interaction between sustainability promise, sustainability outcome, and the pre and post attitude toward the company evaluation ($F(2, 303) = 3.35, p = .04$). These results suggest that based on the type of sustainability promise made, there is a significant change between pre and post attitudes when consumers are exposed to a social sustainability outcome. Importantly, results of the repeated measures ANOVA also indicate a significant two-way interaction between sustainability promise and sustainability outcome ($F(2, 303) = 3.33, p = .04$).

**Sustainability Successes**

Follow up analyses to the repeated measures ANOVA were conducted to examine sustainability successes. When a paired success occurs, in this case when a social sustainability promise is followed by a social sustainability success, there is no significant change from pre ($M = 6.10; SD = 1.04$) to post ($M = 6.19; SD = 1.17; t(51) = .89; p = .38$) attitudes toward the company. Alternatively, attitudes significantly increase when a complementary success occurs. That is, when an environmental sustainability
promise is followed by a social sustainability success, there is a significant increase from pre ($M = 5.96; SD = .88$) to post ($M = 6.24; SD = .77; t(49) = 2.54; p = .01$) sustainability success attitudes toward the company evaluations. When a complementary success takes place, attitudes toward the company are enhanced because the company is now comprehensively considering the interconnection between the dimensions in consumers’ minds. These results support H3a. See figure 4.10.

![Figure 4.10](image)

**Figure 4.10** Study 2: Attitudes Toward Paired and Complementary Successes

**Sustainability Failure**

Attitudes toward the company both pre and post exposure to a sustainability failure were also examined. For the environmental sustainability promise, there is a significant decrease from pre ($M = 5.75; SD = 1.01$) to post ($M = 2.14; SD = 1.50; t(51) = 14.60; p < .01$) attitudes toward the company evaluations after a social sustainability
failure occurred. Likewise, pre \((M = 5.69; SD = 1.18)\) to post \((M = 2.17; SD = 1.53; t(53) = 13.59; p < .01)\) attitude toward the company evaluations are significantly decreased when a social sustainability promise is made and followed by a social sustainability failure. As predicted, attitudes are significantly diminished when social sustainability failure occurs, regardless of the dimension of the initial sustainability promise. These findings provide support for \(H_3b\) and are presented in figure 4.11.

![Figure 4.11 Study 2: Attitudes Toward a Sustainability Failure](image)

**Discussion**

The results of study 2 provide additional support of \(H_1\). Specifically, findings suggest that there is an interconnection between social and environmental sustainability such that when a company makes a promise to be sustainable along one dimension of
sustainability, consumer perceptions of the other dimension are enhanced. Support for H2 is also provided. That is, consumers have more favorable attitudes toward companies that make sustainability promises, regardless of whether the promise is social or environmental. Importantly, the analyses revealed no significant difference in attitudes between social and environmental sustainability promises. These results suggest that consumers place value on both dimensions.

These analyses also provide evidence of an interaction between sustainability promise and sustainability outcome onto attitudes toward the company. Results of the study reveal that when a paired success occurs, attitudes are not significantly impacted. Based on the results of H2, consumers have heightened attitudes towards companies that make a sustainability promise of either kind. However, a paired success does not result in enhanced attitudes toward the company. Alternatively, a complementary sustainability success was found to have a positive impact on consumer evaluations of the company. When a company makes a sustainability promise along one dimension of sustainability and subsequently deliver along another dimension of sustainability, consumer attitudes are enhanced because the company is considering the interconnection between the sustainability dimensions. The analysis also revealed that consumer attitudes are significantly decreased after a sustainability failure, regardless of whether the promise made was social or environmental. These results offer support for H3a and H3b.

**Study 3**

The purpose of study 3 is to extend the findings presented in studies 1 and 2 by identifying the underlying mechanisms that explain the interaction between sustainability promise and sustainability outcome onto consumer evaluations of the company.
Specifically, perceptions of sincerity and competence are predicted to explain why this interaction impacts consumer attitudes. When a paired success occurs, it is predicted that consumer perceptions of the company’s competence are enhanced, but perceptions of the company’s sincerity are not impacted. For a complementary success, it is anticipated that consumer perceptions of both competence and sincerity are enhanced, thereby enhancing attitudes. When the company commits a sustainability failure, evaluations of both competence and sincerity are predicted to decrease, thereby lowering attitudes.

Where study 2 utilized a social sustainability outcome, study 3 explores an environmental sustainability outcome. Social and environmental sustainability were found in studies 1 and 2 to be interconnected and perceived similarly by consumers. Finding comparable results to study 2 using the environmental sustainability outcome will provide further evidence of this prediction. Study 3 also generalizes the findings of study 2 to a new product category by using the chocolate company from study 1b.

**Procedure**

A total of 450 respondents were recruited from an online panel to participate in the study. Twenty-nine of these respondents were removed from the sample for failing an instructional attention check, leaving a final sample of 421 (52% male; average age 37). Participants were asked to carefully review advertisements with information about a company that is creating a new line of chocolates. Participants were randomly assigned to view either a social (n = 141), environmental (n = 141), or no (control; n = 139) sustainability promise for the chocolate company from study 1B (see figures 5a, 5b, 5c). After the participants read the promises, they were asked to answer questions measuring their perceptions of the company’s social and environmental sustainability. Then
participants’ attitude toward the company and their perceptions about the company’s sincerity and competence were collected.

Next, participants were asked to imagine that they purchased the chocolates from the company. Respondents were then randomly assigned to either an environmental success (n = 211) or an environmental failure (n = 210; see figures 10a and 10b) depicted in images of the shipping packages that the chocolates arrived to them in. After viewing the chocolate company’s packaging, participants again answered questions about their attitude toward the company and perceptions of the company’s sincerity and competence. Participants were also asked to answer manipulation check questions to ensure that the environmental success and failure outcomes were successful.

Manipulations and Measures

Sustainability Promise Manipulations

The sustainability promise manipulations from study 1B were used in this study. The manipulations describe a chocolate company making either an environmental, social, or no (control) sustainability promise.

Environmental Sustainability Outcome Manipulations

The environmental failure scenario depicts excessive packaging materials made from environmentally unfriendly materials such as Styrofoam packing peanuts and gel cooling packs. The environmental success scenario depicts the chocolate’s packaging as being made from 100% recycled materials.
Sustainability Perceptions and Attitude Toward the Company

Participants again completed the 5-item measure of social sustainability ($\alpha = .97$) and the 3-item measure of environmental sustainability ($\alpha = .95$). Also, consumer attitudes toward the company were measured using the 6-item scale from study 2 (pre-outcome $\alpha = .96$; post-outcome $\alpha = .99$).

Perceived Sincerity

Perceptions of sincerity were measured using a 3-item scale adapted for the context of this study from Moorman, Deshpande, and Zaltman (1993). Specifically, participants were asked to indicate their belief that the company is sincere in its promises, has sincere motives, and will act sincerely in future dealings. This scale was assessed using a 7-point Likert scale ranging from 1 = strongly disagree to 7 = strongly agree.

Perceived Competence

Perceptions of competence are measured using a 3-item scale from Cuddy, Fiske, and Glick (2008). This scale assesses belief that the company is capable, intelligent, and competent. Competence was assessed using a 7-point Likert scale with endpoints ranging from 1-strongly disagree to 7-strongly agree.
Figure 4.12  Environmental Success – Chocolate Packaging

Figure 4.13  Environmental Failure – Chocolate Packaging
Results

*Measurement Model Assessment*

Prior to the hypotheses evaluation, reliability and validity of the measurement model was assessed. As both the development of a scale and the inclusion of multiple constructs takes place in this study, a confirmatory factor analysis via AMOS was conducted to assess the unidimensionality of the scale items. Results of the analysis indicate an acceptable fit (Hu and Bentler 1999) of the model to the data ($\chi^2 = 1139.90$, $df = 436$, $p < .001$; CFI = .96, IFI = .96, RMSEA = .06). Evidence of convergent and discriminant validity was also found as all items only loaded onto their respective constructs (see table 4.2).
Table 4.2  Confirmatory Factor and Reliability Analysis

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized Loadings</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Outcome - attitudes toward the company (α = .96)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My overall impression of this company is:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bad/Good</td>
<td>0.92 a</td>
<td></td>
</tr>
<tr>
<td>- Unfavorable/Favorable</td>
<td>0.91 32.54</td>
<td></td>
</tr>
<tr>
<td>- Negative/Positive</td>
<td>0.93 34.13</td>
<td></td>
</tr>
<tr>
<td>- Untrustworthy/Trustworthy</td>
<td>0.85 26.69</td>
<td></td>
</tr>
<tr>
<td>- Unpleasant/Pleasant</td>
<td>0.91 32.25</td>
<td></td>
</tr>
<tr>
<td>- Dislike/Like</td>
<td>0.91 31.87</td>
<td></td>
</tr>
<tr>
<td><strong>Post Outcome - attitudes toward the company (α = .99)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After seeing how the product was packaged, my overall impression of this company is:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Bad/Good</td>
<td>0.96 a</td>
<td></td>
</tr>
<tr>
<td>- Unfavorable/Favorable</td>
<td>0.97 51.61</td>
<td></td>
</tr>
<tr>
<td>- Negative/Positive</td>
<td>0.97 53.23</td>
<td></td>
</tr>
<tr>
<td>- Untrustworthy/Trustworthy</td>
<td>0.94 42.97</td>
<td></td>
</tr>
<tr>
<td>- Unpleasant/Pleasant</td>
<td>0.96 50.97</td>
<td></td>
</tr>
<tr>
<td>- Dislike/Like</td>
<td>0.97 52.22</td>
<td></td>
</tr>
<tr>
<td><strong>Pre Outcome - Competence Perceptions (α = .90)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Based on the advertisement you have just seen, please indicate the extent to which the below characteristics describe the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Competent</td>
<td>0.89 a</td>
<td></td>
</tr>
<tr>
<td>- Intelligent</td>
<td>0.84 22.57</td>
<td></td>
</tr>
<tr>
<td>- Capable</td>
<td>0.86 23.51</td>
<td></td>
</tr>
<tr>
<td><strong>Post Outcome - Competence Perceptions (α = .96)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>After seeing how the company packaged the chocolates, please indicate the extent to which the below characteristics describe the company.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Competent</td>
<td>0.95 a</td>
<td></td>
</tr>
<tr>
<td>- Intelligent</td>
<td>0.95 41.58</td>
<td></td>
</tr>
<tr>
<td>- Capable</td>
<td>0.94 39.39</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 (continued)

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized Loadings</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Outcome - Sincerity Perceptions</strong> (α = .92)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Please indicate the extent to which you agree with the following statements.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- I believe this company's motives are sincere.</td>
<td>0.87</td>
<td>a</td>
</tr>
<tr>
<td>- I believe this company will act sincerely in future dealings.</td>
<td>0.93</td>
<td>27.04</td>
</tr>
<tr>
<td>- I believe this company is sincere in its promises.</td>
<td>0.89</td>
<td>24.88</td>
</tr>
</tbody>
</table>

**Post Outcome - Sincerity Perceptions** (α = .97)

After seeing how the company packaged the chocolates, please indicate the extent to which you agree with the following statements.

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized Loadings</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>- I believe this company's motives are sincere.</td>
<td>0.96</td>
<td>a</td>
</tr>
<tr>
<td>- I believe this company will act sincerely in future dealings.</td>
<td>0.96</td>
<td>45.91</td>
</tr>
<tr>
<td>- I believe this company is sincere in its promises.</td>
<td>0.96</td>
<td>46.64</td>
</tr>
</tbody>
</table>

**Environmental Sustainability** (α = .95)

- This company operates in a manner that is less harmful to environment than other companies.

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized Loadings</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>- This company operates in a manner that is better for the environment than other companies.</td>
<td>0.91</td>
<td>a</td>
</tr>
<tr>
<td>- This company is more environmentally friendly than other companies.</td>
<td>0.95</td>
<td>33.97</td>
</tr>
</tbody>
</table>

**Social Sustainability** (α = .97)

<table>
<thead>
<tr>
<th>Items</th>
<th>Standardized Loadings</th>
<th>t-values</th>
</tr>
</thead>
<tbody>
<tr>
<td>- This company cares about human rights.</td>
<td>0.87</td>
<td>a</td>
</tr>
<tr>
<td>- This company is concerned with the welfare of poverty stricken people.</td>
<td>0.94</td>
<td>30.27</td>
</tr>
<tr>
<td>- This company aims to build up vulnerable communities around the world.</td>
<td>0.93</td>
<td>29.28</td>
</tr>
<tr>
<td>- This company wants to help people in need.</td>
<td>0.96</td>
<td>32.33</td>
</tr>
<tr>
<td>- This company is concerned with the development of people and communities.</td>
<td>0.94</td>
<td>30.30</td>
</tr>
</tbody>
</table>

Note: "a" denotes a constrained relationship to 1.00 in order for identification

Model fit statistics: \( \chi^2 = 1139.90, df = 436, p < .01; CFI = .96, IFI = .96, RMSEA = .06 \).

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Sustainability Interconnection

One-way ANOVAs were next conducted to ensure that the chocolate company manipulations were again successful and to examine H1, the interconnectedness between social and environmental sustainability. Results of a one-way ANOVA indicate significant differences in perceptions of environmental sustainability across the social, environmental, and no (control) sustainability promises ($F(2, 418) = 130.51, p < .01$). The environmental sustainability company ($M = 6.21; SD = .89$) is perceived to be more environmentally friendly than both the social sustainability company ($M = 4.60; SD = 1.33; t(280) = 11.97; p < .01$) and the control ($M = 4.16; SD = 1.10; t(278) = 17.17; p < .01$). Additionally, the socially sustainable company is perceived as more environmentally sustainable than the control ($t(278) = 3.02; p < .01$), again indicating an interconnection between social and environmental sustainability.

Perceptions of social sustainability were also examined. Results of a one-way ANOVA reveal a significant difference across the three promises ($F(2, 418) = 128.46, p < .01$). The social sustainability company ($M = 6.06; SD = 1.05$) is perceived more socially sustainable than both the environmental company ($M = 4.49; SD = 1.25; t(280) = 11.44; p < .01$) and the control ($M = 3.94; SD = 1.14; t(278) = 16.16; p < .01$). Moreover, the environmental sustainability company is perceived as more socially sustainable than the control ($t(278) = 3.82; p > .01$), replicating the results of study 1B. These results provide further support for H1, that social and environmental sustainability are interconnected. A promise to be sustainable along one dimension enhances perceptions of the other dimension. See figure 4.14.
Sustainability Promises & Attitude Toward the Company

As in study 2, attitudes toward the company prior to exposure to the environmental sustainability outcome were examined to test H2. Results of a one-way ANOVA indicate that attitudes toward the chocolate company are significantly different across the three groups ($F(2, 418) = 15.36, p < .01$). Compared to when no sustainability promise (control; $M = 5.45; SD = 1.04$) is made, attitudes toward the company are more favorable for both a social promise ($M = 5.98; SD = .98; t(278) = 4.40; p < .01$) and an environmental promise ($M = 6.06; SD = 1.00; t(278) = 4.98; p < .01$). Again, no significant difference in attitudes toward the company is found between the social and environmental sustainability promises ($t(280) = .66; p = .51$). The results of this study provide additional support for H2. Companies that make social or environmental
sustainability promises enjoy more favorable attitudes from consumers compared to companies that do not make sustainability promises.

**Sustainability Outcomes**

To test H3, a 3 (social, environmental, and no sustainability promise) x 2 (environmental sustainability success or failure) between-subjects x 2 (pre-outcome or post-outcome) within-subjects repeated measures ANOVA was conducted. This analysis was performed to confirm that the predicted interactions between pre- and post-sustainability outcome and sustainability promise were consistent with findings from study 2 when using the new environmental sustainability outcome context. Results of the repeated measures ANOVA reveal a significant three-way interaction between sustainability promise, sustainability outcome, and the pre and post attitude toward the company evaluation ($F(2, 415) = 13.24, p < .01$). Specifically, there is a significant difference between pre and post attitudes toward the company when consumers are exposed to an environmental sustainability outcome based on the type of sustainability promise that was made. Results of the repeated measures ANOVA also reveal a significant two-way interaction between sustainability promise and sustainability outcome ($F(2, 415) = 4.87, p < .01$).

**Sustainability Successes**

Follow-up analyses to the repeated measures ANOVA first examined sustainability successes. Here, a paired success occurs when the environmental sustainability promise is followed by the environmental sustainability success. Though attitudes remain high, there is not a significant change from pre ($M = 6.12; SD = .93$) to
post \((M = 6.08; SD = .89; t(70) = .58; p = .57)\) attitudes toward the company after a paired success. However, after a complementary success, in this case a social sustainability promise followed by an environmental sustainability success, there is a significant increase from pre \((M = 5.89; SD = 1.06)\) to post \((M = 6.07; SD = .84; t(69) = 2.65; p = .01)\) attitudes toward the company. Thus, when a complementary success occurs, attitudes toward the company are enhanced. The results of this analysis provide additional support for H3a (see figure 4.15).

![Figure 4.15 Study 3: Attitudes Toward Paired and Complementary Successes](image)

**Sustainability Failure**

Next, attitudes toward the company after exposure to an environmental sustainability failure were examined. There is a significant decrease from pre \((M = 6.00; SD = 1.07)\) to post \((M = 3.31; SD = 1.58; t(69) = 11.04; p < .01)\) attitudes toward the company.
company when an environmental sustainability promise is followed by an environmental sustainability failure. Additionally, when a social sustainability promise is made and followed by an environmental sustainability failure, pre ($M = 6.08; SD = .89$) to post ($M = 3.24; SD = 1.50; t(70) = 14.89; p < .01$) attitude toward the company evaluations are significantly decreased. These results are consistent with the findings from study 2, providing additional support for H3b. If a company makes a sustainability promise along either dimension and a sustainability failure later occurs, attitudes toward the company will be significantly diminished. See figure 4.16.

Figure 4.16  Study 3: Attitudes Toward a Sustainability Failure

Conditional Process Analysis

New to study 3 is the assessment of the prediction that sincerity and competence mediate the interaction between sustainability promise and sustainability outcome onto
consumer attitudes toward the company. PROCESS model 8 (Hayes 2013) was used to perform the conditional process analysis. All regression coefficients were unstandardized, and 5,000 bias-corrected bootstrap samples were used to estimate the indirect effects. Model 8 is appropriate as it tests the moderating effect of sustainability outcome on the relationship between sustainability promise and attitudes through perceived sincerity and competence.

Because the independent variable (sustainability promise – social, environmental, or control) contains three categories, it was dummy coded for the mediation analysis. Dummy coding allows the use of categorical independent variables in various kinds of estimation models, such as the regression based techniques utilized by PROCESS (Hair et al. 2010). Here, two dummy coded variables were used to represent the social and environmental categories of the independent variable, sustainability promise. When participants were exposed to the social sustainability promise, the social sustainability dummy variable was coded as “1” and all other manipulations coded as “0.” The social dummy variable is referred to simply as the social promise in this study. Additionally, when participants are exposed to the environmental sustainability promise, the environmental sustainability dummy variable is coded as “1” with all other manipulations coded as “0.” The environmental dummy variable is referred to as the environmental promise in moving forward. Thus, the no sustainability promise (control) group serves as the reference group and is coded as “0” for both the social and environmental dummy variables. Interaction terms between the dummy coded variables and the sustainability outcome moderator are relevant in this model - social promise X sustainability outcome and environmental promise X sustainability outcome.

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In this study, perceptions of sincerity and competence were collected within-subjects. First, these perceptions were collected after the initial sustainability promise was made to consumers and again after the participant was exposed to the environmental success or failure. The post sustainability outcome measures are of interest here to understand how sustainability successes or failures influence consumer perceptions of sincerity and competence, ultimately influencing attitudes.

As predicted, results of the regression analyses using PROCESS model 8 indicate a significant interaction between the social promise and sustainability outcome onto post measures of both sincerity (\(a = 1.53, \ SE = .34, \ t = 4.47, \ p < .01\)) and competence (\(a = 1.57, \ SE = .32, \ t = 4.95, \ p < .01\)). Additionally, there is a significant interaction between the environmental promise and sustainability outcome onto post sincerity (\(a = 1.72, \ SE = .34, \ t = 5.02, \ p < .01\)) and post competence (\(a = 1.12, \ SE = .32, \ t = 3.53, \ p < .01\)). These results suggest that there are significant differences in consumers’ perceptions of both sincerity and competence when exposed to an environmental sustainability outcome based on the type of sustainability promise that was made. There are also significant simple effects of social promise, environmental promise, and sustainability outcome onto post sincerity and post competence (see table 4.3).

Further analysis of the conditional process results indicates a significant positive effect of sincerity perceptions onto attitudes toward the company (\(b = .41, \ SE = .04, \ t = 11.60, \ p < .01\)). Results of the analysis also reveal a positive effect of competence perceptions onto attitudes toward the company (\(b = .43, \ SE = .04, \ t = 11.28, \ p < .01\)). Sustainability outcome also has an effect on attitudes (\(b = .70, \ SE = .12, \ t = 5.63, \ p < .01\)) such that a success enhances attitudes and a failure decreases attitudes with both
mediators in the model. Neither the social promise (b = -0.20, SE = 0.12, t = 1.34, p = 0.18) nor the environmental promise (b = -0.17, SE = 0.12, t = 1.65, p = 0.10) has a significant effect on attitudes. Importantly, the direct effect of the interaction between the social promise and sustainability outcome (c = 0.02, SE = 0.18, t = 0.13, p = 0.90) and the interaction between the environmental promise and sustainability outcome (c = 0.07, SE = 0.18, t = 0.43, p = 0.67) through perceptions of sincerity and competence are both nonsignificant. The indirect effect, as indicated by the index of moderated mediation, is significant for both sincerity (a*b = 0.70, CI = 0.41 to 1.05) and competence (a*b = 0.48, CI = 0.18 to 0.81). These results hold when controlling for the pre sustainability outcome measures of attitude, sincerity, and competence. Overall, the results of this analysis indicate the predicted presence of moderated mediation. See figure 4.17 for a graphical depiction of the conditional process analysis. For regression results of the analysis, see table 4.3.
Note: No simple effects included in this depiction of the conditional process analysis results.

\* = p < .01
s = social promise X sustainability outcome
e = environmental promise X sustainability outcome
c = competence
si = sincerity

Figure 4.17  Conditional Process Analysis
### Table 4.3  Regression Results of Conditional Process Analysis

<table>
<thead>
<tr>
<th></th>
<th>Sincerity</th>
<th>Competence</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
<td>Estimate (SE)</td>
</tr>
<tr>
<td>Social Promise</td>
<td>-0.99* (.24)</td>
<td>-1.02* (.22)</td>
<td>0.20 (.12)</td>
</tr>
<tr>
<td>Environmental Promise</td>
<td>-1.23* (.24)</td>
<td>-0.71* (.23)</td>
<td>-0.17 (.12)</td>
</tr>
<tr>
<td>Sustainability Outcome</td>
<td>0.90* (.24)</td>
<td>1.04* (.23)</td>
<td>0.70* (.12)</td>
</tr>
<tr>
<td>Sincerity</td>
<td>0</td>
<td>0.41* (.04)</td>
<td></td>
</tr>
<tr>
<td>Competence</td>
<td>0</td>
<td>0.43* (.04)</td>
<td></td>
</tr>
</tbody>
</table>

**Interaction Terms**

<table>
<thead>
<tr>
<th>Interaction</th>
<th>Sincerity</th>
<th>Competence</th>
<th>Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soc Prom X Sustainability Outcome</td>
<td>1.53* (.34)</td>
<td>1.57* (.32)</td>
<td>0.02 (.18)</td>
</tr>
<tr>
<td>Env Prom X Sustainability Outcome</td>
<td>1.72* (.34)</td>
<td>1.12* (.32)</td>
<td>0.07 (.18)</td>
</tr>
</tbody>
</table>

*Note: *p* < .01

**Interaction Effects onto Sincerity and Competence**

**Paired Success**

Next, the effects of the interactions between sustainability promise and sustainability outcome onto perceived sincerity and competence were examined. Results of the paired success analyses indicate that there is no significant change from pre (*M* = 5.62; *SD* = 1.02) to post (*M* = 5.69; *SD* = 1.05; *t*(70) = 1.09; *p* = .28) perceptions of the company’s sincerity after a paired success. However, there is a significant increase from pre (*M* = 5.72; *SD* = 1.08) to post (*M* = 5.89; *SD* = 1.11; *t*(70) = 2.16; *p* = .03) perceptions of the company’s competence after a paired success. Thus, the interaction between sustainability promise and sustainability outcome, for a paired success, increases perceptions of competence while not significantly impacting perceptions of sincerity, leaving attitudes unchanged. See figure 4.18. These results provide support for H4.
Complementary Success

Examination of the complementary success indicates an increase from pre ($M = 5.51; SD = 1.25$) to post ($M = 5.75; SD = 1.19$; $t(69) = 3.04; p < .01$) perceptions of the company’s sincerity. Likewise, pre ($M = 5.67; SD = 1.05$) to post ($M = 6.03; SD = .83$; $t(69) = 4.36; p < .01$) perceptions of competence were also significantly increased after a complementary success. Taken together with the findings from the conditional process analysis and that attitudes toward the company are only enhanced after a complementary success occurs, these results provide support for H5a and b. That is, the interactions between sustainability promise and sustainability outcome for a complementary success lead to an enhancement of consumers’ perceptions of both the company’s sincerity and competence, thereby enhancing attitudes. See figure 4.19.


**Sustainability Failure**

When there is a sustainability failure, consumer perceptions of both sincerity and competence are diminished regardless of the dimension of the original sustainability promise ($t > 9.92; p < .01$). See figure 4.20. The results of these analyses in combination with the results from the PROCESS analysis and the finding that attitudes are diminished after a sustainability failure regardless of the dimension of the initial promise (H3b) provide support for H6a and H6b. Specifically, the interaction between sustainability promise and sustainability outcome onto consumer attitudes following a sustainability failure is mediated by both sincerity and competence where each are decreased, thereby decreasing attitudes.
Discussion

The results of study 3 replicate and extend the findings from studies 1 and 2. Findings from this study again reveal an interconnection between the social and environmental sustainability dimensions. Additionally, results indicate that consumers have heightened attitudes towards companies when either a social or environmental sustainability promise is made. Moreover, an interaction between sustainability promise and sustainability outcome onto consumer attitudes toward the company was again found. This finding replicates the results from study 2 using the environmental sustainability outcome versus the social sustainability outcome, providing additional evidence of the interconnection between social and environmental sustainability. Attitudes toward a company are heightened after a sustainability promise of any kind is made. However, a
paired success does not further enhance consumer attitudes toward the company. Attitudes toward the company are significantly enhanced after a complementary success occurs. Following a sustainability failure, there is a significant decrease in attitudes regardless of the dimension of the initial sustainability promise.

The results of study 3 also revealed the underlying mechanisms driving the interaction between sustainability promise and sustainability outcome onto consumer evaluations of the company. Specifically, consumer perceptions of the company’s sincerity and competence explain the impact on consumer attitudes. After a paired success, only perceptions of competence are enhanced. Sincerity perceptions are already high after a company makes a sustainability promise along either dimension. However, achieving a success along the same dimension as the original sustainability promise is not enough to enhance these already high sincerity perceptions. These findings help to explain why there is no significant increase in attitudes after a paired success as it takes an increase in both perceptions of sincerity and competence to enhance attitudes.

When a complementary success occurs, perceptions of sincerity and competence are enhanced. As a company takes into account the interconnection between the sustainability dimensions in consumers’ minds and achieves a sustainability success beyond what was originally promised, both sincerity and competence perceptions can be heightened, thereby enhancing attitudes. After a sustainability failure, perceptions of both sincerity and competence diminish regardless of the dimension of the initial promise made. As perceptions of sincerity and competence decrease, attitudes are also diminished. Overall, the conditional process analysis findings from study 3 provide support for H4-H6.
Study 4

The purpose of study 4 is to examine how sustainability promises and subsequent sustainability outcomes influence actual behavior. Where the previous studies have focused on how the link between the social and environmental sustainability dimensions influences attitudes, this study extends these findings to product choice. Specifically, a behavioral choice experiment is conducted in a laboratory setting. The experiment examines consumers’ actual product choices after receiving information about an environmental sustainability outcome from a company that makes a social or environmental sustainability promise.

Study 4 deviates from previous studies as it follows a 3 (social, environmental, and no (control) sustainability promise) x 3 (sustainability success, failure, or no outcome) between-subjects design. This study does not follow the repeated measures format of the previous studies. Instead, the no outcome (control) group was added to the experiment to act as a comparison group in place of collecting pre- and post-sustainability outcome measures. Specifically, after seeing either a social, environmental, or no (control) sustainability promise, participants were exposed to either a sustainability success, sustainability failure, or no outcome before being given a product choice. Thus, the no outcome is equivalent to only having seen one of the three sustainability promise scenarios prior to making a product choice.

The repeated measures design was not chosen for this experiment because research on status quo decision making suggests that once an initial choice is made, consumers will try to make choices that are consistent with their previous choice (i.e. stick to the status quo; Chernev 2004; Samuelson and Zeckhauser 1988; Yen and Chuang
2008). By asking participants to make a choice after seeing the sustainability promise (social, environmental, or control), their ultimate product choice may be biased. Thus, to rule out confounds with status quo decision making, participants’ choices after seeing a sustainability success or failure are compared to those who did not see a sustainability outcome.

Further, this study generalizes the results to a new product context, an office supply company. Sticky notes are used as the focal product to further examine how consumers react to sustainability promises and subsequent sustainability outcomes using a new product category. Previous studies support that the dimensions of sustainability are interconnected. Moreover, findings have been robust for both social and environmental sustainability outcomes. Study 4 uses an environmental sustainability outcome.

**Procedure**

A total of 483 undergraduate business students were recruited to participate in an in-person choice experiment for partial course credit. The sample was approximately 58% female with an average age of 21. Advertisements for an office supply company making either a social (n = 161), environmental (n = 164), or no (control; n = 158) sustainability promise were created and pretested for use in this choice study. Participants were randomly assigned to view one of the three promises.

After reading the promise, participants were randomly exposed to either an environmental sustainability success (n = 164), failure (n = 160), or no outcome (control; n = 159). The environmental sustainability outcomes were pretested prior to use in the behavioral study. The sustainability success provided information that the company has recently implemented the use of energy efficient power sources in its manufacturing
facilities, while the failure describes the company as emitting excessive amounts of pollution into the air. After reviewing the sustainability outcome, participants were given a choice to receive either one pack of sticky notes from the company they had just seen (focal product) or two packs of sticky notes from an alternative brand, Office Depot (see figures 4.21 and 4.22). Two packs of the alternative brand of sticky notes were offered to mitigate concerns about the perceived higher value of sustainable products over non-sustainable products (Skirbol and Nelson 2015). Office Depot was chosen to ensure that choice of the focal product was robust to even a well-known brand. Those in the no outcome condition did not see a sustainability outcome and immediately made a product choice after viewing the sustainability promise (social, environmental, or no sustainability promise). At the end of the survey, participants’ product choice was discretely distributed to ensure that choices were private.

Figure 4.21  Product Choice – Sticky Notes from the Focal Company
Manipulations and Measures

Sustainability Promise Manipulations

The socially sustainable promise describes the office supply company as using ethical working conditions and paying their employees fairly for 100% of their work. The social promise emphasizes that the company helps to change lives in vulnerable communities. The environmentally sustainable promise describes the company’s products as made from sustainable, recyclable, and biodegradable materials. Moreover, the environmental promise suggests that the company strives for a reduced environmental footprint. The no sustainability promise (i.e. control) focuses on the quality and functionality of the office supplies offered by the company. Specifically, the no sustainability promise indicates that the company’s mission is to offer products that help busy people organize their lives and get their work done. See figures 4.23, 4.24, and 4.25.
**Simply sustainable.**

Our company’s primary mission is to develop a line of school and office supplies sourced from environmentally sustainable materials.

**Here are some ways we achieve that goal:**

- Made from sustainable, recycled, and biodegradable materials
- All adhesives used in the products are chemical free and used sparingly
- All of our school and office supplies are completely recyclable

**With these products, you can get your work done and reduce your environmental footprint. Try our school and office supplies made from eco-friendly materials!**

Figure 4.23  Office Supply Company – Environmental Sustainability Manipulation

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**Simply responsible.**

Our company’s primary mission is to develop a line of school and office supplies sourced from socially sustainable materials.

**Here are some ways we achieve that goal:**

- Manufactured by workers in poverty-stricken communities who have struggled to earn a sustainable income
- All products manufactured under completely ethical working conditions
- All workers are fairly paid for 100% of their work

**With these products, you can get your work done while creating dignified jobs for people who need them. Try our school and office supplies made to change lives in vulnerable communities!**

Figure 4.24  Office Supply Company – Social Sustainability Manipulation
Simply productive.
Our company’s primary mission is to develop a line of school and office supplies to help busy people organize their lives.

Here are some ways we achieve that goal:

- Designed to deliver high quality supplies to succeed at school or the office
- Focused on delivering products with functional value
- Committed to providing innovative and unique products

With these products, you can get your work done with polished and professional materials. Try our school and office supplies made to help you do your work!

Figure 4.25  Office Supply Company – No Sustainability Manipulation

Sustainability Outcome Manipulations

The environmental success outcome depicts an image of wind turbines and solar panels. Under the image, new information about the company was provided to the participants, stating that the company has recently implemented a clean and renewable energy program in its manufacturing facilities. The environmental failure outcome depicts the image of a factory emitting pollution into the air with new information about the company underneath the image. The new information provided for the failure outcome states that the company’s manufacturing facilities emit excessive greenhouse gasses into the air. See figures 4.26 and 4.27 for the images used to manipulate the environmental success and failure. A manipulation check was also collected to assess the success of the sustainability outcome.
It was just announced that the company from the scenario you just saw has recently made efforts to reduce the environmental impact of their products. Toward this end, the company has implemented a clean and renewable energy program in its manufacturing facilities, utilizing both solar and wind energy systems.

Figure 4.26 Environmental Success – Manufacturing Processes

It was just discovered that the company from the scenario you just saw has been utilizing environmentally unfriendly practices in manufacturing their products. As a result of these practices, the company has been producing an excessive amount of greenhouse gas emissions through its manufacturing process at its facilities.

Figure 4.27 Environmental Failure – Manufacturing Processes
Because the choice study used new and untested advertisements, a pretest was collected to ensure that the new office supply company manipulations were successful and to examine the interconnection between social and environmental sustainability. A sample of 150 respondents were recruited from an online panel to participate in the pretest. Participants were randomly assigned to view one of the three office supply promises making either a social (n = 50), environmental (n = 50), or no (control; n = 50) sustainability promise and then answer questions measuring their perceptions about the company’s social and environmental sustainability. The 5-item measure of social sustainability (α = .97) was collected. Participants of the pretest also completed the 3-item measure of environmental sustainability (α = .95). Participants were randomly assigned to view either the environmental sustainability success or failure and asked to answer manipulation check questions.

Results of a one-way ANOVA indicate that there was a significant difference in perceptions of environmental sustainability across the social, environmental, and no (control) sustainability promises ($F(2, 147) = 30.47, p < .01$). Participants perceive the environmental sustainability company ($M = 5.98; SD = .90$) to be significantly more environmentally friendly than both the social sustainability company ($M = 5.01; SD = 1.33; t(98) = 4.24; p < .01$) and the control ($M = 4.17; SD = 1.19; t(98) = 8.53; p < .01$). Moreover, the socially sustainable company is perceived as more environmentally sustainable than the control ($t(98) = 3.32; p < .01$), indicating an interconnection between the dimensions.
Results of a one-way ANOVA examining the perceptions of social sustainability were again found to be significantly different across the three promises ($F(2, 147) = 44.70, p < .01$). Participants perceive the social sustainability company ($M = 6.05; SD = .93$) to be significantly more socially sustainable than both the environmental company ($M = 4.59; SD = 1.05; t(98) = 7.35; p < .01$) and the control ($M = 4.12; SD = 1.20; t(98) = 9.00; p < .01$). Results also indicate the interconnection between the dimensions. The environmental sustainability company is perceived as significantly more socially sustainable than the control ($t(98) = 2.12; p = .04$). See figure 4.28.

![Figure 4.28](image)

**Figure 4.28** Study 4 Pretest: Environmental and Social Sustainability Perceptions Between Sustainability Promises
Results

Logistic Regression Analysis

Hierarchical logistic regression was used to analyze the results of the choice study as it is an appropriate statistical method for analyzing a dichotomous dependent variable (Hair et al. 2010). When the focal product was chosen over the alternative, Office Depot product, it was coded at “1.” Choice of the alternative, Office Depot product, was coded as “0.”

Moreover, logistic regression is a robust statistical technique that allows for the use of dummy coded, categorical independent variables (Hair et al. 2010), as were used in the analysis of sustainability promises and sustainability outcomes impact on consumer choice. Two dummy coded variables were created to represent the social and environmental categories of the independent variable, sustainability promise (SP). When participants were exposed to the social sustainability manipulation, the social sustainability dummy variable was coded as “1,” and all other manipulations coded as “0.” The social dummy variable is referred to as simply the social promise (SP_S) in this study. When participants were exposed to the environmental sustainability manipulation, the environmental sustainability dummy variable was coded as “1,” and all other manipulations coded as “0.” The environmental dummy variable is referred to as the environmental promise (SP_E) moving forward. The no promise (control) group serves as the reference group and was coded as “0” for both the social and environmental dummy variables.

Two dummy coded variables were also created to represent the success and no outcome categories of sustainability outcome. When participants were exposed to the
sustainability success manipulation, the success variable was coded as “1,” and all other manipulations were coded as “0.” The sustainability success dummy variable is referred to simply as the sustainability success (SO\textsubscript{S}) moving forward. Additionally, when participants were not exposed to a sustainability outcome, the no outcome group was coded as “1,” and all other groups were coded as “0.” The no outcome dummy variable is referred to going forward as simply no outcome (SO\textsubscript{N}). The sustainability failure manipulation was coded as “0” for both the sustainability success and no outcome dummy variables and thus serves as the reference group.

The 3x3 interaction between sustainability promise (social, environmental, or no sustainability promise) and sustainability outcome (success, failure, or no outcome) onto product choice is of primary interest in this analysis. Because the independent variables are categorical and must be dummy coded for the logistic regression analysis, four new interaction terms were created to represent this one interaction. Specifically, social promise X sustainability success (SP\textsubscript{S} SO\textsubscript{S}), social promise X no outcome (SP\textsubscript{S} SO\textsubscript{N}), environmental promise X sustainability success (SP\textsubscript{E} SO\textsubscript{S}), and environmental promise X no outcome (SP\textsubscript{E} SO\textsubscript{N}) interactions represent the interaction between sustainability promise and sustainability outcome.

To test the significance of the interaction between sustainability promise and sustainability outcome, two models were examined using hierarchical logistic regression. In model 1, only the four dummy coded independent variables were entered into the regression model. Model 2 retained the four dummy coded independent variables and added the four interaction terms. Collectively, the four interaction terms represent the 3x3 interaction between sustainability promise and sustainability outcome. Evidence of a
significant interaction can be seen by a significant increase in model fit from model 1 to model 2. Thus, this hierarchical approach allows for the examination of the 3x3 interaction via the four interactions terms. The full model logistic equations is as follows:

\[
\ln \left( \frac{P_{\text{Focal Product}}}{1 - P_{\text{Focal Product}}} \right) = SP_S + SP_E + SO_S + SO_N + SP_S SO_S + SP_S SO_N + SP_E SO_N \\
+ SP_E SO_N
\]

Model 1 of the hierarchical logistic regression analysis reveals a statistically significant model ($\chi^2(4) = 194.98; p < .01$). When only the independent variables are included in the logistic regression equation, all four variables significantly influence choice of the focal product. Importantly, model 2 reveals a significant improvement in the overall logistic regression model after adding the four interactions terms ($\Delta\chi^2(4) = 11.02; p = .03$). Thus, when the four interaction terms, representing the 3x3 interaction, were added to the model, there was a significant improvement in the model. These results indicate that the predicted interaction between sustainability promise and sustainability outcome is significant. Three of the four interaction terms were significant predictors of focal product choice. Social promise X sustainability success, environmental promise X sustainability success, and environmental promise X no outcome were all significant predictors of choice while social promise X no sustainability outcome was not. See table 4.4 for results of the hierarchical logistic regression.
Table 4.4 Hierarchical Logistic Regression Results

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<tr>
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<th>Model 1</th>
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<th>Model 2</th>
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<tr>
<td></td>
<td>Log odds</td>
<td>Wald $\chi^2$</td>
<td>Odds ratio</td>
<td>Log odds</td>
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<tr>
<td>Intercept</td>
<td>-1.90**</td>
<td>46.18</td>
<td>0.15</td>
<td>-1.18**</td>
</tr>
<tr>
<td>Social Promise</td>
<td>1.05**</td>
<td>11.97</td>
<td>2.87</td>
<td>0.22</td>
</tr>
<tr>
<td>Environmental Promise</td>
<td>0.65*</td>
<td>4.98</td>
<td>1.92</td>
<td>-0.59</td>
</tr>
<tr>
<td>Sustainability Success</td>
<td>3.38**</td>
<td>113.06</td>
<td>29.31</td>
<td>2.33**</td>
</tr>
<tr>
<td>No Outcome</td>
<td>2.69**</td>
<td>90.42</td>
<td>14.78</td>
<td>1.76**</td>
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**Interaction Terms**

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<td>1.91*</td>
<td>4.42</td>
<td>6.72</td>
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<tr>
<td>Soc Promis X No Outcome</td>
<td>0.90</td>
<td>1.88</td>
<td>2.46</td>
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<tr>
<td>Env Promise X Success</td>
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<td>5.29</td>
<td>5.73</td>
</tr>
<tr>
<td>Env Promise X No Outcome</td>
<td>1.91**</td>
<td>7.31</td>
<td>6.78</td>
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*Note:* *p < .05; **p < .01

**Focal Product Choice Proportion Analyses**

**Sustainability Promises and Product Choice**

Next, follow up analyses were conducted to further assess the results of the product choice study in relation to the hypotheses. The notion that consumers will choose the focal product more after a social or environmental sustainability promise is made versus when no sustainability promise is made, was examined. Compared to no sustainability promise (control; $p = 64.15\%$), participants choose the focal product over the Office Depot product significantly more after both a social ($p = 84.62\%, Z = 2.40, p = .01$) and an environmental ($p = 87.04\%, Z = 2.76, p < .01$) sustainability promise. These results indicate that consumers have a higher likelihood of choosing a product after a company makes a sustainability promise on either dimension versus companies that do not make sustainability promises, supporting H2. Moreover, there was no significant difference in choice of the focal product between the social and environmental
sustainability promises ($Z = .36, p = .72$), suggesting that participants placed value on both the social and environmental dimensions when making their product choice.

**Sustainability Successes and Product Choice**

The effect of the interaction between sustainability promise and sustainability outcome onto product choice was explored next. First, sustainability successes were examined. Choice of the focal product after a sustainability success or failure was compared to consumer choice after the no outcome (control). After a paired success ($p = 90.91\%$), there is no significant difference in choice of the focal product compared to no sustainability outcome ($p = 87.04\%, Z = .65, p = .52$). Though choice of the sustainable product is greater after either a social or environmental sustainability promise is made, a paired success does not result in increased choice of the sustainable product. Specifically, consumers’ likelihood to choose the focal product is not significantly different from simply promising to be sustainable and not achieving an additional sustainability success.

Alternatively, participants choose the focal product significantly more after a complementary success ($p = 96.36\%$) compared to no sustainability outcome ($p = 84.62\%, Z = 2.09, p = .04$). A complementary success results in greater focal product choice compared to simply making a promise without later achieving a sustainability success. Thus, making a promise on one dimension of sustainability and later succeeding on the complementary dimension increased the likelihood that a participant would choose the sustainable product. These findings provide additional support for H3a.
**Sustainability Failure and Product Choice**

Results of the follow up analyses revealed that participants do not choose the focal product as often after a sustainability failure compared to no sustainability outcome, regardless of the dimension of the original promise. Specifically, choice of the focal product was significantly lower when an environmental promise was followed by an environmental failure ($p = 14.55\%$) compared to simply making an environmental promise with no sustainability outcome ($p = 87.04\%, Z = 7.57, p < .01$). Likewise, when a social sustainability promise was followed by an environmental failure ($p = 27.78\%$), choice of the focal product was significantly lower compared to a social sustainability promise with no sustainability outcome ($p = 87.04\%, Z = 5.89, p < .01$). These results support H3b using actual product choice. Despite the dimension of the original sustainability promise, the likelihood that a consumer will choose the focal product is significantly lower after a sustainability failure occurs. Actual choice proportions from this experiment are presented in figure 4.29.
Discussion

Results of the behavioral choice experiment indicate that consumers actually choose a company’s product significantly more if a social or environmental sustainability promise has been made. However, no significant difference in product choice was found between companies that make a social versus an environmental sustainability promise.

The interaction between sustainability promise and sustainability outcome’s impact on actual product choice was also examined. Though a sustainability promise of any kind increases product choice, consumers’ likelihood of choosing the sustainable product does not increase after a paired success occurs. Thus, making a promise along one dimension and later succeeding along that same dimension does not significantly
impact product choice when compared to simply making a sustainability promise and not achieving a sustainability success. However, when compared to no sustainability outcome consumer choice of a company’s product is higher after a complementary success occurs. That is, making a promise along one dimension and later delivering a success along the other dimension increases the likelihood that a consumer will choose the sustainable product. Overall, these results suggest that, in terms of sustainable product choice after a sustainability promise has been made, a complementary success is better than simply making a sustainability promise. After a sustainability failure takes place, consumer choice of a sustainable product is significantly reduced. This decrease in choice occurs regardless of the sustainability dimension on which the company promises or later fails. These findings provide support for H3a and H3b using actual product choice.
Across four studies, a conceptual model of the interconnection between the social and environmental dimensions of sustainability was developed and tested. Though the social and environmental dimensions of sustainability are distinct from each other, they are interconnected in consumers’ minds. For example, consumers perceive a social promise to be more socially sustainable than an environmental promise. However, perceptions of the social company’s environmental sustainability are also significantly affected even though no environmental claims were made. The reverse is true when an environmental promise is made. Consumers perceive an environmental promise as more environmentally sustainable than a social promise, but their perceptions of the environmental company’s social sustainability are also enhanced despite no social claims being made. Results also show that consumers have heightened attitudes toward companies that make either social or environmental sustainability promises versus companies that do not make promises to be sustainable. Moreover, no significant difference was found in attitudes toward companies that make social versus environmental promises, suggesting that consumers value both dimensions.

Results of the studies also suggest that a sustainability promise’s effect on consumers’ evaluations of a company is moderated by sustainability outcome. When a paired success occurs (i.e. the dimension of the sustainability promise matches the
dimension of the sustainability success) attitudes toward the company are not significantly impacted. That is, attitudes remain constant between consumers’ pre to post paired success evaluations of the company. However, when a complementary success occurs (i.e. the dimension of the sustainability promise does not match the dimension of the sustainability success) attitudes toward the company are significantly enhanced. After a sustainability failure takes place, attitudes are significantly diminished, regardless of the dimension of the initial sustainability promise. Importantly, the interaction between sustainability promise and sustainability outcome onto consumers attitudes occurs for both social and environmental sustainability outcomes, providing further support for the interconnection in consumers’ minds between social and environmental sustainability.

The interaction between sustainability promise and sustainability outcome onto consumer attitudes is driven by consumer perceptions of sincerity and competence. Specifically, results indicate that attitudes are significantly changed when perceptions of both sincerity and competence are impacted. When a paired success occurs, perceptions of competence are enhanced but perceptions of sincerity are not significantly impacted, thereby attitudes toward the company remain constant. When a complementary success occurs, perceptions of both the company’s sincerity and competence are significantly increased, enhancing attitudes toward the company. Following a sustainability failure along either dimension of sustainability, perceptions of sincerity and competence are significantly diminished. Thus, after a sustainability failure, as perceptions of sincerity and competence diminish, attitudes toward the company also decrease.

A behavioral experiment was also conducted to test the effect of the interaction between sustainability promise and sustainability outcome on product choice. Results of
the behavioral study provide support for the interaction’s effect on actual product choice. Specifically, consumers choose a product more after a sustainability promise is made along either the social or environmental dimension of sustainability versus when a sustainability promise is not made. Also, there is no significant difference in product choice after a social versus an environmental sustainability promise from a company, again indicating that consumers place value on both of the dimensions. Results of the behavioral study also reveal that after a paired success occurs choice of a sustainable product is not significantly increased. However, choice of a sustainable product occurs significantly more after a complementary success. No matter the dimension of the sustainability promise, choice of a sustainable product significantly decreases after a sustainability failure. Theoretical and practical implications for these findings are explored next followed by a discussion of limitations and future research objectives.

**Theoretical Implications**

The research presented here makes several important contributions to sustainability literature, answering the call for research that considers the multiple dimensions of sustainability (Chabowski et al. 2011). A majority of the current research on sustainability has focused solely on either environmental (Luchs et al. 2010, Cronin et al. 2011; Griskevicius et al. 2012) or social sustainability factors (Sen and Bhattacharya 2001; Kang et al. 2016), ignoring the broader scope of sustainability and the possible connections between these two dimensions. When the two dimensions have been examined in the literature, some problems have arisen with differentiation between the dimensions. First, social and environmental sustainability are often combined in sustainability manipulations or measures so that the two dimensions are evaluated
simultaneously (e.g. Moser 2015; Lenz et al. 2017; Pirsch et al. 2007). For instance, a study’s manipulation may include company information about recycling (i.e. environmental sustainability) and fair trade practices (i.e. social sustainability). Second, the social and environmental dimensions are often used interchangeably across studies in sustainability research (e.g. Bolton and Mattila 2015; Cotte and Trudel 2009; Peloza et al. 2013). For example, studies one, two, and three on a sustainability topic may focus on environmental sustainability practices such as pollution control and energy conservation while study four examines a social sustainability practice such as gender equality in wages. In either scenario, issues arise as the comparative importance of each of these dimensions remains unknown and the interdependence between these dimensions is left unexplored. This research recognizes and responds to the need to examine whether social and environmental sustainability may be interconnected. Here, the two dimensions were examined within the same studies while at the same time a clear distinction between the two dimensions was made.

Specifically, a more holistic approach to investigating consumer responses to sustainability promises was taken by exploring both the social and environmental sustainability dimensions and the links between them. Most prior research has overlooked the possible links between the sustainability dimensions (Van der Byl and Slawinski 2015). However, results of the studies presented in this research indicate that the social and environmental dimensions are interconnected in consumers’ minds. Specifically, the multiple pathway anchoring and adjustment model (MPAA; Cohen and Reed 2006) was used to explain this interconnection and how it ultimately impacts consumer attitudes and choice. MPAA suggests that consumers often form evaluations about an object based on
its similarity to other attitude objects (Cohen and Reed 2006). In the case of social and environmental sustainability, both objects are innately focused on preserving and enhancing the future (Chow and Chen 2012; Elkington 1997). Even though the dimensions are distinct from each other, the future focus of both the social and environmental dimensions supports the interconnection between the dimensions. Therefore, when a company makes a sustainability promise along either sustainability dimension, consumers perceptions of the other dimension are enhanced.

Moreover, researchers have often theorized about whether or not consumers care about sustainability efforts (Bhattacharya and Sen 2004; McWilliams, Siegal, and Wright 2006; Kang et al. 2016). Specifically, prior research has had mixed results on whether or not the social or environmental dimensions of sustainability may enhance evaluations and purchases for companies that make sustainability promises. While some studies have found that consumers evaluate companies that make social (Sen and Bhattacharya 2001; Kang et al. 2016) or environmental (Gershoff and Frels 2015; Rivera-Camino 2007) sustainability claims positively, there is research that suggests that this is not always the case (Luchs et al. 2010; Peattie 2010). Here, findings across four studies indicate that companies that make sustainability promises along either the social or environmental dimension of sustainability enjoy heightened attitudes and product choice versus companies that do not make sustainability promises. These results suggest that consumers do value sustainability and this translates into positive evaluations for companies that make these promises to their consumers.

Importantly, results of these studies also indicate that there is not a significant difference in attitudes or product choice between companies that make a social versus an
environmental sustainability promise. Some prior research has suggested that consumers may place more importance on one dimension or the other. For instance, Simpson and Radford (2014) suggest that the environmental dimension is more salient to consumers while Tully and Winer (2014) indicate that consumers may be more willing to pay a premium for products that are socially sustainable. Across four studies, this research failed to find a significant difference between evaluations of the two dimensions.

To further explore the interconnection between the dimensions of sustainability, this research also examined the interaction between sustainability promises and sustainability outcomes, introducing the terms **paired success** and **complementary success**. A paired success occurs when a company makes a promise along one dimension of sustainability and later achieves a sustainability success along that same dimension though not directly confirming the original promise. Though attitudes are heightened after a sustainability promise of any kind, findings indicate that the occurrence of a paired success is not enough to further increase consumer attitudes toward a company. This is because, according to MPAA, after an initial attitude has been formed, attitude congruent information only reinforces the previously formed attitude (Haddock et al. 1999; Cohen and Reed 2006; Lynch 2006). Thus, when a paired success occurs, consumers form an initial attitude toward the company based on the sustainability promise made to them. The established attitude evaluation is later reinforced when the company succeeds along the same sustainability dimension. That is, a paired success offers no new information to the consumer which would result in enhanced attitudes, and the attitudes toward the company are not significantly changed.
A complementary success, on the other hand, occurs when a company achieves a success along a sustainability dimension that does not match the dimension of the company’s original sustainability promise, again not directly confirming the original promise. Here, it was found that a complementary success results in enhanced consumer attitudes towards a company. Prior research suggests that novel information requires more cognitive processing (Petty et al. 1997; van Dijk et al. 2012) which initiates attitude adjustment when that new information does not match a consumer’s original evaluation (Cohen and Reed 2006; Lynch 2006; Rucker et al. 2006). The new information offered by a success on the complementary sustainability dimension from that of the original sustainability promise causes consumers to pay more attention to the new sustainability information and thus update their previously formed attitude. Moreover, when a complementary success occurs, the company is now accounting for the interconnection between the sustainability dimensions. Thus, attitudes toward the company are enhanced after a complementary success because the company is now comprehensively considering the interconnection between the dimensions in consumers’ minds.

Due to the interconnection between the dimensions, consumers hold companies accountable for being sustainable along both dimensions of sustainability as a promise to be sustainable along one dimension increases thoughts of the other dimension. When a sustainability failure occurs, a company is meeting present needs while compromising the ability for future generations to meet their own needs. A failure along either sustainability dimension was found to diminish attitudes toward the company. Under MPAA, a failure along either dimension would be considered new information as it does not match the information that caused the initial attitude formation (provided in the sustainability
promise). Thus, attitude adjustment is triggered (Cohen and Reed 2006; Lynch 2006; Rucker et al. 2006), where the valence of the new information impacts the directionality of the attitude change (Schwarz and Bohner 2001). Because failing to be environmentally or socially sustainable can negatively impact consumer evaluations of companies (i.e. Choi and Ng 2011; Cotte and Trudel 2009; Carrigan and Attalla 2001; Creyer and Ross 1996), in the case of a sustainability failure, attitudes toward the company decrease. This finding was present regardless of the dimension of the initial sustainability promise.

Companies must now take a broader approach to their sustainability initiatives, considering both the social and environmental dimensions. Consumers will perceive both sustainability dimensions from a sustainability promise even though the company never promised to be sustainable along both dimensions. Thus, one dimension cannot be ignored simply because the company did not make a sustainability promise along that dimension.

Findings from this research also indicate that the interaction between sustainability promise and sustainability outcome’s impact on consumer evaluations is driven by consumer perceptions of sincerity and competence. Perceptions of both sincerity and competence have been previously used in branding literature to help explain consumer evaluations of companies (Ang and Lim 2006; Eisend and Stokburger 2013; Sung and Kim 2010). Some prior research has suggested that sincerity may have a stronger effect on brand outcomes than competence (Sung and Kim 2010; Zentes et al. 2008; Folse et al. 2012). However, this research is the first to establish that a company may need to influence both sincerity and competence to impact evaluations. Perceptions of sincerity are high after a sustainability promise along either dimension, but a paired
success does not result in enhanced sincerity perceptions. When a paired success takes place, only perceptions of competence are enhanced, but there is no significant impact on perceptions of sincerity. Thus, the enhancement of competence alone is not enough to enhance overall attitudes toward the company. Alternatively, consumer perceptions of both sincerity and competence are enhanced after a complementary success, leading to an increase in attitudes toward the company. After a sustainability failure, sincerity and competence perceptions decreased resulting in diminished consumer attitudes. Only when perceptions of both sincerity and competence increase or decrease are attitudes toward the company significantly enhanced or diminished.

Another important theoretical contribution of this research is the introduction of an integrated definition of sustainability – meeting the needs of the present without compromising the needs of future generations to meet their own needs for society, the environment, and the economy. Previous definitions of sustainability were either too narrow to consider the multiple dimensions of sustainability or too all-encompassing to meaningfully represent the complexity of the topic. Specifically, the new definition offered in this research integrates the specificity of the triple bottom line (Elkington 1997; Elkington 2004) with the broad Brundtland (1987) definition which lacked structure in its conceptualization of sustainability. This new definition is comprehensive while also allowing for the study of the nuanced topics that fall under each of the three dimensions of sustainability.

**Practical Implications**

Beyond these theoretical implications, this research also has practical implications for companies that make social and environmental sustainability promises. Companies
are often called upon to help resolve societal issues because of their power and impact on society (Chang 2016). Making sustainability promises is a way that companies can meaningfully advance social and environmental objectives and make the world a better place for future generations. When making these sustainability promises a core part of their business, companies often focus on only one sustainability dimension at a time. For example, the Seventh Generation brand focuses solely on the environmental dimension by advertising the environmental friendliness of its cleaning product line. Similarly, some organizations only make sustainability claims along the social dimension. The Serrv chocolate company, for instance, touts its fair trade business model as helping to lift disadvantaged farmers, artisans, and families out of poverty. Findings from this research suggest that this singular focus on only one sustainability dimension may not be the most effective strategy. That is, results across four studies suggest that the social and environmental dimensions are interconnected in consumers’ minds. When a company makes a promise to be sustainable along one dimension of sustainability, consumers instinctively have increased perceptions of the other dimension that was not promised on. Because of this interconnection, companies should strive to consider both sustainability dimensions when making sustainability promises to consumers.

Though companies need to holistically consider both the social and environmental dimensions of sustainability in their practices because of the interconnection between the dimensions, there may still be more of a focus on one dimension or the other. For instance, a company may primarily make a socially sustainable promise to operate using fair trade practices but also begin to implement recycling in their manufacturing processes to account for the environmental sustainability dimension. Alternatively, a
company might primarily promise to be environmentally sustainable by having a chemical free product formula while at the same time begin to participate in a socially sustainable program to promote literacy in the community. In either case, companies may question if a primary focus on one dimension over the other is preferable to consumers.

Findings from this research help to alleviate these concerns that marketers may have about the relative importance of one dimension over the other. Results suggest that consumers have enhanced evaluations and product choice of companies that make sustainability promises along either the social or environmental dimension compared with companies that do not make sustainability promises. This finding should motivate companies to act sustainably along either dimension as consumers respond positively to sustainable claims from companies. Importantly, no significant differences in company evaluation or product choice was found between companies that make a social versus an environmental sustainability promise. Thus, companies should feel free to make their primary sustainability promise along either dimension and receive equally positive reactions from consumers.

Once a primary promise has been made along either the social or environmental dimension of sustainability, companies may then want to further their sustainability efforts. These additional sustainability initiatives can manifest as either a paired success or a complementary success as described in the previous examples. Because of the interconnectedness between the dimensions, companies receive enhanced evaluations and product choice after a complementary success. Thus, when considering additional sustainability actions beyond the primary sustainability promise made to consumers,
companies should endeavor to seek out sustainability actions along a complementary dimension.

Further, companies can expect negative reactions from consumers when a sustainability failure occurs, despite the dimension of the original promise. Because of the interconnectedness between the dimensions, companies cannot ignore a sustainability dimension simply because they do not promise to be sustainable along that dimension. For example, a coffee company cannot make the social sustainability promise to use only local farmers to source their coffee beans then later fail to be environmentally sustainable by polluting the local water source. Consumers connect these dimensions in their minds. Thus, a sustainability failure along any dimension leads to a drastic reduction in evaluations of the company and overall product choice. To at least maintain the positive evaluations companies can receive from sustainability promises, companies need to ensure that they do not later fail to consider their broader sustainability impact and negate any gains they may have previously received.

Findings from these analyses also have important implications for public policy makers. Despite the push from policy makers and marketers alike, sustainability initiatives are not always quickly adopted by the public (Prothero et al. 2011). The slow adoption of sustainability initiatives may be driven, at least in part, by a lack of consideration for the interconnectedness between the sustainability dimensions. Results of these studies suggest consumers respond positively when both social and environmental dimensions are considered. Thus, as policy makers attempt to increase focus on and adoption of sustainability objectives, it may be important for them to keep in mind this interconnection between the two dimensions of sustainability. Moreover,
consumers will benefit from marketers and policy makers’ that take a holistic view of sustainability.

Results of these studies also help to increase our understanding of how consumers evaluate sustainability offerings. Consumers are often faced with the choice to use their purchasing power to support either environmental or social sustainability initiatives. However, findings from these studies suggest that consumers actually think of the two sustainability dimensions as interconnected. Thus, a singular focus on only one dimension fails to consider the holistic view of sustainability that consumers take. As companies and policy makers begin to consider their broader sustainability impact by comprehensively focusing on both the social and environmental sustainability dimensions, consumers’ interconnected thoughts of sustainability are taken into account. Moreover, research suggests that at current levels of consumption, consumers will not be able to maintain their standard of living as earth’s resources are consumed at a faster rate than they can be replenished (World Wildlife Fund 2008). At the same time, consumers are faced with negative consequences of many social problems, including hunger, poverty, and human rights issues (Elvar 2015). A holistic consideration of both social and environmental sustainability begins to confront these important sustainability problems faced by consumers. Thus, consumers may reap the reward of a better society and environment overall.

Limitations and Future Research

Although this research offers novel insights into furthering marketing’s understanding of consumer responses to companies that make sustainability promises, some limitations are acknowledged that provide opportunities for future research. For
instance, this research focused primarily on how the interconnection between social and environmental sustainability impacts consumer attitudes toward the company and product choice. No pricing or financial information about the companies or products was utilized in the studies. The office supply product choice study controlled for consumer perceptions that sustainable products have a higher value over non-sustainable products (Skirbol and Nelson 2015) by offering two packs of an alternative brand of sticky notes versus one pack of the sustainable brand. However, future research may attempt to include specific financial information to investigate the impact pricing data may have on the findings presented here.

Future research should also investigate companies that make social and environmental sustainability promises simultaneously. This research focused on exploring how the two dimensions, in isolation of each other, interconnect to influence attitudes and product choice. This reflects the propensity of most companies making sustainability promises to focus on one dimension or the other. For example, the Fairhills wine company makes social sustainability promises to help local communities by launching housing renovation, alcohol rehabilitation, and adult literacy programs. Similarly, Bedstu shoe company makes environmental promises to use recycled materials in their products.

Though the majority of companies focus on one dimension or the other, some companies may begin to make sustainability promises along both dimensions. It may be interesting to investigate how consumers respond to companies that make a joint promise, a promise on both dimensions. For instance, how might a joint sustainability promise influence consumer attitudes? Moreover, future research should explore how consumer
reactions to sustainability successes and failures may be different for companies that make a joint promise. The current research found that consumer attitudes are enhanced after a complementary success occurs. Should companies that make a joint promise promote both of these promises to consumers? Or might it be better to only promote a sustainable promise along one dimension and let the other sustainability initiative act as a complementary success? Overall, future research should explore these questions for companies that make joint sustainability promises.

Another interesting avenue of future research may be to investigate the effect of local versus global sustainability promises between the dimensions. For example, whether the company is promising to be socially or environmentally sustainable in a local community versus a community in third world country may impact overall evaluations and product choice. Across the studies in this research, both local and global sustainability promises were eluded to between the product contexts. For instance, the social promise for the chocolate company discusses changing lives around the globe, and the environmental chocolate company promise discusses using environmental farming techniques in area where rainforest deforestation is an issue. However, the office supply company implies more of local, or at least domestic, emphasis as no mention of other countries or global focus is discussed in the scenarios. The impact of a local versus global focus on evaluations between the dimensions was not explored as it was beyond the scope of this research. Future studies should investigate how the model is impacted by the local versus global nature of a company’s sustainability promise.
Conclusion

The findings from the studies presented in this research offer valuable insights into how consumers view companies that consider both the social and environmental dimensions of sustainability. The two dimensions are interconnected in consumers’ minds, where a perception of one dimension enhances perception of the other. When a company considers both dimensions, consumer attitudes and product choice can be enhanced. Moreover, a failure along either dimension results in diminished evaluations and product choice. Overall, researchers should continue to investigate the links between the sustainability dimensions and the impact this interconnection has on consumer evaluations and product choice. By taking a holistic approach to sustainability, consumer adoption of sustainability initiatives can be enhanced, creating a better environment for society.
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Environmental Responsibility (studies 1-4; Klein and Dawar 2004)
(1 = Strongly Disagree; 7 = Strongly Agree)
1. This company operates in a manner that is less harmful to environment than other companies.
2. This company operates in a manner that is better for the environment than other companies.
3. This company is more environmentally friendly than other companies.

Social Responsibility (studies 1-4)
(1 = Strongly Disagree; 7 = Strongly Agree)
1. This company cares about human rights.
2. This company is concerned with the welfare of poverty stricken people.
3. This company aims to build up vulnerable communities around the world.
4. This company wants to help people in need.
5. This company is concerned with the development of people and communities.

Quality (Study 1; Kaufman, Jayachandran, and Rose 2006)
(1 = Strongly Disagree; 7 = Strongly Agree)
1. I would judge the products of this company to possess high quality features.
2. I would judge the products of this company to have quality packaging.
3. I would judge the products of this company to be inexpensive. (r)
4. I would judge the products of this company to have a low performance risk.
5. I would judge the products of this company to have a strong overall value.

Aesthetic Evaluation (Study 1; Lam and Mukherjee 2005)
(7-point semantic differential)
1. Poor looking/Nice looking
2. Unattractive/Attractive
3. Ugly /Beautiful

Attitude Toward the Company (studies 2-3; Speed and Thompson 2000)
(7-point semantic differential)
1. Bad/Good
2. Unfavorable/Favorable
3. Negative/Positive
4. Untrustworthy/Trustworthy
5. Unpleasant/Pleasant
6. Dislike/Like

Social Failure/Success Manipulation Check (Study 2)
(1 = Strongly Disagree; 7 = Strongly Agree)
1. This company cares more about social welfare than other companies.
2. This company is socially responsible.
3. This company is concerned with the development of communities.
4. This company is cares more about society than other companies.
Environmental Failure/Success Manipulation Check (study 3)
\[(1 = \text{Strongly Disagree}; \ 7 = \text{Strongly Agree})\]
1. This packaging is less harmful to the environment than typical packaging.
2. This packaging is eco-friendly.
3. This packaging can be considered "green".
4. This packaging is environmentally friendly.
5. This packaging is better for the environment than typical packaging.

Sincerity (study 3; adapted from Moorman et al. 1993)
\[(1 = \text{Strongly Disagree}; \ 7 = \text{Strongly Agree})\]
1. I believe this company is sincere in its promises.
2. I believe this company will act sincerely in future dealings.
3. I believe this company's motives are sincere.

Competence (study 3; Cuddy et al. 2008)
\[(1 = \text{Strongly Disagree}; \ 7 = \text{Strongly Agree})\]
1. Capable
2. Intelligent
3. Competent