THE SUSTAINABLE JEWELRY CONTEXT IN BRAZIL

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THE SUSTAINABLE JEWELRY CONTEXT IN BRAZIL

BY

LAUREN MACHADO

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF
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ABSTRACT

While prior studies have reported unsustainable practices in the jewelry industry, consumers are becoming increasingly conscious about brands’ sustainable behaviors (or lack of) (Abdelmeguid et al., 2019; Kutter & Castilhos, 2017). Brazil is an important landmark in the jewelry business, and it is one of the world’s most important gem suppliers (Boehm, 2012). Therefore, the Brazilian jewelry industry is facing the need to adapt and behave sustainably (Severo et al., 2017). Since a lack of sustainability knowledge is often referred to be the one of biggest barriers towards more sustainable consumption (Tseng & Hung, 2013), it becomes important that Brazilian jewelry brands communicate their sustainability efforts using appropriate marketing messages. While prior literature underscores the importance of sustainable marketing messages to meet consumers’ needs of sustainability (Mont et al., 2014), such studies provide a rather generic perspective of developing nations and lack a Brazilian emphasis. Therefore, the purpose of this study was to test the influence of sustainability-related marketing messages (SRMM’s) on consumers’ word of mouth (WOM) and brand loyalty (BL). Furthermore, this study investigated the mediating effect of sustainability awareness of consequences (SAC), ascribed responsibility of sustainability (ARS) and personal norms (PN’s) through the lenses of the NAM model (Schwartz, 1977). A single factor between-subject experimental design was implemented to investigate the purpose of the study. The independent variable of SRMM was manipulated and participants were randomly exposed to one of the two stimuli. The results suggested that participants’ WOM and BL were positively impacted by SRMM’s only when mediated by their SAC, ARS, and PN.
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CHAPTER 1

INTRODUCTION

Sustainability Concepts and the Unsustainable Jewelry Industry

Sustainability refers to meeting the needs of the current generations and simultaneously being mindful of the future generations’ needs (Tolba & Biswas, 2013). The concept of sustainability includes three major dimensions: environmental, social, and economic, according to the Triple Bottom Line (Delai & Takahashi, 2011). The United Nations (UN) has developed 17 sustainable development goals in 2015 that involve social, economic, and environmental goals to be achieved by 2030 (United Nations, 2015). According to the UN, those goals can be achieved by changes coming from businesses and consumers. Actions that shift not only the production process but also the way consumers buy, i.e., sustainable consumerism, are essential to achieve these goals by 2030.

The jewelry industry has been globally criticized for its impacts on environmental and social sustainability related to mining and beyond, specifically from the triple bottom line (TBL) perspective of sustainability (Brown et al., 2017; Hill, 2018), and forms the focus of this research. From the social perspective, for example, it is widely known for its unethical working conditions, specifically for workers who work in mines to retrieve precious metals and gems worldwide (Kumah, 2006). Some of the world’s biggest suppliers of precious materials, such as Brazil, Botswana, and Ghana, are known to yet struggle with providing fair working conditions for mine workers (Amezaga et al., 2011; Kumah, 2006). Various unsustainable social practices of the jewelry industry, including child labor, forced labor, unequipped workers, and poor working conditions for artisans and jewelers, have often been globally reported in prior studies (Abdelmeguid et al., 2019;
Similarly, various studies have reported unsustainable environmental practices involved in the jewelry business (Amezaga et al., 2011; Lino et al., 2019; Sonter et al., 2017; Tavares Kütter & Pci, 2017; Villén-Pérez et al., 2020). For example, Brazil is responsible for 37% of mercury emissions globally (Tavares Kütter & Pci, 2017). While mercury is central to gold recovery and is extensively used throughout the Amazon region for jewelry businesses (Lino et al., 2019), this poisonous metal gets directly dispersed in the aquatic systems of the forest region, contaminating the environment. Further, the local community is also affected through constant exposure to this metal, either directly by inhalation or indirectly by ingestion of contaminated aquatic products (Castilhos et al., 2015). Yet in Latin America, countries such as Peru face issues with the informal and illicit gold sectors, where young children are trafficked into sexual slavery and/or child labor within mining towns (Brown et al., 2017). Moreover, women in the local communities are redirected to less desirable, lower-paying jobs in Peru’s gold mining activities (Brown et al., 2017). Within the industry’s health impacts on host societies, we found that food security and disease management are both critical issues for consideration. Additionally, various studies have reported that water pollution is caused by gold mining of the jewelry industry in African countries (Amezaga et al., 2011). Botswana, for example, failed on the proper treatment of the native San people (Brown et al., 2017). The natives encounter mass evictions from their ancestral homelands, the diamond-heavy Central Kalahari Game Reserve, and discrimination within the local diamond workforce (Brown et al., 2017). Thus, when discussing sustainability and
strategic goals to achieve TBL sustainability by 2030, it is important to consider the jewelry industry and its impact on society and the environment.

**Sustainable Behavior and Communications**

As the jewelry industry is known for its unsustainable impacts, it is facing the need to adapt and behave in sustainable ways to build brand reputation, especially with increasing consumer consciousness and sustainability expectations of brands across the globe (Lerma *et al.*, 2017; Severo *et al.*, 2017). For the past decades, with resources exploitation and climate changes, consumer awareness towards sustainability has risen (Zhang *et al.*, 2019). In fact, numerous studies have shown that consumers present higher valuations of products that are sustainable, or also called green products (Bemporad & Baranowski, 2007; Zhang *et al.*, 2019). Specifically, young consumers are considered to be more interested in social and environmental sustainability than the older generations and are expected to react positively to sustainable marketing (Pencarelli *et al.*, 2019).

Consequently, several jewelry brands have launched dedicated sustainable collections and initiatives to cater to consumer needs worldwide (Biondi, 2018; Hill, 2018). In this light, some Brazilian jewelry designers are modifying their businesses around sustainability. For example, Fernando Jorge, a globally acclaimed Brazilian fine-jewelry designer, added sustainable styles to his collection in 2018. In his “laid-back and effortless sensual jewelry” (*Fernando Jorge is part of the BoF 500*, 2019), materials native to Brazil such as Tagua seeds and fossilized wood, were used to underscore the sustainable aspect. Along with the same trend, in 2018, some other jewelry designers from Brazil created new fine-jewelry designs using similar materials. For example, Moritz Glik also used Tagua seeds along with upcycled gold in his jewelry without
compromising the finesses of the pieces, and such grasped media’s attention, being showcased in a curated exhibition by Vogue Italia (Christie’s, 2018). Moreover, important retailers in the jewelry industry, such as Tiffany and Bulgari, are making efforts to incorporate sustainable values across their businesses (Garrahan, 2020). Bulgari, for instance, is applying ethical sourcing and eliminating plastic through its production.

**Brazilian jewelry industry and consumers**

Brazil is an important landmark in the jewelry business, and it is one of the world’s most important gem suppliers (Boehm, 2012). It is ranked as the third-largest importer of semiprecious stones for the USA, holding a share of 12% of the imports in 2018 (Global Colored Stone Outlook Through Challenges, 2019). It has one of the 10 largest global gold reserves and is currently ranked as the 11th top gold producer in the world (Mineral commodity summaries 2013, 2013). In 2016, Brazil was reported to have 187 active mines with over USD 31 billion in exports (Bruno, 2018), and was ranked third among the world’s leading emerald producers (UN ComTrade, 2016). Brazil is the third-largest gold producer in South America and the 13th largest consumer of gold globally (Tavares Küttler & Pci, 2017). It represents 86% of the revenue of fine jewelry for Latin America (Jewellery in Brazil, 2020). Therefore, it is likely to claim that Brazil's jewelry industry is crucial for the global jewelry industry, not only as a supplier and exporter but as consumers as well.

Simultaneously, as Brazilian consumers are being increasingly aware of sustainability, about where and how their products are made (*Brasileiros estão cada vez mais sustentáveis e conscientes*, 2019). In fact, Brazilian consumers care for ethically
made products when making purchases related to beauty, cosmetics, and fashion (Graciano et al., 2021). They are also proud of their country and that patriotism may affect positively their jewelry consumerism in terms of sustainability (OECD Better Life Index, 2015). Brazilian consumers also value brands that care about people and society, and are constantly looking for ways of reducing their impacts on the planet and people in terms of sustainability (Kuroki, 2018). Thus, it is important for Brazilian jewelry brands to not only fulfill these rising demands but also communicate about their sustainability initiatives to create a niche in the competitive industry (Dauriz et al., 2014).

**Research Gaps**

While prior literature underscores the importance of sustainable marketing messages to leverage consumers’ needs of sustainability and improve brands’ image in general (Mont & Lähteenoja, 2014), a specific and dedicated focus on the jewelry industry is lacking. For example, researchers found that brands can elevate their identity and gain value by applying sustainable practices to their communication strategy (Kim et al., 2012; Lerma et al., 2017). Similarly, Moraes et al. (2015) reported a growing need for sustainability and transparency from brands. Despite the growing need for sustainability on the consumers’ end, the jewelry industry is often reported to be unique in terms of sustainability (Lerma et al., 2017). Such uniqueness relates to the industry’s complex and vast supply chain, therefore making its sustainability a challenge to be addressed (Batchelor, 2021). In addition, since there is a lack of clear information on the jewelry industry’s supply chain structures and production, sustainability in the jewelry industry is often questioned for transparency and it is associated with greenwashing (Batchelor, 2021).
Studies, books, and documentaries frequently report unethical working conditions in mines, water pollution and consumption in the gold manufacturing process, and corruption involved in the mines located in developing countries in South America and Africa (Amezaga *et al*., 2011; Kumah, 2006). Considering that the jewelry industry often has less traceable and transparent information available for consumers compared to other industries, it is additionally important for this industry to strategize its communication, allow consumers to understand the production and the product, and to better communicate its sustainable value to the customers (Lerma *et al*., 2017).

**Purpose and significance of the Study**

The purpose of this study was to test the influence of sustainability-related marketing messages (SRMM’s) on consumer behavioral intentions within the jewelry industry in Brazil. Specifically, it investigated how a sustainability focus on such messages (or a lack thereof) might influence consumers’ word of mouth (WOM) and brand loyalty (BL). Using the norm activation model (Schwartz, 1977), this study further proposes that such consumer behavioral intentions might be mediated via their personal norms regarding sustainability. This thesis also investigated if consumers’ sustainability awareness of consequences and their ascribed responsibility of sustainability mediate their personal norms applied to the jewelry industry in Brazil.

Although sustainability-related marketing strategies and the influence that it has on consumer behavior has been widely explored in other broader fields such as the luxury sector, there is a research gap in relation to the jewelry industry (Lim *et al*., 2021; Oakes, 2019). In fact, few to no studies explore the jewelry industry solely. Further, considering the fragmented nature of the jewelry industry, a lack of dedicated marketing messages
explaining sustainability initiatives can make it difficult for consumers to trace the
sustainability aspects of their jewelry products (Wood, 2018). Therefore, the jewelry
industry requires a catered and in-depth study that aims to investigate this subject. Thus,
this study specifically focuses on the SRMM’s as Brazilian jewelry brands should
communicate and investigate the impacts of such messages on consumers.
CHAPTER 2

REVIEW OF LITERATURE

_Sustainability Related Marketing Messages (SRMM’s)_

Marketing, a key driver of business globally, is intended to promote products and services to consumers, by creating wants that weren’t necessarily existent in the consumers’ lives (Day & Aaker, 1970; Grundey, 2008). Marketing practices have been developed in order to raise revenues for business entities, and the way to achieve it is by fulfilling consumer needs (Lockett, 2018; Srivastava _et al._, 1999). As businesses struggle to create a niche in an otherwise mass-market environment, it is that brands use their marketing messages effectively. Marketing is a selling tool for brands, when harnessed responsibly can encourage consumers to behave sustainably (Gordon _et al._, 2011). Marketing places an important role in promoting economic development worldwide, raising living standards in many countries (Fisk, 2001). Marketing strategies have the potential to shift habitual unsustainable behavior (Jackson, 2005). Sustainability could therefore become a crucial component of marketing.

Sustainability related marketing messages (SRMM) refer to brands’ marketing communications that shed insight on their sustainability-specific efforts and inform consumers about the same (Story, 2019). Consumers report an increased disposition towards ethical behaviors. A recent Boston Consulting Group (BCG) study of 9000 consumers in nine different countries across the globe concluded that green and ethical issues are a significant factor, influencing where consumers shop and what they buy (Gordon _et al._, 2011; Manget _et al._, 2009). Consumers consider the linkages between production, consumption, and disposal systems of the supply chain, and the
environmental impacts caused by such systems (Peattie and Collins, 2009). Thus, using the power of marketing interventions, such SRMM can allow brands to fulfill consumers’ expectations and facilitate sustainable consumer behavior.

Sustainability-related marketing have been widely studied to positively influence consumer behavior and behavioral intentions (Lee Thomas et al., 2011; P. Govender & L. Govender, 2016; Smith, 2010). Previously done studies claim that consumers care about brands’ ethics and would adjust their behaviors accordingly (Creyer, 1997). Consumers have been found to change their purchase decisions, brand evaluations, attitudes, based on marketing messages related to sustainability. Yet, such SRMMs have not been investigated within the jewelry industry. Despite the growing popularity of sustainability within the marketing context and lack of traceable sustainable information within the jewelry industry, limited research focused on consumers’ evaluations of brands in the context of their sustainability initiatives and message framing specifically within this industry. Further, no study has studied the same specifically applied to the Brazilian market. Given the emerging market of conscious consumers that Brazil represents, understanding the impact of brands’ SRMM on consumers is important.

*Word of Mouth (WOM)*

WOM, one of the dependent variables used in this study, is defined as intentions of sharing information about a brand or product with friends and acquaintances (Jeuring & Haartsen, 2016). WOM is an essential component of marketing strategies, considering that consumers tend to trust peoples’ or prior consumers’ views more than brands’ marketing efforts (Jeuring & Haartsen, 2016). Hussian et al. (2018) claim that consumers seek WOM when looking for credibility and unbiased options online. Studies have
investigated the effects of WOM and its impacts on consumer behavior (Filieri & McLeay, 2013; Lim, 2015). For instance, Chang & Wang (2019) found that online advertising and electronic word-of-mouth may have positive impacts on brands. Prior research claims that the message clarity, tone of messages, or content of those messages allow people to relate better with the marketing content and likewise, be more likely to voice their opinions and support the brands (Allen & Spialek, 2017; Lee Thomas et al., 2011).

Several studies explored the antecedents of WOM and what influences such behavior (Chang & Wang, 2019; Filieri & McLeay, 2013; Hussain et al., 2018; Lim, 2015), to report advertising efforts being a considerably important and relevant one (Graham & Havlena, 2007). For example, Bughin et al. (2010) found that the right marketing messages motivates consumers to speak highly of those brands and those messages expand within consumers’ networks. In this light, it can be expected that SRMMs, with their specific focus on brands’ sustainability initiatives, will similarly influence consumers’ likeliness to spread positive messages about the brand among their friends and acquaintances. Specifically within the jewelry industry, that often has less traceable and transparent information available for consumers compared to other industries, such SRMMs can be expected to shed that lacking insight about brands’ sustainability efforts and likewise, increase consumers’ WOM intentions. Further, considering that the Brazilian jewelry industry is unique and its consumers are labeled to be concerned about sustainability, WOM is commonly practiced and considered important among the native consumers (Nunes de Castro, 2020). Thus, we hypothesize that:

H1: SRMM would positively influence consumers’ WOM in the jewelry industry.
Brand Loyalty (BL)

In marketing literature, BL is defined as the degree to which consumers develop an emotional attachment to a brand, and it is the second dependent variable of this study (Hanaysha, 2016). Such attachment is expressed through their commitment to repeat purchases of brands' products without intending to switch to others (Hanaysha, 2016). Customers who are loyal to a brand will continue purchasing and will often try new products. These customers will likely spread positive word of mouth, persuading others to try the brand's products (Kopp, 2019).

Brand loyalty might be encouraged through promotional activities, reputation, or previous experiences with your brand (Kopp, 2019). The main concept behind BL is understanding that consumers are loyal to a brand because they believe such brand offers a better service and higher quality than the other brands (Dixon et al., 2015). That is, the brand meets consumers' expectations better and excels in doing so over its competitors. These loyal consumers tend to stick to these brands and are more likely to experiment with other products from the same brand that they trust (Kanuk & Sheth, 1975; Rundle-Thiele & Maio Mackay, 2001). BL is claimed to enhance consumers’ willingness to pay a premium price for a brand (Lassar et al., 1995).

Concerning the relationship between marketing efforts and BL, Šerić and Gil-Saura (2012) proposed that marketing communications play a crucial role in convincing and instigating consumers’ brand loyalty. Furthermore, the presence of sustainability in marketing efforts not only strengthens the consumers’ identification with the brand but also builds a long-term relationship and value system between the consumer and the brand (Alexander et al., 2014; Lee et al., 2011; Shamma & Hassan, 2011). Santoro et al.,
(2019) indicated that marketing efforts focusing on the social aspect of sustainability have positive effects on consumers’ brand loyalty. When analyzing it from the brands’ perspective, such loyal relationships are built around values shared with consumers, and those brands seem to have a competitive advantage over others (Wu & Lin, 2014). Thus, in order to develop BL and strengthen their brands, marketers need to focus on environmental protection, social welfare, and other activities that may enhance their sustainability image (Wu & Lin, 2014).

Despite the extensive literature investigating the sustainability messages’ impacts on consumer behavior, no prior literature sheds any empirical insight on the relationship between sustainability-related marketing messages and BL applied to the jewelry industry. Since this industry is a complex one, with less sustainability information available and accessible to consumers (Batchelor, 2021), we expect to see an increased BL among consumers for jewelry brands when such information is proactively shared by brands through their marketing communications. That is, when jewelry brands present SRMM’s in their marketing initiatives, consumers’ BL would be amplified. Comparably, a lack of SRMM’s can be predicted to reduce BL. Thus, we hypothesize:

H2: SRMM would positively influence consumers’ BL in the jewelry industry.

*Norm activation model (NAM) as Theoretical Framework*

As SRMM is proposed to directly influence consumers’ WOM and BL within the jewelry industry as argued above, such impacts are also expected to be mediated by consumers’ knowledge, responsibility, and normative beliefs regarding sustainability, as explained by the NAM framework (Schwartz, 1977). The NAM Model (Schwartz, 1977) exists in two different models: the mediating model and the moderating model to explain
the effects of ascribed responsibility and awareness of consequences on one’s personal norms to eventually predict one’s behavior. Personal Norms (PN's) are defined as feelings of moral obligations to perform specific actions (Chen, 2020; Schwartz, 1977). Awareness of consequences refers to one being cognitive about how his or her actions might impact someone or something (De Groot & Steg, 2009; Schwartz, 1977). In other words, one is aware of the repercussions of their behavior. Finally, ascribed responsibilities refer to one's belief or denial that their actions might contribute or reduce those consequences and taking responsibility for his or her actions (Schwartz, 1977; Stern et al., 2000). That is, one takes ownership of their behavior.

To describe the moderator model proposed by Schwartz (1977), the personal norm serves as an antecedent of consumers’ behavior, with ascribed responsibility and awareness of consequences controlling and moderating the influence of those norms on behavior. On the other hand, the mediator model suggests that ascribed responsibility and awareness of consequences would directly and sequentially influence personal norms. Those personal norms are responsible for mediating the influence on the behavior in turn. In this second model and (which is used to conceptualize this study), the relationship between the variables is linear, such that awareness of consequences would directly influence ascribed responsibility, which would directly affect personal norm, which in turn, affect behavior. Such relationship has been widely explored in the prior literature (De Groot & Steg, 2009: Onwezen et al., 2013; Shin & Hancer, 2016). In fact, PN has been shown to mediate the relationship between publicity efforts and consumers’ behavioral intentions (Wang et al., 2018). At the same time, for people to perform pro-sustainability behavioral intentions, awareness of consequences and ascribed
responsibility serve a crucial role in activating the personal norm or moral obligation to perform those sustainable behaviors (Hansla et al., 2008).

This mediator model finds its frequent application in the literature to understand one’s pro-social and pro-environmental behaviors (Wang et al., 2018). Previously done studies show that individuals must be aware of the possible consequences that their unsustainable behavior may have prior to taking responsibility for it (De Groot & Steg, 2009; Wang et al., 2018). Furthermore, personal norms have been found to mediate sustainable consumption and it is claimed to predict and determine intentions (Conner & Armitage, 1998; Stern, 2000). Simultaneously, sustainability awareness is considered to be critical for any actions taken in relation to sustainability; and those values have an important role in activating personal norms and sustainable responsibility that further will result in the performance of sustainable behaviors (Steg et al., 2014; Stern, 2000).

This study utilized the NAM mediator framework to investigate the impacts of SRMM’s on consumers’ pro-sustainability behavioral intentions. Therefore, this study proposed a unique approach in which one’s PN influences consumer pro-sustainability behavior, and it is influenced or activated by ARS (ascribed responsibility of sustainability) and SAC (sustainability awareness of consequences). Refer to figure 1 for the conceptual model.
Figure 1. Conceptual model based on Schwartz’s (1977) NAM mediator model

Sustainability Awareness of Consequences (SAC)

Applied to this study, the awareness of consequences as proposed by Schwartz (1977) is comparable to SAC, and it refers to whether one is cognitive and aware of the consequences, impacts of their sustainable actions. Such awareness of one’s actions and their results have been found to positively influence consumers' selfless concern for others (Panda et al., 2020). In this light, SAC can also be considered critical to elevate consumers’ altruistic behaviors, such as their sustainability-related actions. Gifford and Nilson (2014) suggest that promotion of prosocial behaviors is most successful when policies first aim to raise awareness for the problem before focusing on the other constructs of the NAM. Therefore, it is important to understand the potential triggers to consumers' awareness of sustainability consequences.

The interest of consumers towards sustainable practices has been growing in the last decades (Mancuso et al., 2021). Along with that interest, consumers seem to be
consistent with their awareness about the need to address environmental and social causes, that aim to avoid compromising future generations (Mancuso et al., 2021). Therefore, brands are increasingly committed to the adoption and, most important the communication of sustainable approaches (Mancuso et al., 2021). In turn, this trend in consumer behavior has resulted in the development of sustainable marketing practices, according to which brands leverage the sustainability (either environmental or social) aspect when delivering value to customers and promoting their products and services (Mancuso et al., 2021). Given that scenario, sustainable marketing efforts have been found to increase and stimulate consumers' awareness of sustainability (Charter et al., 2002).

In this light, it can be expected that, when one sees a marketing message that advocates sustainability, their levels of awareness about how his/her sustainable actions can improve the society and environment increases (compared to a marketing message with no reference to sustainability). Thus, we hypothesize:

H3: SRMM would positively influence consumers’ SAC.

The NAM suggests that one’s awareness of consequences is an internal factor that can influence their PN related to sustainability (Schwartz, 1977; Steg et al., 2014). However, this study proposed that, as an internal factor, SAC might also mediate the relationship between SRMM and one’s ARS related to sustainability and be impacted by SRMM’s. According to De Groot & Steg (2009), one must be aware of the consequences of behavior before feeling responsible to engage in this behavior or acknowledging that one’s own contribution may be useful. Further, the mediator model proposed by Schwartz claims that it is difficult to feel responsible for acting pro sustainably or to think about the
effectiveness of possible actions without knowing whether not acting pro sustainably is a problem (Gifford & Nilsson, 2014).

In this light, it can be argued that when one is exposed to a marketing message that advocates specific causes and values, depending on their awareness of consequences related to that cause, one’s feelings of responsibility towards that cause can be triggered variably. That is, when one sees a marketing message that advocates sustainability, one’s resulting high level of awareness about how his/her sustainable actions can improve the society and environment (as proposed in H3), might trigger feelings of heightened responsibility to practice sustainable behaviors. Thus, a high level of SAC can be expected to amplify how consumers react to marketing messages with sustainability-related information. Similarly, when one is exposed to a marketing message that lacks a commitment to sustainability, one’s resulting lower level of awareness (about how his/her sustainable actions can improve the society and environment) might lead to little or no sense of responsibility. Thus, we hypothesize:

H4: Consumers’ SAC would mediate the relationship between SRMM and their ARS in the jewelry industry.

**Ascribed Responsibility of Sustainability (ARS)**

Applied to this study, one’s ascribed responsibility of sustainability (ARS) is comparable to NAM’s ascribed responsibilities, as in whether an individual should consider themselves responsible to contribute to sustainability. Ascribed responsibility has been investigated to understand and explain consumers’ pro-sustainability behaviors (Guo et al., 2019). However, this research proposes the ARS to mediate the relationship between SAC and one’s PN related to sustainability.
According to the NAM mediator model, awareness of consequences affects ascription of responsibility, and that responsibility indirectly affects one’s intentions and behaviors via personal norms (Black et al., 1985; De Ruyer & Wetzels, 2000; Diamond & Kashyap, 1997; Steg et al., 2005; Stern, 2000). That is, one must feel personally responsible for a problem or for its solution, one must believe (or deny) that their actions can have consequences. It is only this resulting ascribed responsibility, based on one’s awareness of consequences for a cause that, therefore, can evoke feelings of moral obligations towards that cause. Accordingly, a strong ARS (i.e., heightened responsibility to contribute to sustainability) based on one’s high levels of SAC in response to marketing messages showing presence of sustainability content can be expected to increase one’s PN. Similarly, when one feels less responsible to contribute to sustainability (i.e., low ARS) as a result of their lower level of awareness, a lack of commitment to sustainability in marketing messages might trigger little or no PN in consumers. Likewise, we hypothesize:

H5: Consumers’ ARS would mediate the relationship between SAC and their PN in the jewelry industry.

**Personal Norms (PN)**

Applied to this study, one’s PN refers to their feeling of moral obligations to practice sustainable consumption and support brands’ sustainable initiatives. That is, whether consumers consider it to be their moral duty to commit to sustainability through their consumption practices. Prior studies implementing the NAM mediator model (Schwartz, 1977) have reported the role of consumers' PN as a mediator between their
feelings of responsibility and behavioral intentions. For example, Gifford and Nilsson (2014) found that problem awareness and responsibility play important roles in the development of PN in the first place, and only when these conditions are met, PN will affect prosocial intentions in accordance with these norms. According to De Groot (2008), feelings of ascribed responsibility increase feelings of moral obligation for consumers to behave pro sustainably, and these feelings of obligation induce prosocial behavioral intentions. When consumers are exposed to marketing messages with similar values and ethos, with a similar commitment to sustainability, their awareness of consequences and ascribed responsibility are triggered which in turn affects their internal values and feeling of obligations (Han et al., 2017; Landon et al., 2018; Rezvani & Bengtsson, 2017; Vermeir & Verbeke, 2008). The feelings of moral obligations (i.e., one’s PN) in turn, influence consumers to spread positive words and messages to express gratitude (Cheung & Lee, 2012; Kolyesnikova et al., 2011; Kozinets et al., 2010).

In this light, this study also proposed consumers’ PN to act as a mediator between one’s ascribed responsibility and WOM. When marketing messages showing sustainability-related content increase one's awareness of consequences and ascribed responsibility to contribute to sustainability, their resulting high levels of personal obligations towards sustainable consumption would increase their intentions to support those brands’ sustainable initiatives by communicating positively about the brands. Similarly, when consumers are exposed to a marketing message that lacks a similar commitment to sustainability, their resulting lower levels of SAC and ARS might not bolster their feelings of obligations, and likewise, their PN might not influence consumers to spread positive words about the brand. Thus, it is hypothesized:
H6: Consumers’ PN would mediate the relationship between ARS and their WOM in the jewelry industry.

Given that the existing literature reports of the effect of personal norms on behavioral intentions within many different sectors and parts of the world (Park & Kim, 2016; Salim Khraim, 2011), there is still a need to investigate the impacts of PN on BL, specifically in the jewelry industry. Thus, a similar mediating relationship of PN can also be expected between ARS and BL. When consumers are exposed to marketing messages that portrait sustainability values that align with their own prior awareness of sustainability and responsibility, their feelings of moral obligations might be triggered, which in turn would increase BL intentions. Similarly, when consumers are exposed to a marketing message that lacks a similar commitment to sustainability, their resulting feeling of obligations based on SAC and ARS might not be bolstered, and likewise, their PN might not increase BL intentions towards that brand in consumers. Thus, it is hypothesized:

H7: Consumers’ PN would mediate the relationship between ARS and their BL in the jewelry industry.

**Sustainability in the Brazilian jewelry industry**

This study is based on the Brazilian jewelry industry as Brazil is ranked fourth out of eighteen countries studied regarding their environmental concern. The consumers in the country are more likely to agree that they are very concerned about environmental problems (60%), in fact, those consumers believe that global warming will worsen their way of life within their lifetimes (64%) (“Greendex 2018 Consumers Choice and The Environment - A Worldwide Tracking Survey,” 2008). Consumers in developing
countries, such as Brazil, feel more responsible towards environmental problems than those in developed countries (“Greendex 2018 Consumers Choice and The Environment - A Worldwide Tracking Survey,” 2008). Additionally, Brazilians often choose the path of sustainability (Kuroki, 2018). Specifically for consumer goods and fashion products, every seven out of ten Brazilian consumers have been found to prefer sustainable alternatives instead of overconsumption (Kuroki, 2018).

However, these consumers are also often searching for discounts and ways of saving their money. In fact, 75% of Brazilians are looking for forms of spending less (Donatelli et al., 2016). Those same Brazilian consumers are typically known for being brand-loyal (Fang, 2019; Mazza, 2014), which can be a powerful tool for jewelry brands, and brand loyalty has been proved to positively influence consumers' word of mouth (Reichheld, 2003). Brazilian consumers also want to feel special; they expect to have personal shoppers carrying their bags and giving them compliments in the changing room (Mazza, 2014). Interaction and personalization seem to be the key to a successful shopping experience in Brazil (Mazza, 2014). Specifically, for luxury goods, Brazilians want no less than an exclusive treatment (Fang, 2019; Mazza, 2014). Bespoke pieces appear to be essential for these consumers as well (Fang, 2019; Mazza, 2014). Brands often need to adapt to each and every region in the country in order to cater to the needs of this demanding consumer (Mazza, 2014).

An important barrier to more sustainable behaviors is the perception that sustainable products are more expensive (Kuroki, 2018). However, for luxury consumerism, Brazilian consumers are not sensitive to price as luxury goods are more expensive in Brazil than elsewhere in the world (Franca & Weber, 2014). So, for those
consumers who show the need to save money when making purchases, but at the same time, care about the environmental and social impacts of the products they buy, solutions that go beyond behavioral change seem to be suitable (Moodie, 2015). Information, education, and transparency are essential in Brazil (Moodie, 2015).

Thus, such contrasting, rather a spectrum of consumers' needs, and sustainability expectations present an interesting and important landscape to investigate how brands can strategize to fulfill such needs. Being an important player in the landscape of the global jewelry business, Brazilian brands are already undertaking initiatives to challenge the otherwise unsustainability concerns surrounding the jewelry industry and to satisfy consumers’ increasing needs for sustainability (Annachiara Biondi, 2018; Hill, 2018). In this light, some Brazilian jewelry designers are modifying their businesses around sustainability (Business of Fashion [BOF], 2019; Christie’s, 2018). However, such approaches are still in their infancy and lack a more strategic and informed initiative to embed sustainability into the local Brazilian jewelry businesses and meet consumers’ expectations (Danziger, 2019).
CHAPTER 3

METHODOLOGY

Research Design

A single factor (sustainability: present/absent) between subject experimental design was implemented to investigate the purpose of the study. The independent variable of SRMM was manipulated in this study. Participants were randomly exposed to one of the two stimuli following which, they completed a survey answering questions about their SAC, ARS, PN, WOM, and BL.

It is important to note that the questionnaire of this study was developed in English, although it is not the first language spoken in Brazil. This was due to the fact that for majority of the Brazilian jewelry brands, it is a common practice to create their marketing initiatives and design their websites in English. For example, the brands Fernando Jorge, Vivara and H.Stern showcase their jewelry collections in English instead of Portuguese, Brazil’s national language, to cater to both domestic as well as global consumers. Additionally, Brazilian consumers have been studied to have varied levels of English proficiency, with 47% of those who speak English being able to understand and converse in basic English (British Council, 2014). Further, considering jewelry represent a luxury product market, mostly its target consumer market is the economic elite and the higher social classes of Brazil (Diniz, 2014), a demography studied to be proficient in English. Thus, keeping with the global orientation of the Brazilian jewelry industry and how its consumers are often exposed to English marketing messages, this research was designed in English to best capture the reality.

Stimuli Development
Stimuli messages were designed as brands’ webpages to show the presence or absence of SRMM’s. For instance, a case of sustainability present described the brand engaging in both social and environmental sustainability endeavors, such as ethically mined raw materials, fair trade within the supply chain, offering a safe working environment free of chemical contamination, usage of recycled/upcycled materials, conscious consumption of water within the production, and usage of alternative synthetic materials to avoid the harmful mining process (Carter, 2010; Hill, 2018; Kaye, 2011). On the other hand, a case of sustainability absence showed a webpage with no sustainability message and rather information about promotions, product designs, product varieties, and packaging. Thus, a total of two stimuli were created.

**Manipulation Check**

To determine the appropriateness of stimuli for the study purpose, a manipulation check was conducted using 45 adult participants (mean age = 30; 65.8% male and 26.3% female) based in both Brazil and the USA. A Chi-Square analysis indicated that participants correctly identified the presence (or absence) of sustainability in brands’ messages. However, the analysis indicated the needs of further modifications in sustainability absence stimulus. Therefore, a second manipulation check was performed, and stimuli were rechecked. Participants correctly identified whether the stimuli messages had any sustainability-related information included or not (Chi-Sq = 39.19; \( p < .001 \)). Thus, the manipulation of the sustainability-related message was deemed successful for study purposes.

**Pilot Test**
To ensure the reliability and validity of the adapted scales, a pilot test was conducted through Amazon Mechanical Turk with 40 participants randomly assigned to two stimuli. Data indicated acceptable scale reliability for all the scales (Cronbach’s alpha .901 for personal norms, .891 for responsibility, .923 for awareness, .881 for word of mouth, and .834 for brand loyalty) However, the results indicated a considerable amount of missing data, which was interpreted as a need to further rephrase the stimuli and scale items for better comprehension. For example, the sustainability-presence stimulus was observed to show messages related to the brand, its supply chain aspects, and policies, rather than the actual jewelry. However, the stimulus showing sustainability absence had messages directly related to the jewelry (i.e., highlighting product attributes). Thus, changes were made to both the stimuli messages to ensure both focusing on the actual brand and its sustainability practices (or lack thereof), and not its products. For example, phrases such as 'fair trade' and 'environmentally friendly' were highlighted in those messages and any reference to the product was deleted. Likewise, the scales of the two mediators SAC and ARS were reworded in more simple comprehensible English, in which participants could understand it more easily.

**Measures**

Consumers’ SAC was measured using the scale of four items adapted from Wang et al. (2018) with reported reliability (at 0.931). These items were measured on a Likert scale of one to five with, one indicating strongly disagree and five indicating strongly agree. Consumers’ PN was measured using the scale of six items adapted from Wang et. al (2018) with reported reliability at 0.90. Although Wang et al. (2018) used four items, the scale is modified and likewise, two additional items were added to address
the social and environmental focus of this study. The items were measured on a 5-point Likert scale, one being strong disagreement and five being strong agreement. Consumers’ ARS was measured using the scale of four items adapted from Wang et al. (2018) with a 0.96 Cronbach’s alpha reliability. The items were measured on a 5-point Likert scale, one being strong disagreement and five being strong agreement.

WOM was measured using six items each adapted from Brown et al. (2005), with reported reliability of 0.95. The items were measured on a 5-point Likert scale (one indicating strongly disagree and five indicating strongly agree). To measure BL, a scale adapted from Petzer et al. (2014) with 4 items was used. With accepted reliability of 0.914, this scale will be measured using a 5-point Likert scale (one indicating strongly disagree and five indicating strongly agree).

**Sample Selection**

Given the focus of the study, a purposive random sample of adult Brazilian consumers was recruited using Amazon Mechanical Turk. All participants were required to be at least 18 years of age and reside in Brazil during the time of the survey. Since the majority (77.1%) of the population of Brazil is represented by people aged 18 years or above, such age requirement was considered suitable for this study (IBGE - Pesquisa Nacional por Amostra de Domicílios Contínua trimestral, 2020). The study population represented a more conservative consumer market, who are in general, more aware and concerned of their purchase choices (IBGE - Pesquisa Nacional por Amostra de Domicílios Contínua trimestral, 2020; McKinsey & Company, 2016). Data were collected over a span of three to four weeks in July 2021.
CHAPTER 4

FINDINGS

Data were analyzed using the Statistical Package for the Social Sciences (SPSS) software. Descriptive analyses of the data were conducted to determine sample characteristics. PROCESS (Model 6) under SPSS (Hayes, 2009) was utilized to analyze the direct and mediation effects of the conceptual model. PROCESS (model 6) results were used to test the mediating effects of SAC, ARS, and PN on WOM and BL (Hayes, 2009). The significance of the mediating relationship is measured based on Sober's test value (Z value). If the Z value exceeded 1.96, it demonstrates significant mediating relationship \( (p < .05) \). Conceptually, simple mediation means that a change in independent variable leads to change in mediator (path a), and that change leads to change in the dependent variable (path b). The indirect effect is depicted as path ab (i.e., the product of the two paths that connect the independent variable to the mediator and the mediator to the dependent variable). If the indirect effect ab is greater or smaller than zero (i.e., if it is statistically significant), one can claim that some form of mediation takes place (Zhao et al., 2010). Simple mediation is the most basic form of mediation and allows one to make inferences about the underlying mechanism that connects an independent with a dependent variable. Cronbach’s \( \alpha \) were computed to determine the scales’ reliability.

Sample Characteristics

A sample of \( N = 300 \) adults aged 18 years or above, who can read and understand English and are based in Brazil was recruited. Participants were recruited through Amazon Mechanical Turk and were compensated at varying rates between US$0.20 and
US$0.50. The sample represented a majority of males (60.5%), aged between 26 and 35 years old (49.3%), with 53.3% finished a bachelor’s degree and, 22.9% with monthly income between $1,400 and $1,700.

This sample well represented the Brazilian national demography, where approximately 51% of the demography are males, aged between 20 to 39 years old (IBGE, 2021), with an average monthly income of $1,600/month (Soucy, 2021). Further, the majority of fluent English speakers in Brazil are 18 years old and above, with 10.3% being from 18 to 24 years old and 5.2% from 25 to 35 years old (“Learning English in Brazil Understanding the aims and expectations of the Brazilian emerging middle classes A report for the British Council by Data Popular institute,” 2014). The jewelry industry consumer can be divided into two categories: those who wear the jewelry and those who make the jewelry purchases (Stephanie, 2021). These two categories are represented by female and male, respectively (idem). That can be explained due to the fact the males earn more money in Brazil, rather than females (Guedes, 2021). Additionally, as mentioned above, majority of the population in Brazil is represented by males (IBGE, 2021). Thus, this participant sample was deemed fit for the purpose of the study. See table 1 for the summary of participant demographics.
Table 1

Summary of participant demographics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>185</td>
<td>60.5%</td>
</tr>
<tr>
<td>Female</td>
<td>115</td>
<td>37.6%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-25</td>
<td>95</td>
<td>31.6%</td>
</tr>
<tr>
<td>26-35</td>
<td>148</td>
<td>49.3%</td>
</tr>
<tr>
<td>&gt;36</td>
<td>57</td>
<td>19.1%</td>
</tr>
<tr>
<td>Education Level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>40</td>
<td>13.1%</td>
</tr>
<tr>
<td>Some college but no degree</td>
<td>57</td>
<td>18.6%</td>
</tr>
<tr>
<td>Bachelor’s/Undergraduate</td>
<td>163</td>
<td>53.3%</td>
</tr>
<tr>
<td>Master’s</td>
<td>32</td>
<td>10.5%</td>
</tr>
<tr>
<td>Doctorate</td>
<td>8</td>
<td>2.6%</td>
</tr>
<tr>
<td>Income/month (USD)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>$ 1.4k – $ 1.7k</td>
<td>70</td>
<td>22.9%</td>
</tr>
<tr>
<td>$ 1.7k – $ 4.4k</td>
<td>54</td>
<td>17.6%</td>
</tr>
<tr>
<td>$ 4.4k – $ 8k</td>
<td>49</td>
<td>16%</td>
</tr>
<tr>
<td>$ 8k – $ 13k</td>
<td>67</td>
<td>21.9%</td>
</tr>
<tr>
<td>$ 13k – $ 17k</td>
<td>27</td>
<td>8.8%</td>
</tr>
<tr>
<td>$ 17k – $ 21k</td>
<td>13</td>
<td>4.2%</td>
</tr>
<tr>
<td>More than $ 21k</td>
<td>20</td>
<td>6.5%</td>
</tr>
</tbody>
</table>

Validity and Reliability

Multidimensional factor analysis was not deemed necessary since all items for variables were adopted or adapted from existing literature and have been reported to be valid.

The internal consistency estimates of reliability, shown in Table II, indicate all scales had acceptable reliability coefficients (Cronbach’s alpha coefficients being higher than .70) (Cronbach, 1951). See the table below for a summary of scales' reliability.
## Table 2

Summary of Scales’ Reliability (Cronbach’s Alpha)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAC adapted from Wang et al. (2020)</td>
<td>.928</td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can reduce child labor in jewelry production</td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can reduce the exploitation of environmental resources.</td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can lead to worker safety</td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can reduce negative environmental impacts.</td>
<td></td>
</tr>
<tr>
<td>ARS adapted from Wang et al. (2018)</td>
<td>.928</td>
</tr>
<tr>
<td>I feel responsible to reduce child labor with my own jewelry consumption</td>
<td></td>
</tr>
<tr>
<td>I feel responsible to reduce the exploitation of environmental resources with my own jewelry consumption.</td>
<td></td>
</tr>
<tr>
<td>I feel responsible to support worker safety with my own jewelry consumption</td>
<td></td>
</tr>
<tr>
<td>I feel responsible to reduce negative environmental impacts with my own jewelry</td>
<td></td>
</tr>
<tr>
<td>PN adapted from Wang et al. (2018)</td>
<td>.908</td>
</tr>
<tr>
<td>I feel personal obligation to protect the society.</td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to have a sense of social responsibility.</td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to improving the society with my own jewelry consumption.</td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to protect the environment.</td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to have a sense of environmental responsibility.</td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to improving the environment with my own jewelry</td>
<td></td>
</tr>
<tr>
<td>WOM adapted from Brown et al. (2005)</td>
<td>.940</td>
</tr>
<tr>
<td>Make sure that others know that I do business with UNI.</td>
<td></td>
</tr>
<tr>
<td>Speak positively about UNI to others.</td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to family members.</td>
<td></td>
</tr>
<tr>
<td>Speak positively of UNI to others.</td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to acquaintances.</td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to close personal friends.</td>
<td></td>
</tr>
<tr>
<td>BL adapted from Petzer et al. (2014)</td>
<td>.901</td>
</tr>
<tr>
<td>I would buy from UNI whenever I can.</td>
<td></td>
</tr>
<tr>
<td>I would buy as much of UNI as I can.</td>
<td></td>
</tr>
<tr>
<td>I feel UNI is the only brand of jewelry I need.</td>
<td></td>
</tr>
<tr>
<td>UNI is the one brand I would prefer to buy or use.</td>
<td></td>
</tr>
<tr>
<td>If this UNI was unavailable, it would be difficult if I had to use another brand.</td>
<td></td>
</tr>
<tr>
<td>I would go out of my way to buy from UNI</td>
<td></td>
</tr>
</tbody>
</table>
**Hypotheses testing**

Table 3 shows the impact of sustainability-related marketing messages on word of mouth, when mediated by sustainability awareness of consequences, ascribed responsibility of sustainability and personal norm, and the direct impact of sustainability-related marketing messages on both word of mouth and brand loyalty. However, the results for H1 revealed that sustainability-related marketing messages did not significantly and positively predict word of mouth ($\beta = .13, p = .17, CI_{95} = .05,.32$). Therefore, H1 was not supported.

H2 tested the direct impact of sustainability-related marketing messages on brand loyalty. The findings revealed that the sustainability-related marketing messages did not significantly and positively impact brand loyalty ($\beta = .02, p = .82, CI_{95} = .17,.22$). Therefore, H2 was not supported. For H3, the sustainability-related marketing messages were tested to predict the sustainability awareness of consequences. The findings revealed that the sustainability-related marketing messages, sustainability awareness and ascribed sustainable responsibility positively influence personal norms ($\beta = .70, p < .001, CI_{95} = .62,.79$). Therefore, H3 was supported.

H4 tested the mediating effect of sustainability awareness of consequences between sustainability-related marketing messages and ascribed responsibility of sustainability. The findings revealed that the mediating relationship was significant and positive ($\beta = .51, p < .001, CI_{95} = .43,.60$), thereby supporting H4. The H5 tested the relationship between sustainability awareness of consequences and personal norms when mediated by ascribed responsibility of sustainability. The results showed that such
mediating relationship was significant and positive ($\beta = .32$, $p < .001$, CI$_{95} = .17,.47$). Therefore, H5 was supported.

For H6 the impact of ascribed responsibility of sustainability on word of mouth, when mediated by personal norms was tested. The results showed that such mediating relationship was significant and positive ($\beta = .27$, $p = .01$, CI$_{95} = .49,.05$). Therefore, H6 was supported. Finally, H7 tested the impact of ascribed responsibility of sustainability on brand loyalty, when mediated by personal norms. The findings revealed that the mediating relationship was significant and positive ($\beta = .38$, $p = .001$, CI$_{95} = .49,.05$). Therefore, H7 was also supported.

Since the majority of this study’s sample was represented by male (60%) with comparatively lesser number of females (30%), an additional test was developed to test for any effect of participants’ gender on the Hs. The results showed no significant differences between the two gender categories for all the seven hypotheses. That is, for both male and female participants, all the Hs reported of similar directionality, similar indirect effects of SRMM on WOM and BL, and no direct impacts.

Table 3
Hypothesis results

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>95% CI</th>
<th>SE B</th>
<th>$\beta$</th>
<th>p-value</th>
<th>$F$-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>[.05,.32]</td>
<td>.09</td>
<td>.13</td>
<td>.17</td>
<td>$F (df1, df2) =$ 5.95</td>
</tr>
<tr>
<td>SRMM would positively influence consumers’ WOM in the jewelry industry.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>[.17,.22]</td>
<td>.10</td>
<td>.02</td>
<td>.82</td>
<td>$F (df1, df2) =$ 10.87</td>
</tr>
<tr>
<td>SRMM would positively influence consumers’ BL in</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
the jewelry industry.

<table>
<thead>
<tr>
<th>H3</th>
<th>SRMM would positively influence consumers’ SAC.</th>
<th>[.62,.79]</th>
<th>.04</th>
<th>.70</th>
<th>&lt;.001</th>
<th>$F_{(df1, df2)} = 149.28$</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H4</th>
<th>Consumers’ SAC would mediate the relationship between SRMM and their ARS in the jewelry industry.</th>
<th>[.43,.60]</th>
<th>.04</th>
<th>.51</th>
<th>&lt;.001</th>
<th>$F_{(df1, df2)} = 175.21$</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H5</th>
<th>Consumers’ ARS would mediate the relationship between SAC and their PN in the jewelry industry.</th>
<th>[.17,.47]</th>
<th>.32</th>
<th>.07</th>
<th>&lt;.001</th>
<th>$F_{(df1, df2)} = 39.24$</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H6</th>
<th>Consumers’ PN would mediate the relationship between ARS and their WOM in the jewelry industry.</th>
<th>[.49,.05]</th>
<th>.11</th>
<th>.27</th>
<th>.01</th>
<th>$F_{(df1, df2)} = 5.95$</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>H7</th>
<th>Consumers’ PN would mediate the relationship between ARS and their BL in the jewelry industry.</th>
<th>[.60,.15]</th>
<th>.11</th>
<th>.38</th>
<th>.001</th>
<th>$F_{(df1, df2)} = 10.87$</th>
</tr>
</thead>
</table>

Note CI = confidence interval

*p < .05
CHAPTER 5

CONCLUSION

Results and Discussion

This study focused on testing the influence of sustainability-related marketing messages on consumers’ word of mouth and brand loyalty directly and when mediated by their awareness of sustainability consequences, ascribed sustainable responsibility, and personal norms related to sustainability. Participants represented both men and women from Brazil and were aged 18 years old or above. Considering Brazilian adult consumers are considered to represent a conservative market and be more aware of their purchase choices, such sample demography was considered suitable for the purpose of this study (IBGE - Pesquisa Nacional por Amostra de Domicílios Contínua trimestral, 2020; McKinsey & Company, 2016).

This research showed that the presence of sustainability information in marketing messages has significant positive impacts on consumer behavior compared to when such a message was absent. When participants were shown a stimulus that contained sustainability-related marketing messages related to fair trade policies, workers' safety, and usage of sustainable materials, those messages were confirmed to influence consumers' word of mouth and brand loyalty positively, but only indirectly. In other words, participants' intentions to spread positive messages about the brand were increased by the presence of sustainability-related marketing messages only when mediated by their sustainability awareness of consequences, ascribed responsibility of sustainability, and personal norms. Similarly, those same sustainability-related marketing messages were found to influence consumers' brand loyalty positively, when mediated by
their sustainability awareness of consequences, ascribed responsibility of sustainability, and personal norms.

Such positive impacts of sustainability-related marketing messages on consumers’ behavioral intentions were in alignment with prior literature (White et al., 2019), as Brazilian consumers have been in general frequently reported to value and care for sustainability (Brasileiros estão cada vez mais sustentáveis e conscientes, 2019). However, prior studies have indicated more of a direct relationship between sustainability marketing and consumer behaviors. For example, Sun & Ko (2016) found that when marketing messages of brands cater to elucidate sustainability, such directly impacted consumers’ word of mouth intentions. And, Eklund et al. (2020) observed sustainability-related advertisements to have similar direct and positive effects on brand loyalty. On contrary, this study observed no such direct relationships to exist between sustainability messages and consumers’ word of mouth or brand loyalty.

Further, the indirect effects of sustainability messages on consumers' behavioral intentions were observed to exist via consumers' norms, awareness, and responsibilities. That is, the results indicated that Brazilian consumers had a higher word of mouth and brand loyalty in response to sustainability-related messages for jewelry brands, only when the sustainability pillars and aspects were in line with the norms and awareness that Brazilian consumers carry. These mediating and dominating roles of Brazilian consumers' morality and values, in triggering their behavioral intentions, were contrary to prior literature. For example, Leite, (n.d.) found that Brazilian consumers are, in general, do not have a strong normative bent of mind and are more flexible in their values. That is, consumers do not prioritize their normative values in their behaviors. But in this study,
results indicated otherwise, and Brazilian consumers' word of mouth and brand loyalty were evoked in response to three mediating relationships as explained below.

The results indicated participants’ awareness of consequences, pertaining to sustainability, mediated the relationship between sustainability-related marketing messages and ascribed responsibility of sustainability. So, when participants were exposed to marketing messages with references to various social and environmental sustainability engagements of the jewelry brand, participants were observed to be more mindful about how their jewelry transactions can make a positive difference, and likewise, their feelings of responsibility to engage in such sustainable consumption were observed to spike.

Similarly, the results indicated participants’ ascribed responsibility of sustainability, mediated the relationship between sustainability awareness of consequences and consumers' personal norms. So, after participants were exposed to marketing messages with references to sustainability engagements of a jewelry brand, they were observed to be more conscious of how their jewelry transactions can make a difference, and likewise, their feelings of responsibility to engage in such sustainable consumption were observed to spike. Such responsibility of sustainability, in turn, triggered their internal values to also be inclined towards sustainability. That is, consumers take ownership of their own sustainable behavior and how that may impact the jewelry industry concerning sustainability.

The results also indicated participants’ personal norms mediated the relationship between ascribed responsibility of sustainability and brand loyalty as well as word of mouth. So, when participants were exposed to marketing messages referring to various
social and environmental sustainability engagements, their awareness of consequences and ascribed responsibility towards those causes, in turn, activated their personal norms to eventually increase their brand loyalty and word of mouth. Such indirect, mediated influence of sustainability messages and consumers' behavioral intentions can be explained by the fact that Brazil is one of the most valuable suppliers of precious metals and stones globally (Poppino & Burns, 2019). Considering that this country's jewelry industry generates jobs and increases the internal economy (Lucas, 2013), it might be that the Brazilian consumers felt morally obligated and responsible to behave more sustainably and care more for their country.

One interesting finding was that sustainability-related marketing messages had a positive and direct impact on personal norms. Such relationship was not predicted but observed in the results, and it opens room for other future studies and fields for investigation. This could be explained by COVID and its aftermaths. For example, when employees were being furloughed or terminated, this brand stimulus (sustainability present) indicated to consumers that they were caring for their employees and their safety. Since Brazilian consumers are known to boycott or reward brands based on sustainable credentials (Echegaray, 2013), the sustainability-related content in marketing messages might have appealed to their sense of ethics and personal obligations towards enforcing those ethics. That is, it might have evoked a sense of obligation among the participants as to how they should practice sustainable consumption and support brands’ sustainable initiatives.
Theoretical Contributions

The present study was intended to investigate the impact of sustainability-related marketing messages on word of mouth and brand loyalty. Additionally, it also aimed to investigate the mediating effects of sustainability awareness of consequences, ascribed responsibility of sustainability, and personal norms on word of mouth and brand loyalty when influenced by those same sustainable messages in the context of Brazilian jewelry consumers.

Accordingly, it makes both theoretical and practical contributions, as explained below. First, this study filled a gap in the literature by addressing the need for sustainability marketing strategies in the jewelry industry. While prior literature has indicated the demand and positive effects of sustainability in general marketing (Kim et al., 2012; Lerma et al., 2017; Moraes et al. 2015), a specific focus on the jewelry industry was missing. This paper compared how a presence (versus absence) of sustainability-related information on a corporate website of a jewelry brand can influence consumers' behavioral intentions while invoking their values and beliefs in the process. Considering that the supply chain and production in the jewelry industry are often hard to trace (Wood, 2018), this study represents a potential shift in the jewelry industry urging it to eventually become more transparent about its sustainability engagements. It also paves the path for future research related to this field, such as exploring the type of message and message framing, to create a better understanding of the sustainable consumer behavior related to jewelry.

Second, this research brought in a Brazilian approach within the context of sustainability in a luxury market segment, thus making a unique and valuable
contribution to the literature. In the last decade, the media has been giving more attention to the negative impacts of the jewelry industry, specifically in terms of sustainability, in countries from Africa and South and Central America (Crocitti, 2012; Weaver et al., 2021). Movies, books, and magazine articles expose the unsustainable jewelry industry and trace the entire jewelry production supply chain, and broadcast the negative impacts that the jewelry industry causes in the local communities (Franciele, 2021; MapBiomas Brasil, 2020). On the other hand, for the last couple of years, studies have been showing that jewelry brands have been encountering the necessity to behave sustainably and have been shifting their production process to apply sustainable practices into it (Biondi, 2018; Hill, 2018). Thus, this research not only responded to the need to investigate sustainability and its importance within the Brazilian jewelry industry but also brought a more positive and proactive approach towards marketing such sustainability to Brazilian consumers. It showed the positive impacts marketing messages have on Brazilian consumers’ word of mouth and brand loyalty when specifically reporting sustainability, thus adding to the literature.

Third, this study showed that consumer behavioral intensions, such as WOM and BL, were being influenced via consumers' awareness of consequences, ascribed responsibility, and personal norms. Thus, it added emerging evidence to support the existing theoretical arguments of the Norm Activation Model (Schwartz, 1977), and explained how consumers' behavioral intentions related to an ethical context such as sustainability are controlled by their sense of awareness, responsibility, and obligations even for a luxury market segment such as the jewelry industry.
**Managerial Contributions**

Overall, the study contributes to the jewelry industry by giving a chance for brands to understand consumers' behavioral intentions and possibly elevate their brand loyalty and word of mouth. Through these research findings, jewelry brands will have a better understanding of the effects of sustainability-related marketing messages on their consumer behavior. Results indicated that the presence of sustainability-related marketing information indirectly increased consumers' intentions to positively communicate about the brand and feel loyal to the brand. WOM is an essential component of marketing (Jeuring & Haartsen, 2016) and BL is crucial to brands’ repeat transactions (Hanaysha, 2016). Thus, no matter how small or big sustainability efforts are, Brazilian jewelry marketers, need to ensure including all their sustainability initiatives in their marketing messages. In addition, consumers’ values and norms were found to be important in predicting their behavioral intentions in response to sustainability messages. Thus, while communicating sustainability messages are important in general, it might be specifically beneficial for brands to frame their messages and adapt their communications efforts to appeal to consumers’ values and norms towards sustainability.

**Limitations and Future Studies**

The current study is a preliminary investigation of the mediating effect of sustainability awareness of consequences, ascribed responsibility of sustainability, and personal norms on word of mouth and brand loyalty, in the jewelry industry in Brazil. Despite its contributions, the study is not free of limitations and thus paves the path for future research opportunities. First, considering the experimental research design of this study, the generalization of the given research becomes limited. Since the environment of
the research was controlled and the independent variable of sustainability-related marketing messages was manipulated by the researcher, the generalization of the findings must be limited. Furthermore, this study’s stimuli showcased information only concerning the brand and was designed to not include any product information. Since in reality, sustainability information might involve messages related to both the brands and their products, a future study could potentially explore the effects of the different types of messages, by comparing sustainability-related marketing messages that refer to the product and sustainability-related marketing messages that refer to the brand and their impacts.

Second, this study only focused on Brazilian consumers. Future studies could thus replicate this research to investigate consumer behavior in other developing nations as well as to conduct a comparative study between countries under the BRICS. These developing nations (Brazil, Russia, India, China, and South Africa) have impactful resources and consumers across the globe. Therefore, replicating this research to various nationalities and cultures might generate interesting results.

Third limitation of this study that must be acknowledged is the language aspect. Although the survey used participants who could speak and understand basic English, in accordance with the common practices of Brazilian jewelry brands and consumers, these participants are not English speakers and uses Portuguese as their native language. Such might have some influence on participants’ processing of the stimuli messages and likewise, adds to the limitations of this study. Additionally, studies investigating subjects such as sustainability might have some social desirability influencing participants’ responses. Even though some strategies were implemented in this study in order to avoid
this challenge, such as switching the order of the scales in the survey to not giveaway the conceptual model and reduce its predictability (Grimm, 2010), this limitation must be acknowledged.

The fourth limitation is related to data collection platform of Amazon Mechanical Turk. While some studies have critiqued this platform for experimental design studies and data quality, others have found the platform to be free of any attrition or disruption issues (Keith et al., 2017). Thus, it might a potential limitation and likewise, future studies are recommended replicating this research with other data collection platforms.

Finally, data were collected during the aftereffects of COVID when overall, brands were still being criticized and called upon for being not responsible towards their consumers, society, environment, and economy. This negative environment might have influenced participants' perceptions to better appreciate a brand that showcased sustainable and responsible behaviors. In fact, a few studies have reported that consumers, during the pandemic, might have faced a paradigm shift in behavior in which they behave more sustainably (Mehta et al., 2020). Thus, future studies are needed to investigate whether the findings of this research would still hold true in another timeframe.
APPENDICES

IRB Approval and Revision Approval

THE UNIVERSITY OF RHODE ISLAND
DIVISION OF RESEARCH AND ECONOMIC DEVELOPMENT
OFFICE OF RESEARCH INTEGRITY
70 Lower College Road, Suite 2, Kingston, RI 02881 USA
p. 401.874.4328  f. 401.874.4814  web.uri.edu/research integrity/office-of-research-integrity

FWA: 00003132
IRB: 00000599
DATE: March 31, 2021
TO: Saheli Goswami, PhD
FROM: University of Rhode Island IRB
STUDY TITLE: The Sustainable Jewelry Context in Brazil
IRB REFERENCE #: 1732780-1
LOCAL REFERENCE #: IRB2021-191
SUBMISSION TYPE: New Project
ACTION: DETERMINATION OF EXEMPT STATUS
EFFECTIVE DATE: March 31, 2021
REVIEW CATEGORY: Exempt 2i

Thank you for your submission of materials for this research study. The University of Rhode Island IRB has determined this project falls into the EXEMPT REVIEW category according to federal regulations 45 CFR 46. Per URI IRB policy, the project has been reviewed by either the IRB Chair or the IRB Administrator. Approval is valid for the duration of the project.

No changes to procedures involving human subjects may be made without prior IRB review and approval. You must promptly notify the Office of Research Integrity of any problems that occur during the course of your work using Appendix S - Event Reporting.

If you have any general questions, please contact us by email at research integrity@etal.uri.edu. For study related questions, please contact us via project mail through IRBNet. Please include your study title and reference number in all correspondence with this office.

Matthew Delmonico, Ph.D., MPH
IRB Chair

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OFFICE OF RESEARCH INTEGRITY
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p: 401.874.4328 f: 401.874.4014 web.uri.edu/researchcondev/office-of-research-integrity

FWA: 00003132
IRB: 00000599
DATE: September 24, 2021

TO: Saheli Goswami, PhD
FROM: University of Rhode Island IRB

STUDY TITLE: The Sustainable Jewelry Context in Brazil
IRB REFERENCE #: 1732780-2
LOCAL REFERENCE #: IRB2021-191
SUBMISSION TYPE: Amendment/Modification

ACTION: DETERMINATION OF EXEMPT STATUS
EFFECTIVE DATE: September 24, 2021

REVIEW CATEGORY: Exempt 2(i)

Thank you for your submission of materials for this research study. The University of Rhode Island IRB has determined this project falls into the EXEMPT REVIEW category according to federal regulations 45 CFR 46. Per URI IRB policy, the project has been reviewed by either the IRB Chair or the IRB Administrator. Approval is valid for the duration of the project.

No changes to procedures involving human subjects may be made without prior IRB review and approval. You must promptly notify the Office of Research Integrity of any problems that occur during the course of your work using Appendix S - Event Reporting.

If you have any general questions, please contact us by email at researchintegrity@etal.uri.edu. For study related questions, please contact us via project mail through IRBNet. Please include your study title and reference number in all correspondence with this office.

Matthew Delmonico, Ph.D., MPH
IRB Chair
Participation Recruitment Email

The primary goal of this research is to investigate the influence of marketing messages on consumer behavior. Your participation will help today’s Brazilian jewelry brands to better understand consumer expectations.

If you are 18 years old or older, AND currently reside in Brazil, you are encouraged to participate. The survey is in English language and will take approximately 8 minutes to complete. Participation in this study is completely voluntary and anonymous. Your responses will be anonymous and at no time, you will be asked about identifiable information.

You will be compensated at $0.50 for participating in this survey and the compensation will be made via Amazon Mechanical Turk portal. If you have any questions about the study, please contact Dr. Saheli Goswami (sgoswami@uri.edu) and Lauren Machado (laurenmachado@uri.edu).

If you wish to participate, please click on the below link to deploy the consent form and the survey.

Thank you.
**Consent Form**

You are being asked to take part in a research study. The purpose of the research study is to test the influence of marketing messages on consumer behavioral intentions. Please read the following before agreeing to be in the study. It will take you approximately 10 minutes to complete this survey. There are no known risks, and once you complete this survey you will receive a compensation of $0.50.

Your responses will be strictly anonymous. The responses may be used for research purposes. Participation in this research is voluntary and you may withdraw at any time without penalty or loss of benefits. You have the right not to answer any single question, as well as to withdraw completely from the survey at any point during the process; additionally, you have the right to request that the researchers not use any of your responses.

You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have questions about the study, at any time contact Saheli Goswami from the Textiles Fashion Merchandising and Design/College of Business at the University of Rhode Island (URI), at 401.874.9294 or sgoswami@uri.edu.

Additionally, you may contact the URI Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Rhode Island IRB may be reached by phone at (401) 874-4328 or by e-mail at researchintegrity@etal.uri.edu. You may also contact the URI Vice President for Research and Economic Development by phone at (401) 874-4576.
If you are 18 years or older and freely elect to participate, please click the next button below.

If you would like to keep a copy of this document for your records, please print or save this page now. You may also contact the researcher to request a copy.

By clicking the ‘next’ button below, you indicate that you consent to participate in this study.

<< “Next” button >>
**Stimuli**

**Sustainable Bands**

*MADE IN BRAZIL*

- **Fairtrade policies** applied in the production to reduce child labor and wage differences.
- Usage of **up-cycled metals** to reduce exploitation of environmental resources promote less waste generation/control waste generation.
- **Worker safety** is guaranteed with proper work gear and safety-uniforms.
- **Environmentally friendly synthetic material**, such as lab grown diamonds, used in the production to reduce negative environmental impacts.

**Simple Bands**

*MADE IN BRAZIL*

- UNI is a **jewelry line** founded by the global brand Sook Incorporated.
- The brand sells **jewelry for women and men** and continues to grow rapidly into a full-fledged business.
- There are now multiple **UNI retail locations** nationwide.
- If you are interested in hosting a shopping party or want to learn about the latest events, **contact us**.
AMT & Qualtrics Survey

Start of Block: Participation Requirements

Q1.1 To begin the survey, please answer the following questions.

Q1.2 Do you currently reside in Brazil?
Yes
No

Q1.3 Can you read and understand basic English?
Yes
No

Q1.4 How old are you (in years)?

End of Block: Participation Requirements

Start of Block: Consent Form

You are being asked to take part in a research study. The purpose of the research study is to test the influence of marketing messages on consumer behavioral intentions. Please read the following before agreeing to be in the study. It will take you approximately 10 minutes to complete this survey. There are no known risks, and once you complete this survey you will receive a compensation of $0.50.

Your responses will be strictly anonymous. The responses may be used for research purposes. Participation in this research is voluntary and you may withdraw at any time without penalty or loss of benefits. You have the right not to answer any single question, as well as to withdraw completely from the survey at any point during the process; additionally, you have the right to request that the researchers not use any of your responses.

You have the right to ask questions about this research study and to have those questions answered by me before, during or after the research. If you have questions about the study, at any time contact Saheli Goswami from the Textiles Fashion
Merchandising and Design/College of Business at the University of Rhode Island (URI), at 401.874.9294 or sgoswami@uri.edu.

Additionally, you may contact the URI Institutional Review Board (IRB) if you have questions regarding your rights as a research participant. Also contact the IRB if you have questions, complaints or concerns which you do not feel you can discuss with the investigator. The University of Rhode Island IRB may be reached by phone at (401) 874-4328 or by e-mail at researchintegrity@etal.uri.edu. You may also contact the URI Vice President for Research and Economic Development by phone at (401) 874-4576. If you are 18 years or older and freely elect to participate, please click the next button below.

If you would like to keep a copy of this document for your records, please print or save this page now. You may also contact the researcher to request a copy.

By clicking the ‘next’ button below, you indicate that you consent to participate in this study.

End of Block: Consent Form

Start of Block: Instructions

Q3.1 you will see a message from a jewelry company named “UNI”, as published on their website. Please read the message carefully and answer the questions that follow.

End of Block: Instructions

Start of Block: SUS_PRES

Q4.1 Below is a company message from UNI. Please read the message carefully and answer the following questions.

(stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)
Q4.3 Below, the message is shown again.
(stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)
Q4.4 Based on the above brand message, how would you agree with the following statements:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel personal obligation to protect the society.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to have a sense of social responsibility.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to improving the society with my own jewelry consumption.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to protect the environment.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to have a sense of environmental responsibility.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel personal obligation to improving the environment with my own jewelry consumption.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q4.5 Below, the message is shown again. (stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)

Q4.6 Based on the above brand message, how would you agree with the following statements:

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel responsible to reduce child labor with my own jewelry consumption.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I feel responsible to reduce exploitation of environmental resources with my own jewelry consumption.

I feel responsible to support worker safety with my own jewelry consumption.

I feel responsible to reduce negative environmental impacts with my own jewelry consumption.

Data quality is very important to us. To show that you are paying attention, please select 'Strongly Agree'.
Q4.7 Below, the message is shown again.
(stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)

Q4.8 Based on the above brand message, how would you agree with the following statements:

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel aware that my jewelry consumption can reduce child labor in jewelry production.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can reduce exploitation of environmental resources.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can lead to worker safety</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel aware that my jewelry consumption can reduce negative environmental impacts.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Q4.9 Below, the message is shown again.

(stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)

Q4.10 Based on the above brand message, how likely are you to do the following:

<table>
<thead>
<tr>
<th>Make sure that others know that you do business with UNI.</th>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speak positively about UNI to others.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to family members.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to acquaintances.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommend UNI to close personal friends.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For this question, please click 'Strongly Agree'.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page Break
Q4.11 Below, the message is shown again.

(stimuli with sustainability related marketing messages or absence of it, participants were randomly assigned)

Q4.12 Based on the above brand message, how likely are you to do the following:

<table>
<thead>
<tr>
<th>I would buy from UNI whenever I can.</th>
<th>Somewhat disagree</th>
<th>Neither agree nor disagree</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would buy as much of UNI as I can.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I feel UNI is the only brand of jewelry I need.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UNI is the one brand I would prefer to buy or use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If this UNI was unavailable, it would be difficult if I had to use another brand.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would go out of my way to buy from UNI.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

End of Block: SUS_PRES

Start of Block: Demography
Q6.1 Finally, a few questions about yourself.

Q6.2 What gender do you identify with?
Male
Female
Other

Q6.3 Please indicate the highest level of education you have completed.
High School Degree
Some college, but no degree
Bachelor's degree in college
Master's degree
Doctoral degree

Q6.4 Please indicate your current employment status.
Part-time employed (1-39 hours per week)
Full-time employed (40 or more hours per week)
Not employed
Retired

Q6.5 Please indicate your annual household income.
R$8.000 to R$10.000
R$10.000 to R$25.000
R$25.000 to R$45.000
R$45.000 to R$75.000
R$75.000 to R$95.000
R$95,000 to R$120,000
more than R$120,000
Q39 Thank you for participating, here's your AMT Code:

Q7.1 Thank you for taking this survey. Please click next to record your response.
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