The best I can be: how self-accountability impacts product choice in technology mediated environments

Zoe O. Rowe, Hugh N. Wilson, Radu M. Dimitriu, Katja Breiter, Fiona J. Charnley

Abstract

Technology mediated environments are important not only as the location for an increasing proportion of purchases but also as an even more pervasive part of the purchase journey. While most research into online consumer behavior focuses on attitudes as an antecedent of product choice, this article focuses on an important but hardly-explored variable which may be impacted by technology mediated environments: self-accountability. Laboratory experiments suggest that self-accountability may influence online purchases, but this has not been confirmed in field studies. Furthermore, although this prior work suggests that self-accountability may impact product choice through the elicitation of guilt, the role of positive emotions has not been explored. Using two surveys with online retailers, this paper a) shows that in a technology mediated environment, self-accountability influences product choice; b) proposes and confirms a complementary route for this effect through pride that is stronger than that through guilt; and c) evidences the relationship between self-accountability and perceived consumer effectiveness. These results show a clear opportunity for digital marketers to encourage self-accountability, to thereby elicit pride and not just guilt, and hence to impact consumer decision-making in technology mediated environments, particularly when choices have sustainability implications.

Keywords: Online marketing, Consumer behavior, Sustainability marketing, Self-accountability, Self-conscious emotion

Technology mediated environments provide marketers with the flexibility to craft the customer experience to produce a desired effect (Yoon, Choi & Sohn, 2008), and provide consumers with the access to numerous product choices, including sustainable ones (Darley, Blankson & Luethge, 2010). The options for offline retailers are dominated by one-way communications through advertising, loyalty programs and point-of-sale promotions, unless they invest heavily in expensive personal service; by contrast, the internet and associated technologies allow marketers to have a low-cost tailored dialogue with consumers to better serve them (Minton et al., 2013). Online market places would therefore seem a promising context for applying the large body of research on how best to communicate with customers in order to elicit sustainability-related behaviors, much of which proposes carefully controlled framing (Akehurst, Alfonso & Gonçalves 2012; McFerran, Aquino & Tracy 2014) and active consumer engagement (Peloza, White & Shang 2013; Champniss, Wilson & Macdonald 2015).

Furthermore, online retailing accounts for an ever-increasing proportion of consumer spending (Darley, Blankson & Luethge, 2010), so it is increasingly important in numerous categories, with $92.8 billion of US sales at the first quarter of 2016 (US Census Bureau, 2016), an increase of 15.2% from the previous year. Although e-commerce accounts for just 7.8% of total US retail sales, this percentage has been consistently increasing by around 15% per year. The online environment also plays an increasing role in the complete customer journey of searching and shopping for products, irrespective of where the purchase itself is made (Kim & Lennon, 2008). For example, 60% of consumers research online for electrical items and 40% of consumers choose to purchase these online; similarly, 50% of consumers research household appliances online and 29% have purchased them online (PwC, 2016). In addition, an automotive study by Accenture (2015) found that 37% of consumers said they use online channels to search for information prior to purchasing a vehicle. Online purchases

of groceries are no exception, with as many as 48% of UK consumers purchasing groceries online (Mintel, 2016).

Technology mediated environments, then, are of particular interest to firms wishing to motivate sustainable consumption. There has been a growing interest in the circular economy and its role in achieving sustainable lifestyles (Ellen MacArthur Foundation, 2013). Examples include the retail of refurbished goods as well as collaborative consumption models such as Airbnb and Zipcar, each of which is underpinned by online platforms in order to match geographically dispersed buyers and sellers and provide them with instantaneous information (Ellen MacArthur Foundation, 2013; Bocken et al., 2014; Richardson, 2015). Yet consumers' attitudes and behaviors around sustainability in an online environment have received surprisingly little specific focus (Darley, Blankson & Luethge, 2010). Research is necessary to better understand how to encourage consumers' sustainable decision-making in an online environment specifically (Minton et al., 2013).

Much academic work on sustainable consumption has focused on the Theory of Planned Behavior (Ajzen, 1991) and its components and variants. Influencing attitudes through information-based communications can help, but a wide gap has been reported between sustainability-related attitudes and sustainable behaviors (Darley, Blankson & Leuthge, 2010). While social forces such as social identity effects (Champniss, Wilson & Macdonald, 2015) are promising, these are difficult to apply in an online retail environment dominated by the interaction between a customer and a retailer's website, unlike offline shopping where other shoppers, as well as staff, are generally present. The question arises whether any complementary mechanisms exist for online marketers to tailor customer-firm interactions in order to elicit sustainable choices (Kim & Lennon, 2008; Darley, Blankson & Luethge, 2010**;** Argyriou, 2012).

In this paper, we explore the promise of a body of psychological research, namely self-standards and self-discrepancy theory (Higgins et al., 1987), for tackling this challenge of

eliciting online sustainable behaviors. This theory understands individuals to have internally held self-standards that guide behaviors. If a discrepancy occurs between one's actual behavior and an ideal self-standard, individuals will be motivated to act accordingly so as to align them (Higgins et al., 1987). Applications of these concepts have examined the impact of self-discrepancy on task performance (Duval & Lalwani, 1999), affect (Higgins et al., 1986; Higgins et al., 1987; Tangney et al., 1998), and approach vs avoidance behavior (Higgins et al., 1994), but only in one study by Peloza, White and Shang (2013) to the issue of ethical consumer decision-making. These authors develop a measure for self-accountability, which they define as the extent to which one feels accountable to live up to a personally held self-standard, a definition we adopt in this article. This concept derived from self-discrepancy theory has the benefit of being measurable. Looking at sustainable products such as fair trade coffee, Peloza, White and Shang (2013) show that self-accountability can be enhanced through dialogue, by asking individuals to recall a previous occasion when they behaved in a way that was not consistent with their moral self-standards.

Consumers are likely to be characterized by different degrees of self-accountability. Furthermore, technology mediated environments may be varying consumers' self-accountability. Examples can be seen in the influence the internet has had in spreading awareness about marketplace boycotts to influence consumers' purchase decisions (Sen, Guhan-Canli & Morwitz, 2001), and in smartphone apps that monitor behavior to encourage healthy eating and physical activity (Conroy, Yang & Maher, 2014). This raises the question whether consumers' degree of self-accountability in an online environment is affecting consumer behavior.

Our research contributes in several ways to this existing research. First, as Peloza, White and Shang's (2013) only field study using non-students did not measure self-accountability directly, we examine whether this self-accountability effect occurs naturally in the online field and not just the laboratory, through a field survey approach in two contexts,

one relating to environmental sustainability and one to social sustainability. Second, we extend Peloza, White and Shang's (2013) conceptualization by proposing an alternative route by which self-accountability can affect choice, namely via the positive self-conscious emotion of anticipated pride. This extends recent work which has shown other respects in which pride and not just guilt can impact on sustainable consumer choice (Harth, Leach & Kessler, 2013; Onwezen, Antonides & Bartels, 2013, 2014; Antonetti & Maklan, 2014a, 2014b). Third, we check what role if any is played by perceived consumer effectiveness in the impact of self-accountability on consumer choice, as prior studies on emotion have found perceived consumer effectiveness to sometimes play a role (Antonetti & Maklan, 2014b). Fourth, we apply recent work distinguishing two facets of pride, authentic and hubristic pride (Holbrook, Piazza & Fessler, 2013; Tracy & Robins, 2014; McFerran, Aquino & Tracy, 2014), to add precision to the role of pride as a mechanism in mediating between self-accountability and consumer choice.

The remainder of the paper is organized as follows: first, it details the conceptual background and presents the research hypotheses. Second, it presents the results of two studies through which these contentions were tested. A discussion of the results follows, together with pointing out the implications of the current work for existing research and for managerial practice. Not least, a discussion is presented of limitations and possibilities for further research.

CONCEPTUALISATION

Origins of self-accountability: Self-standards and self-discrepancy theory

To understand the concept of self-accountability, we first explain the bodies of literature around self-standards and self-discrepancy theory. Self-standards are the self-beliefs that

guide an individual's behavior. They relate to the possible selves that regulate behavior: the actual self, representing the attributes one possesses; the ideal self, representing the attributes an individual would ideally like to possess; and the ought self, representing the attributes one feels one should possess (Higgins et al., 1987; Duval & Lalwani, 1999). Self-standard discrepancies between the actual self and the ought self lead to negative affect. This awareness of standard discrepancies can lead to affective, cognitive and behavioral changes through the desire to reduce discrepancy and negative emotions (Higgins et al., 1986, 1987; Duval & Wicklund, 1973; Tangney et al., 1998).

Self-discrepancy theory states that different self-discrepancies are related to distinct emotional states (Higgins et al., 1987). Empirical research has concentrated on the self-regulatory impact of negative emotions such as guilt and shame that motivate people to match their actual self to their ideal self or their ought self-attributes, to reach a preferred state (Boldero and Francis, 1999). This raises the question what role, if any, positive emotions such as pride have in motivating the positive end goal of meeting a preferred state.

In an extensive literature, self-discrepancy has been successfully applied to contexts such as depression and anxiety (Stevens et al., 2014), the influence of self-discrepancy on affect (Higgins et al., 1997), associations with childhood memories (Strauman, 1996), and subjective wellbeing (Hardin & Larsen, 2014). It has only once to our knowledge been applied in sustainable behavior context, namely in the study by Peloza, White and Shang (2013) referenced earlier. These authors use self-discrepancy theory to examine the impact of self-accountability on ethical purchase intentions. Through their manipulation test, these authors found that most consumers hold being socially and environmentally responsible as a personally held self-standard. This supports the basis of the current study that an individual may be motivated to behave in an environmentally or socially sustainable manner if they believe they will be reaching this self-standard.

Self-accountability and negative emotions

Self-standards theory suggests that behavior is governed by emotion and discrepancy awareness. An individual's sense of accountability towards living up to their self-standards is believed to lead to feelings of anticipated guilt that can motivate sustainable behaviors (Peloza, White & Shang, 2013). An earlier study on self-accountability by Passyn and Sujan (2006) relatedly examined the role of negative emotions in influencing self-accountability itself, finding that mixed appeals of fear with guilt or challenge heightened an individual's self-accountability for the outcome of their behavior.

Previous research finds that the self-regulatory effect of self-discrepancy theory and self-accountability is mediated by negative emotions. Negative self-conscious emotions such as guilt are elicited when an individual attributes failure to an "internal, unstable, and controllable cause, such as effort" (Tracy & Robins, 2006, p1348). A multitude of research has demonstrated the ability of guilt to guide a variety of decisions (Tangney et al., 1996; 1998; Dahl, Honea & Manchanda, 2005; Basil, Ridgway & Basil, 2006; Hibbert et al., 2007; Carni et al., 2013). More recently, anticipated guilt has been shown to guide ethical purchase decisions when an individual is motivated to avoid feelings of guilt associated with choosing a less ethical option (Steenhaut and Van Kenhove, 2006; Peloza, White & Shang, 2013; Antonetti & Maklan, 2014a, 2014b; Onwezen, Antonides & Bartels, 2013, 2014; Antonetti & Baines, 2015). Nevertheless, anticipated guilt is relatively under-explored in comparison to other facets of guilt such as explicit guilt appeals (O'Keefe, 2002), especially in the sustainability literature. This leads to the hypothesis:

H1: Self-accountability has a role in motivating sustainable purchase intentions through anticipated guilt.

How self-accountability impacts behavior: Complementary role of pride and guilt

Like guilt, pride is also a self-conscious emotion that result from cognitive appraisals of one's self in the occurrence of an emotion-eliciting event (Tracy & Robins, 2004; 2007). Interest in self-conscious emotions research has grown in the last fifteen years, especially in the field of marketing (Gaur, Herjanto & Makkar, 2014). This work has extensively explored the regulating role of guilt, but pride has had considerably less attention.

Pride is also an important emotion that can drive prosocial behavior through the desire to feel positively about one's behavior (Tracy & Robins, 2007; Tracy et al., 2012). Pride shares with self-discrepancy theory the ability to motivate behavior through the desire to behave in a way that is congruent with internal self-standards (Tracy & Robins, 2007); however, the potential of pride for motivating behavior has not been fully explored within self-discrepancy literature. Only recently has pride been applied to sustainable consumption contexts (Harth, Leach & Kessler, 2013; Antonetti & Maklan, 2014a; 2014b; Onwezen Antonides & Bartels, 2013; Onwezen, Bartels & Antonides, 2014). In a similar way to anticipated guilt appraisals, anticipated pride could motivate sustainable purchase decisions through the desire to attain future feelings of pride associated with the sustainable product.

Accordingly, it is proposed that individuals with higher self-accountability will be more motivated to choose sustainable product alternatives, in part due to the anticipation of feeling pride for their purchase choice. Hence, one would expect that the effect of self-accountability on purchase intentions is mediated by the complementary role of both anticipated pride and anticipated guilt.

Based on this, the following two hypotheses are proposed:

H2: Self-accountability has a role in motivating sustainable purchase intentions through anticipated pride.

H3: The role of self-accountability in driving sustainable purchase intentions is due to both anticipated pride and guilt.

Mediating role of perceived consumer effectiveness

Perceived consumer effectiveness (PCE) is important in regulating sustainable consumption as it refers to how effective an individual perceives their actions to be in solving a (sustainability) issue (Thogersen, 1999; Kim & Choi, 2005; Akehurst, Afonso & Goncalves, 2012). Individuals with higher PCE are more likely to engage in sustainable purchase behaviors (Kim & Choi, 2005).

We might expect PCE to be a mediator of self-accountability's impact on purchase intentions because of it functioning with pride and guilt. A recent study by Antonetti and Maklan (2014b) explored the role of pride and guilt on PCE for motivating ethical consumption choices. The study indicated that feelings of pride and guilt can influence PCE and that it mediates the relationship between these emotions and ethical purchase intentions. Self-accountability may be an antecedent of this relationship that could increase the influence of anticipated pride and guilt on levels of PCE to motivate sustainable purchase behavior. Thus, an individual with a desire to live up to a personal self-standard of being sustainable will be motivated to purchase a sustainable product alternative if they believe their actions will have a positive influence on a sustainability issue. This motivation will be strengthened by feelings of anticipated pride at the thought of purchasing a sustainable product, as well as guilt at not doing so.

On the other hand, PCE might not act as a mediator in higher-involvement contexts such as refurbished white goods, one of the contexts we study in the empirical research that follows. High levels of self-accountability may not necessarily translate into higher levels of PCE (Ellen, Wiener & Cobb-Walgren, 1991; Obermiller, 1995) even when anticipated pride and guilt are heightened. Antonetti and Maklan's (2014b) findings are in relation to one

consumption context, ethical coffee. That pride and guilt were found to influence PCE in this context does not mean they will do so in another sustainability context (Ellen, Wiener & Cobb-Walgren, 1991). Ethical coffee is a low-involvement, high-salience product category with a high frequency of use. Prior adoption and frequency of use are believed to influence the impact of higher levels of PCE on a sustainable behavior (Block & Keller, 1995). This may be problematic in the context of purchasing refurbished white goods, a high-involvement category which may be low-salience when a repurchase is not immediately approaching. Lack of past engagement and awareness of its environmental benefits may cause the impact of PCE on purchase intentions to be reduced no matter how high levels of self-accountability or feelings of anticipated pride and guilt may be. In order to explore these possibilities, we test the following hypothesis in two product categories:

H4: PCE fully mediates the relationship between pride and guilt arising from self-accountability and sustainable purchase intentions.

Self-accountability and authentic pride

Tracy and Robins (2007) describe two facets of pride: authentic pride and hubristic pride. Authentic pride relates to feelings of accomplishment and achievement that is focused on one's behavior, whereas hubristic pride relates to arrogance and superiority that is focused on one's self (Tracy & Robins, 2007; Tracy et al., 2012; McFerran, Aquino & Tracy, 2014). These distinct facets of pride have been identified in a variety of contexts such as academic success, relationships and athletics (Tracy & Robins, 2007) and the consumption of luxury brands (McFerran, Aquino & Tracy, 2014). Yet no research to date exists within the sustainable behavior literature. Both authentic pride and self-accountability are linked to self-esteem and engagement in life goals; therefore, it can be anticipated that there is a relationship between motivation of living up to a self-standard of being sustainability conscious and

experiences of authentic pride. When an individual is more motivated to live up to their internal self-standards (i.e. high self-accountability) they may also have increased feelings of authentic pride at the anticipation of achieving greater life satisfaction. Hubristic pride is described as not being prosocial and being linked to status (Tracy & Robins, 2014); therefore, it is not likely to have a positive influence in encouraging sustainable consumption because of the relatively low penetration of sustainable behaviors in most consumer groups.

H5: Authentic pride mediates the impact of self-accountability on purchase intentions.

OVERVIEW OF THE RESEARCH

Two studies were conducted that followed the approach proposed by Troilo, Cito and Soscia (2014). Rival models are contrasted across two studies to explore the conceptual arguments and test the developed hypotheses with data gathered through online surveys. The hypothesized structural models are displayed in Figures 1 to 4.

STUDY 1

Insert Figure 1 about here

Research Design, Sample, and Data Collection

As prior work is restricted in the main to laboratory experiments using student samples (Peloza, White & Shang, 2013), an online consumer field survey was used, to provide natural variation in self-accountability and maximize ecological validity. The survey used a mock 'about us' website page and an advertisement for refurbished white goods, to provide constant information to participants about the brand to reduce model complexity. This product category was selected as: a) an example of environmental sustainability, to test whether self-accountability effects extend beyond the social sustainability context examined by Peloza, White and Shang (2013); and b) an example of a circular economy business model which is underpinned by online platforms. To ensure ecological validity, an existing brand was used that sells remanufactured white goods. The advertisement and 'about us' page were developed with the collaboration of the brand owner and a professional agency. The white goods brand is not well known and is a very recent start-up, to control for bias towards (or against) brands that have pre-existing attitudes attached to them, given the study's primary interest in self-accountability. After showing the 'about us' page and online advertisement, participants were asked a set of questions. See Appendix for the advertisement graphics.

Participants were recruited by an online panel provider in the United Kingdom. The sample of 248 consumers was representative of the UK population in terms of age, gender and education. Data from four participants were removed, as they did not follow directions. The final sample of 244 included 115 males and 129 females with an average age of forty-nine. There were no missing data.

Items using 7-point Likert scales anchored by 'totally disagree' and 'totally agree' were adapted from previous research. See Table 1 for all items. The key dependent measure was category purchase intention (how likely an individual would be to purchase a refurbished

white good). Self-accountability was measured following Peloza, White and Shang (2013), with three items. Anticipated pride and guilt measures were adapted from Roseman (1991), with three items, and Soscia (2007), with two items, and ordered at random. The initial PCE measure consisted of four items adapted from Antonetti and Maklan (2014b); after a reliability test, one item was deleted. With 4 items, Cronbach's alpha was .635 for PCE; after examination of the inter-item correlation matrix, one item was removed to give an alpha of .709.

Insert Table 1 about here

Results and Discussion

Based on analysis of variance (ANOVA), the influence of self-accountability on anticipated guilt (F=3.694, p(1,df<.001)) and anticipated pride (F=8.930, p(1,df<.001)) is significant. These findings not only provide field support for the finding of Peloza, White and Shang (2013) that increased self-accountability leads to increased feelings of guilt, but also shows that self-accountability impacts anticipated pride.

Next, four structural regression models were tested using IBM AMOS 23 software. Structural equation modeling (SEM) was chosen as it allows theoretical development by testing how constructs are linked where there are multiple rival models which are theoretically plausible (Hair et al., 2008; Schreiber et al., 2006). The models were analyzed using the maximum likelihood estimation method. Results are graphically summarized in Figure 2, and detailed in Tables 2 and 3.

Insert Figure 2 about here

Insert Tables 2 and 3 about here

Self-accountability and negative emotions

The negative affect structural model (A) did not have a good fit (Chi-square=16.48,

RMSEA=0.25, CFI=0.84, TLI=0.51) even though self-accountability is significant on

anticipated guilt (r^2= 0.15) and anticipated guilt is positively significant with purchase

intentions (r^2=0.18). This model does not account for a very high variance in purchase

intentions, supporting the need to look to the additional role of anticipated pride. Thus, H1

received only partial support.

Self-accountability and positive emotions

The anticipated pride model (B) has an improved fit as compared with the anticipated guilt

model (Chi-square=2.17, RMSEA=0.07, CFI=0.99, TLI=0.98). The model has a root mean

square error of approximation (RMSEA) below 0.08 to show a reasonable fit (Browne &

Cudeck, 1992). The fit statistics showed a satisfactory comparative fit index (CFI) and

Tucker-Lewis index (TLI) above 0.95 (Bentler, 1990; Hu & Bentler, 1999). Therefore, H2 is

supported. Self-accountability is significant on anticipated pride (r^2=0.34) and anticipated

pride has a significant path to purchase intentions (r^2=0.28). Further, the route through pride

appears stronger than that through guilt (r^2=0.28 in model B, 0.16 in model A).

How self-accountability impacts behavior: Complementary role of pride and guilt

We tested a model in which we included anticipated pride and guilt as parallel mediators of the effect of self-accountability on purchase intentions (Model C). A correlation was made between the error terms of pride and guilt to account for any variances between the two. This correlation is conceptually justified due to self-conscious emotions being interdependent. This model also shows a good fit (Chi-square=1.85, RMSEA=0.06, CFI=1.00, TLI= 0.98), yet it did not show much higher variance of purchase intentions (r^2=0.29) to that of the anticipated pride model (r^2=0.28). Anticipated pride accounts for just over double that of anticipated guilt (r^2=0.34 for anticipated pride, r^2=0.15 for anticipated guilt).

The inclusion of anticipated pride in the negative affect model caused the parameter estimate of anticipated guilt on purchase intentions to become non-significant (p=0.06). Individuals with higher levels of self-accountability are more likely to experience feelings of anticipated pride at the thought of purchasing a remanufactured white good, as well as guilt at the thought of not doing so. While these are naturally correlated, the route to purchase intentions is more significantly evidenced in the case of pride; as with our Model A, it may be that prior results emphasizing the role of guilt suffer from missing the important variable of pride. Thus, by heightening levels of self-accountability through such techniques as Peloza, White and Shang's (2013) manipulations, marketing managers may be able to drive purchases of environmental products as much, if not more so, through increased feelings of anticipated pride as by eliciting guilt at failure to act.

We tested a separate variant of the balanced affect Model (C) with an additional path from self-accountability to purchase intention. This was not significant and caused the model fit to decrease (Chi-square= 67.56, RMSEA= 0.52, CFI= 0.77, TLI = -0.40). The direct path from self-accountability to purchase intention was not significant (p=0.17) and the variance of purchase intentions did not significantly change (r^2=0.29).

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Mediating role of perceived consumer effectiveness

The mediating effect of PCE as depicted in Model D had a satisfactory fit (Chi-square= 3.38, RMSEA=0.10, CFI=0.99, TLI=0.93). Both self-accountability and anticipated pride had a positive significant impact on PCE, while anticipated guilt had a negative significant influence on PCE (r^2=0.26). Contrary to H4, however, PCE did not have a direct influence on purchase intentions (p=0.37) and the variance explained did not change compared to that of the balanced affect model (r^2=0.29).

The significant path from self-accountability to PCE shows an association between an individual feeling motivated to live up to a self-standard and believing the outcome of their purchase decision will have a positive impact on the environment. As expected, when anticipated pride increases so does PCE, suggesting that heightening feelings of anticipated pride leads to increased levels of PCE. Conversely, however, anticipated guilt has a negative significant effect on PCE, suggesting that the beliefs an individual holds towards the effectiveness of their behavior decrease as feelings of anticipated guilt increases. We speculate this might be because anticipated guilt is elicited from an individual considering how they would feel negatively if they were not to purchase the sustainable product. This may be caused by their decision not to purchase the product, thus the perceived benefit of their behavior will decrease.

We also tested a variant on Model D in which PCE, pride and guilt are parallel mediators of the influence of self-accountability on purchase intentions. This was not significant (Chi-square= 18.71, RMSEA=0.15, CFI=0.96, TLI=0.85) and is not further reported here. The path from PCE to purchase intentions was not significant (p=0.35), and nor was that from anticipated guilt to purchase intentions (p=0.08). The overall explanation for the variance of purchase intentions did not change (r^2=0.29). The post-hoc modifications were not conducted for PCE.

STUDY 2

Study 2 builds on Study 1 by replicating the observed effects in another context, involving social rather than environmental sustainability. Furthermore, given the clear role of pride in Study 1, Study 2 aims to further explore the significant impact anticipated pride has in mediating the influence of self-accountability on sustainable purchase intentions. Specifically, we tested for whether the results still hold with a specific form of pride discussed earlier, namely authentic pride.

Insert Figure 3 about here

Research Design, Sample, and Data Collection

This study followed a similar approach to Study 1. An online consumer survey was used whereby participants first viewed a chocolate box with the company slogan on it followed by a page of additional text about the social enterprise and the products they sell. Participants then completed a list of questions. The chocolates are made by a social enterprise that employs autistic people to produce the chocolates; again, this is a real brand, but a newly launching one to control for existing brand knowledge. A pre-test was conducted to ensure the social message used was understood. See Appendix for the professionally produced advertising materials used.

Participants were recruited by an online panel provider, to maximize ecological validity. The sample was UK representative in terms of age, gender and education consisting

of three hundred and four respondents. Data from 52 participants was removed, as they did not follow directions. The final sample size was 243 respondents and there were no missing data. The final sample included 112 females and 131 males, with an average age of 51.

Measures were adopted from Study 1 for common constructs across the two studies. Authentic pride used a 7-item scale from Tracy and Robins (2007). See Table 4 for all items.

Insert Table 4 about here

Results and Discussion

Table 4 shows the path coefficients and model fit statistics for the hypothesized models. Based on analysis of variance (ANOVA), the influence of self-accountability on purchase intentions is significant (F= 3.049, p(1,df<.000)). This again provides field confirmation of Peloza, White and Shang's (2013) argument that self-accountability has the potential to impact purchase intentions.

As in Study 1, conceptual models A-C are tested in addition to a new authentic pride model (E). We discard model D due to the Study 1 results. Using the same procedure as Study 1, four structural regression models (Figure 3) were tested using IBM AMOS 23 software. The models were estimated using the maximum likelihood method. The results and corresponding statistics are graphically displayed in Figure 4 and detailed in Tables 5 and 6.

Self-accountability and negative emotions

The negative affect model (A) has a much higher RMSEA than the recommended cut-off and poor fit statistics (Chi-square= 22.63, RMSEA= 0.30, CFI= 0.64, TLI = -0.09). In accordance

with Study 1, the path coefficients show a significant effect of anticipated guilt on purchase intentions (r^2=0.13); however, the path from self-accountability to anticipated guilt was not significant (p=0.06; r^2=0.03). The explained variance of anticipated guilt and purchase intentions is very low. Anticipated guilt does not mediate the influence of self-accountability on prosocial purchase intentions, thus H1 is not supported.

Self-accountability and positive emotions

The positive affect model (B) explains a much higher percentage of the variance in purchase intentions (r^2=0.48) than the guilt model (r^2=0.13). This model showed a satisfactory fit (Chi-square= 8.14, RMSEA= 0.17, CFI= 0.96, TLI = 0.88) but it was not as significant as in Study 1. However, the mediating role of pride is stronger in Study 2 (r^2=0.48 in Study 2, 0.28 in Study 1). This study reconfirms the significant role of anticipated pride in mediating the influence of self-accountability on sustainable purchase decisions, and shows that this effect applies to both social and environmental sustainability. Thus, H2 is supported.

How self-accountability impacts behavior: Complementary role of pride and guilt

Similar to the findings in Study 1, the structural path through pride in Model C has a much better explanatory power than that through anticipated guilt (r^2=0.09 for anticipated pride, 0.03 for anticipated guilt) yet the model fit was not as significant (Chi-square= 7.86, RMSEA= 0.17, CFI= 0.97, TLI = -0.82). The route from self-accountability to anticipated guilt is not significant (p=0.06), nor is it significant in the path from anticipated guilt to purchase intentions (p=0.19). The variance explained for purchase intentions is the same as in Model B (r^2=0.48), thus H3 is not confirmed.

In a different sustainable product context, this study reconfirms that individuals with high levels of self-accountability are more likely to experience feelings of anticipated pride at the thought of purchasing a sustainable product. Contrary to study 1, in this context

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individuals are not likely to feel anticipated guilt at the thought of not purchasing the chocolates. This may be because societal context-specific norms are better established in the context of reduced household carbon than they are in the context of foods supporting people with autism; so while buying both can lead to pride, not buying the chocolate is less likely to contradict an injunctive norm and lead to guilt. Both categories suggest, however, that increasing levels of anticipated pride could be the most effective way of encouraging sustainable purchase decisions over a variety of different sustainability product categories.

Self-accountability and authentic pride

As anticipated, based on analysis of variance (ANOVA), the influence of self-accountability on authentic pride showed a significant interaction (F= 1.826, p<0.05) (see Figure 4, Model E results).

A parallel model was tested in which authentic pride and anticipated pride were parallel mediators of the effect of self-accountability on purchase intentions. This model did not show a significant fit index (Chi-square= 8.41, RMSEA= 0.18, CFI= 0.98, TLI = -0.89) and showed the same variance on purchase intentions as in Model C (r^2=0.48). Although there was a significant path from self-accountability to authentic pride (r^2=0.07), the path from authentic pride to purchase intentions was non-significant (p=0.08). Authentic pride does not mediate the influence of self-accountability on prosocial purchase intentions, thus failing to corroborate H5.

Similarly to the effects of anticipated pride, authentic pride is more likely to be experienced by individuals with high levels of self-accountability. An increased feeling of authentic pride, however, is not likely to motivate consumers to purchase sustainable products. The findings support existing research that there are different facets of pride that have differing roles in regulating behavior (Tracy & Robins, 2007; Tracy et al., 2012; McFerran, Aquino & Tracy, 2014).

Insert Figure 4 about here

Insert Tables 5 and 6 about here

GENERAL DISCUSSION

This study applies an established psychology behavior change theory to sustainable online consumer choice. The study contributes to several bodies of literature: self-standards and self-discrepancy theory, self-conscious emotions, online retail, sustainability marketing, and the circular economy.

The objective of the current study was to propose a novel mechanism to help academics, practitioners and policy makers who aim to engender sustainable consumption behaviors. This objective was accomplished by empirically testing new conceptualizations of self-accountability's impact on online purchase intentions across two field studies. Both studies suggest that consumers with higher levels of self-accountability are more likely to have their purchase decisions influenced by anticipated feelings of pride from a sustainable purchase, with guilt also appearing to play a lesser role. The generalizability of these findings across two sustainable product categories shows the potential of self-accountability in driving sustainable consumption behaviors in technology mediated environments.

Theoretical implications

This study builds on the work of Peloza, White and Shang (2013) in highlighting the potential of self-accountability in encouraging sustainable purchase decisions. We add to these authors an online field context; the mediating role of anticipated pride; and a test in an environmental sustainability context as well as a social sustainability one. We tested a number of theoretical models for self-accountability and found that a balanced affect model, with a complementary route through anticipated pride and guilt, is most effective at explaining the influence of self-accountability on sustainable purchase intentions.

The main theoretical contribution of these findings is to the work on self-standards and self-discrepancy theory. There are no studies to date that have looked at the role of anticipated pride in mediating the effect of self-standards on behaviors, and none has done so in a sustainability consumerism context. The discovery of the role of self-accountability, along with the role of self-conscious emotions as mechanisms, presents a major opportunity. Academics and practitioners are looking for new ways of changing attitudes and behaviors to be more sustainable, but have overlooked the potential of a focus on self-standards and self-discrepancies. Furthermore, literature on sustainable consumer behavior has discussed the negative emotional route to encouraging behavior change, but has largely missed the opportunity that positive emotions present.

This study's findings highlight the importance of consumers' feelings of anticipated pride and guilt towards potential future sustainable purchase outcomes, for understanding the role of self-accountability. This challenges current beliefs that negative self-conscious emotions are the key to motivating behaviors. The results of this study clearly suggest the inclusion of a positive route from self-accountability to pro-sustainable attitude and behavior change, complementing findings from recent research on other roles for positive emotions (Antonetti & Maklan, 2014a, 2014b; Onwezen, Antonides & Bartels, 2013, 2014). Rather

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than demonizing people for being unsustainable, we can make people feel good to encourage sustainable behaviors.

Incidentally, this study further contributes to self-conscious emotion research by supporting previous work identifying different facets of pride that perform differently (Tracy & Robins, 2007; Tracy et al., 2012; McFerran, Aquino & Tracy, 2014). Even though authentic pride was not significant in explaining sustainable purchase intentions, a unique relationship was discovered between self-accountability and authentic pride.

Finally, this study contributes to the understanding of the role of PCE in sustainability research by showing limits to its role in mediating between self-conscious emotions on the one hand and purchase intentions on the other. The study proposed a theoretical model that integrates self-accountability and both positive and negative self-conscious emotions in predicting PCE and hence sustainable purchase intentions. In line with previous research, PCE was positively influenced by pride (Antonetti & Maklan, 2014b); however, anticipated guilt had a negative significant effect on PCE within Study 1. Furthermore, there was no significant influence on purchase intentions. Individuals with higher self-accountability may have higher PCE, but this does not appear to drive consumers to purchase sustainable products. This effect may have occurred as the study used a low-salience product category, refurbished white goods. These are generally not chosen over new ones, so consumers may not be knowledgeable of its environmental benefits, which may have impacted PCE (Block & Keller, 1995). Less salient sustainability issues may need different message appeals for increasing PCE and behavior intentions (Obermiller, 1995).

Managerial implications

These findings present an opportunity for practitioners who wish to develop online retailing not just for sustainable products, but indeed for a wider range of products where self-

conscious emotions play a role. We provide a route through which an online consumer dialogue can influence prosocial buying behavior, by focusing on self-standards and the mediating role of anticipated pride and anticipated guilt. As well as endeavoring to optimize market attitudes within technology mediated environments, marketing managers can focus on consumers' motivation to live up to their self-standards, as heightened self-accountability increases preference for sustainable products. This mechanism can be applied to such varied challenges as the recycling of otherwise discarded products and the supporting of social causes by firms in the interests of corporate responsibility.

In order to make use of this behavior change mechanism, it is useful that Peloza, White and Shang (2013) showed that self-accountability can be manipulated to increase ethical purchase intentions. Online marketers can apply these authors' technique of asking consumers, prior to a purchase decision, to recall an occasion when they did something that harms the environment, if an environmental product purchase is sought, or something that harms socially, if the behavior sought is a social sustainability one. Furthermore, our discovery of a stronger route through pride suggests that this mechanism would work even better if the recalled incident is a positive story rather than a negative one. This kind of very specific structuring of the dialogue is far easier to achieve in technology mediated environments than in most offline retail environments (Yoon, Choi & Sohn, 2008; Minton et al., 2013), though there are circumstances in which the time available with a customer allows equivalent structuring of the conversation to be possible; premium financial services could be a case in point.

The circular economy provides particular opportunities for applying this research. Businesses are under increasing pressure to move towards a circular economy (Lacy & Rutqvist, 2015), which is underpinned by technology mediated environments, so many marketing managers are being asked to devise successful marketing strategies to facilitate this. Due to engrained attitudes and behaviors from current consumption patterns, very few

people as yet purchase such circular economy offers such as the refurbished white goods we studied. It is hard enough for marketing managers to shift purchase behaviors towards ethical coffee, let alone towards more expensive, complex products such as these.

More broadly, online practitioners might consider using less explicit guilt appeals in online marketing communications, and instead look to use positively framed messages designed to engender pride. There may be examples outside the sustainability context where marketers can look to boost self-accountability through experimenting with different message appeals that ask individuals to recall a past occasion when they did or didn't engage in a particular behavior.

Limitations and directions for future research

Some obvious limitations are evident. As the data were collected from a self-report survey, there is a danger of social desirability bias. To reduce this danger, dependent variables were collected first. Our empirical data were collected in the field from consumers answering about real brands, to maximize ecological validity; but since we used online panel providers, in common with usual market research practice by firms, the sample was not randomly selected from the population so may not be fully representative, despite stratification. Survey respondents may suffer from fatigue; quality control questions were used to reduce this danger.

Another limitation which this study shares with most work exploring online attitudinal and emotional consumer response, and the great majority of work on sustainability behavior, is in the dependent variable of purchase intentions. These do not always result in actual purchase behaviors. An ideal design to further test our findings would be field experiments, combining high internal validity and high external validity.

Such a design might enable the manipulation of self-accountability in such a field setting, extending Peloza, White and Shang's (2013) primarily laboratory-based study and our field surveys. This could thereby compare conditions of high and low self-accountability and their impact on anticipated pride and guilt and hence on consumer behaviors. Peloza, White and Shang (2013) used a negative message to prime self-accountability; as we discussed in our recommendations to managers, scholars might usefully experiment with instead using positive messages to prime self-accountability, as this might be expected to further trigger the positive emotional route to behavior change through pride.

The current study did not control for the influence of behavior setting on self-accountability. Peloza, White and Shang (2013) found that public (as opposed to private) settings heighten self-accountability in a pre-test; however, their field study did not directly measure self-accountability, therefore the influence of this public setting in moderating the relationship between self-accountability and consumer choice is not clear. Furthermore, the majority of research on public versus private settings in consumer behavior has addressed physical settings rather than virtual online ones. Tangney et al. (1996) found that shame and guilt emotions occurred significantly more in private settings, which may be relevant for some online purchase contexts. Future research might explore the difference in public and private settings when receiving online marketing communications and the impact this has on consumers' levels of self-accountability.

The conceptualization of perceived consumer effectiveness (PCE) and its relationship to self-accountability requires further research. Although our model incorporating PCE was not significant in explaining sustainable purchase intentions, there appeared to be a significant relationship between PCE and self-accountability, partially mediated by anticipated pride and guilt. Kim and Choi (2005) discuss PCE in a collective context; sustainable behavior is group orientated and often aims to benefit society. Further research might also explore if social standards moderate the influence of self-accountability on sustainable purchase intentions.

Overall, the recent conceptualization of self-accountability remains little explored but seemingly powerful, particularly in online contexts where it can be effectively manipulated and where other effective mechanisms are in short supply. Further research is needed to explore how technology-mediated environments are already impacting on self-accountability, even when this is not the intent of a marketer. Furthermore, research is required to explore how successful this manipulation can be in practice, what behaviors it can influence other than those we studied, and what the side-effects of this manipulation might be. A longitudinal study would ideally be conducted to examine whether self-accountability can influence long-term sustainable behavior change.

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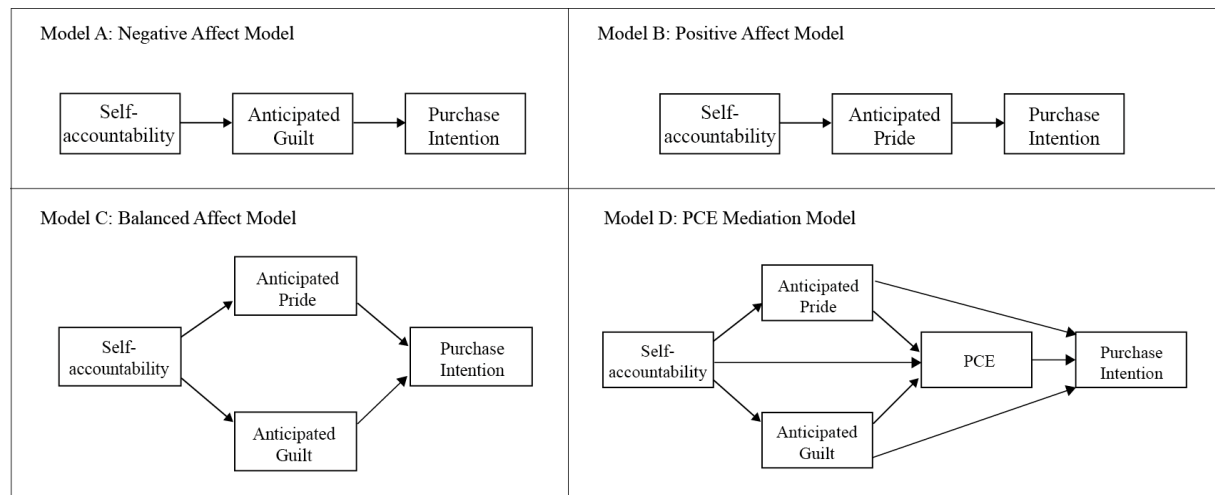
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Figure 1. Conceptual models – Study 1

Model A: Negative Affect Model

Self-accountability → Anticipated Guilt → Purchase Intention

Model B: Positive Affect Model

Self-accountability → Anticipated Pride → Purchase Intention

Model C: Balanced Affect Model

Self-accountability → Anticipated Pride / Anticipated Guilt → Purchase Intention

Model D: PCE Mediation Model

Self-accountability → Anticipated Pride / Anticipated Guilt → PCE → Purchase Intention

Figure 2. Results – Study 1

Model A: Negative Affect Model

Self-accountability →(.51***)→ Anticipated Guilt ($R^2 = .15$) →(.40***)→ Purchase Intention ($R^2 = .16$)

Model B: Positive Affect Model

Self-accountability →(.68***)→ Anticipated Pride ($R^2 = .34$) →(.60***)→ Purchase Intention ($R^2 = .28$)

Model C: Balanced Affect Model

Self-accountability →(.68***)→ Anticipated Pride ($R^2 = .34$) →(.51***)→ Purchase Intention ($R^2 = .29$)
Self-accountability →(.51***)→ Anticipated Guilt ($R^2 = .15$) →(-.13)→ Purchase Intention

Model D: PCE Mediation Model

Self-accountability →(.68***)→ Anticipated Pride ($R^2 = .34$); Anticipated Pride →(.16*)→ PCE ($R^2 = .26$); Anticipated Pride →(.54***)→ Purchase Intention ($R^2 = .29$); Self-accountability →(.36***)→ PCE; Self-accountability →(.51***)→ Anticipated Guilt ($R^2 = .15$); Anticipated Guilt →(-.17***)→ PCE; PCE →(-.08)→ Purchase Intention; Anticipated Guilt →(.12)→ Purchase Intention

*p<0.05; ** p<0.01; ***<0.001

Figure 3. Conceptual models – Study 2

Model A: Negative Affect Model

Self-accountability → Anticipated Guilt → Purchase Intention

Model B: Positive Affect Model

Self-accountability → Anticipated Pride → Purchase Intention

Model C: Balanced Affect Model

Self-accountability → Anticipated Pride → Purchase Intention
Self-accountability → Anticipated Guilt → Purchase Intention

Model E: Authentic Pride Model

Self-accountability → Anticipated Pride → Purchase Intention
Self-accountability → Authentic Pride → Purchase Intention

Figure 4. Results – Study 2

*p<0.05; ** p<0.01; ***<0.001

Table 1: Construct reliability and descriptives – Study 1

Construct	Measures	Cronbach's Alpha (Loadings)	Mean (SD)
Self-Accountability		0.93	5.15 (1.35)
	I feel accountable to behave in an ethical manner	(0.89)	4.91 (1.59)
	I am strongly motivated to live up to my own self-standards	(0.97)	5.22 (1.38)
	I feel accountable towards my own self-standards	(0.96)	5.32 (1.36)
Anticipated Guilt		0.925	2.97 (1.77)
	If you were not to purchase a refurbished white good, how intensely would you feel remorse?	(0.97)	2.93 (1.82)
	If you were not to purchase a refurbished white good, how intensely would you feel guilt?	(0.97)	3.00 (1.86)
Anticipated Pride		0.94	4.41 (1.58)
	If you were to purchase a refurbished white good, how intensely would you feel pleased?	(0.93)	4.61 (1.63)
	If you were to purchase a refurbished white good, how intensely would you feel good about yourself?	(0.97)	4.48 (1.63)
	If you were to purchase a refurbished white good, how intensely would you feel pride?	(0.93)	4.14 (1.75)
PCE		0.71	5.17 (1.32)
	It is worthless for the individual consumer to do anything about waste to landfill. (reverse coded)	(0.91)	5.24 (1.78)
	Since one person cannot have any effect upon pollution and natural resource problems, it doesn't make any difference what I do. (reverse coded)	(0.94)	5.06 (1.82)
	Each consumer's behavior can have a positive effect on society by purchasing products sold by socially responsible companies.	(0.47)	5.20 (1.35)

Table 2: Path Coefficients – Study 1

Independent Variable	Dependent variable	Parameter Estimate	Standard Error
Model A:			
Self-accountability	Anticipated Guilt	0.51	0.08 (***)
Anticipated Guilt	Purchase Intention	0.40	0.06 (***)
Model B:			
Self-accountability	Anticipated Pride	0.68	0.06 (***)
Anticipated Pride	Purchase Intention	0.60	0.06 (***)
Model C:			
Self-accountability	Anticipated Pride	0.68	0.06 (***)
Self-accountability	Anticipated Guilt	0.51	0.08 (***)
Anticipated Pride	Purchase Intention	0.51	0.08 (***)
Anticipated Guilt	Purchase Intention	0.13	0.07 (ns)
Model D:			
Self-accountability	Anticipated Pride	0.68	0.06 (***)
Self-accountability	Anticipated Guilt	0.51	0.08 (***)
Anticipated Pride	PCE	0.16	0.06 (*)
Anticipated Guilt	PCE	-0.17	0.04 (***)
Self-accountability	PCE	0.36	0.06 (***)
PCE	Purchase Intention	-0.08	0.09 (ns)
Anticipated Pride	Purchase Intention	0.54	0.08 (***)
Anticipated Guilt	Purchase Intention	0.12	0.07 (ns)

*p<0.05; ** p<0.01; ***<0.001; ns=not significant

Table 3: Model goodness-of-fit statistics – Study 1

	Model A	Model B	Model C	Model D
Chi-square (df)	16.48 (df=1)	2.17 (df= 1)	1.85 (df= 1)	3.38 (df= 1)
RMSEA	0.25	0.07	0.06	0.10
CFI	0.84	0.99	1.00	0.99
TLI	0.51	0.98	0.98	0.93

Table 4: Construct reliability and descriptives – Study 2

Construct	Measures	Cronbach's Alpha (Loadings)	Mean (SD)
Self-Accountability		0.87	5.24 (1.17)
	I feel accountable to behave in an ethical manner	(0.80)	4.77 (1.68)
	I am strongly motivated to live up to my own self-standards	(0.92)	5.45 (1.17)
	I feel accountable towards my own self-standards	(0.92)	5.49 (1.17)
Anticipated Guilt		0.95	2.06 (1.49)
	If you were not to purchase this product from Harry Specters, how intensely would you feel remorse?	(0.96)	2.05 (1.51)
	If you were not to purchase this product from Harry Specters, how intensely would you feel guilt?	(0.96)	2.06 (1.56)
Anticipated Pride		0.95	3.44 (1.78)
	If you were to purchase this product from Harry Specters, how intensely would you feel pleased?	(0.95)	3.70 (1.82)
	If you were to purchase this product from Harry Specters, how intensely would you feel good about yourself?	(0.94)	3.16 (1.93)
	If you were to purchase this product from Harry Specters, how intensely would you feel pride?	(0.97)	3.47 (1.86)
Authentic Pride		0.96	3.21 (1.69)
	If I bought this product for myself I would feel successful.	(0.87)	2.87 (1.82)
	If I bought this product for myself I would feel like I am productive.	(0.88)	3.13 (1.88)
	If I bought this product for myself I would feel confident.	(0.91)	3.18 (1.82)
	If I bought this product for myself I would self-worth.	(0.91)	3.13 (1.93)
	If I bought this product for myself I would feel like I've achieved something	(0.93)	3.31 (1.97)
	If I bought this product for myself I would feel like I've accomplished something.	(0.93)	3.32 (1.89)
	If I bought this product for myself I would feel fulfilled.	(0.85)	3.49 (1.92)

Table 5. Path Coefficients – Study 2

Independent Variable	Dependent variable	Parameter Estimate	Standard Error
Model A:			
Self-accountability	Anticipated Guilt	0.22	0.08 (ns)
Anticipated Guilt	Purchase Intention	0.43	0.07 (***)
Model B:			
Self-accountability	Anticipated Pride	0.46	0.09 (***)
Anticipated Pride	Purchase Intention	0.70	0.05 (***)
Model C:			
Self-accountability	Anticipated Pride	0.46	0.09 (***)
Self-accountability	Anticipated Guilt	0.22	0.08 (ns)
Anticipated Pride	Purchase Intention	0.67	0.05 (***)
Anticipated Guilt	Purchase Intention	0.08	0.06 (ns)
Model E:			
Self-accountability	Anticipated Pride	0.46	0.09 (***)
Self-accountability	Authentic Pride	0.38	0.09 (***)
Anticipated Pride	Purchase Intention	0.76	0.08 (***)
Authentic Pride	Purchase Intention	-0.07	0.08 (ns)

*p<0.05; ** p<0.01; ***<0.001; ns=not significant

Table 6. Model goodness-of-fit statistics – Study 2

	Model A	Model B	Model C	Model E
Chi-square (df)	22.63 (df=1)	8.14 (df= 1)	7.86 (df= 1)	8.41 (df= 1)
RMSEA	0.30	0.17	0.17	0.18
CFI	0.64	0.96	0.97	0.98
TLI	-0.09	0.88	0.82	0.89

APPENDIX 1

Advertisements used for Study 1

Advertisements used for Study 2

GREAT PRODUCT • GREAT CAUSE

Harry Specters was imagined as a home of chocolate artists gathering to create hand crafted luxury chocolate with distinctive flavours. Today you are holding part of it in your hands - a lovingly award winning composition created in an environment that provides a positive change for young people with autism. Every bar, every chocolate that we make as a social enterprise contributes to making our society better – thank you and enjoy!

The best I can be: how self-accountability impacts product choice in technology mediated environments

Rowe, Zoe O.