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Maintaining the Moral Self: Direct vs. Indirect Compensatory Consumption to Affirm the Moral Self after Threat

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Abstract

Morality has been viewed as a core aspect of the self and even a basic psychological need. Strategies for regulating threats to moral self-views may therefore be distinct from regulating threats to other self-aspects. Consistent with research on the regulation of basic psychological needs, I hypothesized that threats to the moral self require direct as opposed to indirect strategies to effectively compensate for such threats and restore self-worth. I developed and tested the moral self-maintenance perspective using compensatory consumer behavior to regulate moral self-threats. Across five studies, I found evidence that threats to moral self-views increased purchase intentions for ethical consumer brands compared to both moral self-affirmation, and to negative, but non-moral self-threats; that moral self-threats led people to draw closer to a brand on an ethical basis than a positive, but non-moral basis; and that prosocial consumer spending exerted a more enduring effect on moral self-repair than self-indulgent consumer spending after moral threat. Importantly, I found that direct and indirect compensatory consumer strategies were not substitutable for regulating moral self-threats compared to other self-threats, as engaging with ethical products similarly quelled moral and intelligence threats; however, engaging with intelligence products was ineffective for moral self-repair. Finally, I observed that the self-importance of being a moral person magnified or at times created a boundary condition for the effectiveness of certain types of compensatory strategies for moral self-repair. Overall, findings provide preliminary support for the moral self-maintenance perspective and suggest continued research in this area.

Keywords: moral self, psychological needs, self-threat, symbolic self-completion, self-affirmation, compensatory consumption, within-domain, across-domain

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Chapter 1. Introduction

Viewing ourselves both clearly and positively is integral to healthy psychological functioning and well-being. Our self-concepts are constructed from a constellation of fundamental aspects of self-beliefs, of roles in important relationships and group memberships, and even of the possible selves we want to be (e.g., Markus & Ruvolo, 1989; McConnell, 2011). The self-concept can be viewed as a theory that requires an evidentiary basis—to believe something about the self, a person must have evidence that they possess that feature (Epstein, 1973). When a threat to an important aspect of the self arises, this creates an inconsistency between our current view of ourselves and who we ideally want or ought to be that is psychologically aversive (Higgins, 1987). We respond to such threats using a variety of compensatory behaviors to repair the self and restore a sense of self-worth, often by generating evidence that supports the idea that we possess that self-aspect.

One important aspect of the self-concept is the moral self. From a social cognitive view, one's moral identity is organized around moral traits purported to represent an individual's conception of a moral person that guides moral behavior when salient (Aquino & Reed, 2002; Aquino et al., 2009). To the extent that one's moral identity is central to their self-concept in turn directs self-regulatory mechanisms to maintain self-consistency and engage in moral action (see also, Hardy & Carlo, 2005; Walker & Frimer, 2007). Moral identity has been positively associated with prosocial and ethical behavior, moral judgments and expanding one's circle of moral regard, as well as negatively associated with moral disengagement (e.g., Aquino & Reed, 2002; Aquino et al., 2007; Reed & Aquino, 2003; see Hertz & Krettenauer, 2016; Jennings et al., 2015; Shao et al., 2008).

The self-importance of moral identity may certainly vary; however, viewing the self as moral is arguably an important part of everyone's sense of self. Researchers maintain that morality is a core aspect of the self (Strohminger & Nichols, 2014) and a great deal of work has confirmed that moral self-perceptions are key to moral judgment and behavior (see Conway, 2018). Recent research asserts that morality should be considered a basic psychological need (Prentice et al., 2019). Combined with morality's deep evolutionary connection with group inclusion and survival (e.g., Tomasello & Vaish, 2013), the moral self may thusly be distinct from other aspects of the self-concept, particularly in terms of the ways in which threats to the moral self need to be regulated to restore a sense of moral self-worth. But what constitutes a threat to the moral self? Morality is a broad term and threats to moral self-views can reflect discrepancies in a variety of moral qualities (loyalty, fairness, etc.). In this dissertation, moral self-threats are operationalized as the perpetration of social harm, as harm to others is a culturally universal tenet of morality (e.g., Turiel, 2000; Shweder et al., 1997) and a common theme in popular theories of moral psychology (Haidt & Graham, 2007; Haidt & Joseph, 2004; Gray et al., 2012; Janoff-Bulman & Carnes, 2013; Janoff-Bulman et al., 2009).

Following a threat to one's moral self-views, there are a number of strategies people use to generate evidence to themselves that they are good, moral people. One way might be through private ethical or prosocial behavior that provides direct, actual evidence that one is a virtuous person (e.g., Blanken et al., 2015; Conway & Peetz, 2012; Sachdeva et al., 2009; Yetzer, 2019). Another approach might be through planning for future ethical actions, thus creating a blueprint for how one can achieve prospective moral goals (e.g., Cascio & Plant, 2015; Yetzer & Gardner, 2023). An alternative method is to provide the self with symbolic evidence. According to

symbolic self-completion theory (Wicklund & Gollwitzer, 1981), when a self-defining identity has been threatened, people seek to "complete" the self by using available symbols that serve as evidence that one possesses the identity in question. Once a sense of identity completeness is achieved, individuals relax their identity-relevant strivings and self-worth is restored. Following moral threats, one way to acquire symbols that one is indeed a moral person is through ethical consumption.

Little research has focused on moral self-threats and compensatory consumer behavior. It has long been theorized that our possessions serve as extensions of the self (Belk, 1988; James, 1890), and by connecting with, purchasing, and forming positive behavioral intentions toward consumer brands/products that represent a threatened aspect of the self, we can acquire important symbols that demonstrate to the self that we possess that self-aspect (e.g., Braun & Wicklund, 1989; see Wicklund & Gollwitzer, 1981). While these *within-domain* strategies utilize consumer behavior aimed at repairing the threatened self *directly* (e.g., purchasing ethical products following moral self-threats), people may also engage in *across-domain* domain strategies that *indirectly* address self-threats through consumer behavior meant to distract from the self-threat (e.g., purchasing products that provide relaxation or are fun to escape moral self-threats) or strengthen valued identities unrelated to the threatened domain (see Mandel et al., 2017). For instance, according to *self-affirmation theory* (Steele, 1988; see Cohen & Sherman, 2006), people can compensate for threats to important self-aspects by bolstering alternative valued self-aspects or affirming cherished values; thus, consumer strategies that symbolize other positive aspects of the self-concept (e.g., purchasing a Rubik's cube as a symbol of intelligence) should ostensibly quell threats to moral self-views.

Yet, if viewing the self as sufficiently moral is indeed a basic psychological need (Prentice et al., 2019), it is reasonable to suggest that compensatory strategies should not be substitutable to adequately address moral self-threats. Research on basic psychological needs suggests that when thwarted, such needs elicit goal-oriented behavior designed to satisfy them, and that they are not derivative of other motives (Baumeister & Leary, 1995). This would indicate that threats to moral self-views may need to be regulated using direct, as opposed to indirect strategies to effectively repair the self and restore self-worth. Supporting this hypothesis, prior research found that the basic psychological need of belonging elicited a primacy and preference for regulatory strategies that directly addressed belonging threats, and that such strategies more effectively restored self-worth compared to bolstering intelligence (Knowles et al., 2010). Similarly, Woodyatt and Wenzel (2014) found that following a recent real-life personal transgression, only directly affirming the value violated by the transgression increased genuine self-forgiveness and self-trust; these effects were not found for those who affirmed other important values.

In the context of consumer behavior, these findings imply that direct compensatory strategies may be more effective for self-repair than indirect strategies following moral threats; however, the current identity and consumer behavior literature has not examined this question. The goal of the current research was to develop the *moral self-maintenance perspective* by investigating whether threats to moral self-views require direct regulatory strategies to effectively repair the self and restore psychological equanimity. Specifically, this work examined the hypotheses that following moral self-threats, individuals will be drawn to brands and products that symbolize the moral self as a direct compensatory response, that direct

compensatory consumer strategies will serve as more efficacious regulatory approaches for fostering moral self-repair than indirect strategies, and that this regulatory asymmetry will not be observed for other self-threats.

The Importance of Morality

Morality is a key lens through which we form impressions of other people, as well as ourselves. Research from the social cognition and attitudes literature has demonstrated that morality is the primary dimension in person perception by which we make character judgments and evaluations (Abele & Wojciszke, 2014; Brambilla & Leach, 2014; Brambilla et al., 2011, Fiske et al., 2007; Goodwin et al., 2014; Leach et al., 2007; Ray et al., 2021), and influences how we behave socially, emotionally, and physically with others (Brandt et al., 2014; Cikara et al., 2011; Ditto & Koleva, 2011; Ellemers et al., 2008; Ellemers & van den Bos, 2012; Mooijman et al., 2018; Skitka et al., 2005; Skitka & Morgan, 2009).

Existing work has also suggested that people carry the belief that deep down, there is a "true self" that appeals to all to behave in morally virtuous ways (Newman et al., 2015; Strohminger et al., 2017), and views morality as the most essential part of identity (Strohminger & Nichols, 2014). In a series of studies conducted by Strohminger and Nichols (2014), participants indicated that a partial brain transplant that created a cognitive deficit in or a drug that permanently altered a person's morality would change who that person was to a greater degree compared to other cognitive impairments (e.g., amnesia) or trait alterations (e.g., personality, memories, desires). Moreover, they found that people would perceive a friend they had not seen in 40 years as a different person if there was a change in their morality, and to a greater extent than changes in other aspects of who they are.

In addition to the primacy of morality in forming impressions of others, moral needs play a critical role in our lived experiences and well-being that may indicate its potential as a fundamental need. Recently, Prentice and colleagues (2019) have formulated an empirical argument for morality as a basic psychological need by supporting some of the key criteria for establishing psychological needs (see Baumeister & Leary, 1995). For instance, in terms of the criteria that basic needs direct cognitive processing and have affective consequences, they found that individuals used morality to identify several peak life experiences and that having moral needs met in these experiences was positively related to global indices of well-being. Likewise, moral needs were reported as not being met in unsatisfying life events, and to a similar extent as other important psychological needs. The authors highlighted that this pattern across one's life experiences and well-being metrics was further indicative of the prolific and enduring impact of morality. As for the criteria that basic needs should be nonderivative, Prentice and colleagues observed that morality was distinctive from other psychological needs given its unique predictive power on well-being, except for self-esteem. They subsequently examined the structural composition of moral and self-esteem needs and found them to be separate, but covarying latent constructs, thus indicating that the need to view oneself as moral was not simply reducible to the need to view oneself positively.

A great deal of evidence from the literature supports that we have a strong need to view ourselves as good, moral people (for reviews, see Conway, 2018; Jennings et al., 2015; Monin, 2007; Monin & Jordan, 2009). For example, people often exhibit a "holier than thou" bias and overestimate their own generosity (Epley & Dunning, 2000), as well as pinpoint and exaggerate past incidences when they acted morally when unethical alternatives were available (Effron et

al., 2012). People also have a tendency to resent others whose exemplary moral behavior may lay doubt on one's own morality or implicate the potential for moral reproach (Monin, 2007; Monin et al., 2008). There is, of course, individual variation in the extent to which being a moral person is a key characteristic of one's self-concept (Aquino & Reed, 2002, Blasi, 1983) or that moral attributes are integrated within other important self-aspects (Hannah et al., 2011; see McConnell, 2011); however, given the evolutionary role of morality in group inclusion and survival (e.g., Tomasello & Vaish, 2013), it is nonetheless arguable that humans generally need to maintain a view of themselves as sufficiently moral for both intraindividual and interpersonal reasons. Viewing ourselves as good group members who live up to consensually-shared moral values and behavioral norms helps maintain self-esteem (Yetzer, et al., 2018), and a failure to do so can have negative implications for our social/interpersonal approval and inclusion (e.g., Aquino & Reed, 2002; Ellemers & van den Bos, 2012), potentially threatening other fundamental needs (Baumeister & Leary, 1995).

Like other fundamental needs or core aspects of the self, moral self-views are vigorously defended when threatened (e.g., Tetlock et al. 2000). Because viewing the self as a moral person is an important source of self-worth and has implications for social inclusion, a generally universal form of moral self-threat is the perpetration of social harm through one's actions. Harm avoidance has been tied to morality across cultures (e.g., Turiel, 2000; Shweder et al., 1997) and is featured in several influential theories of moral psychology (Haidt & Graham, 2007; Haidt & Joseph, 2004; Gray et al., 2012; Janoff-Bulman & Carnes, 2013; Janoff-Bulman et al., 2009). While it might be tempting to question the veracity of this claim given the many instances of harm perpetration that readily come to mind in our daily lives and beyond, people engage in a

wide variety of psychological processes and behaviors that allow them to maintain moral self-views after (or buffer moral self-views prior to committing) such behavior.

Regulating Threats to The Moral Self

Research has examined a broad array of behaviors that people employ to affirm and maintain their moral self-image when their moral self-view has been threatened (e.g., Aquino & Reed, 2002; Conway & Peetz, 2012; Jordan et al., 2011; Tetlock et al., 2000; see Conway, 2018; Miller & Effron, 2010). For example, recalling recent immoral behavior increased individuals' willingness to volunteer and to help people in ostensible dilemmas, as well as donate more money to charity (Conway & Peetz, 2012). In another series of studies, Jordan and colleagues (2011) found that individuals who recalled unethical actions indicated stronger prosocial intentions and engaged in less cheating compared to those who recalled ethical actions (or positive non-moral, negative non-moral, and neutral actions [Study 2a]).

In contrast to these approach-oriented, problem-focused examples of compensatory behavior, people also engage in more self-defensive coping responses to protect their moral self-perceptions, including minimizing their moral failures through denial, motivated forgetting, or looking for available self-justifications that would diminish the role of the self in immoral behavior (for a brief review, see Conway, 2018; see also Sherman & Cohen, 2002). Additionally, individuals may use an assortment of moral disengagement strategies (e.g., euphemistic labeling, advantageous comparison, dehumanization) that allow them to justify morally transgressive and socially harmful behavior while maintaining a sense of moral agency (Bandura, 1991; Bandura et al., 1996; Shu et al., 2011). One of the most common self-defensive strategies is to simply derogate the source of threat (see Knowles et al., 2010; Sheppard et al., 2008). For instance,

when White people were given feedback that they were racially biased after completing the Implicit Association Task, they reported that the task was less credible, objective, valid, and useful (Vitriol & Moskowitz, 2021).

Regardless of whether people regulate moral self-threats with problem-focused or self-defensive strategies, people appear to be moral satisficers (Gigerenzer, 2010; Monin & Jordan, 2009; Tetlock et al., 2000; see also Tesser, 2000) who balance moral self-worth against the cost of cooperation. Once we obtain evidence that we are indeed moral people, we relax our moral strivings (e.g., moral licensing; see Blanken et al., 2015; Miller & Effron, 2010; see also Wicklund & Gollwitzer, 1981). For instance, Monin and Miller (2001) found that when people were given the opportunity to disagree with sexist statements or select a minority group member for a neutral work position, they were more likely to subsequently recommend a majority group member for a stereotypically-based work position—and this licensing effect was found even when an audience was unaware of the previous establishment of moral credentials.

Even planning for future ethical actions appears to relax moral strivings. In a series of studies conducted by Cascio and Plant (2015) participants embraced more racially-biased attitudes and made more racially-biased decisions regarding a job stereotypically suited for majority members after they first agreed to take part in an upcoming fundraising event. Using hypothetical scenarios, Khan and Dhar (2006) found that simply imagining engaging in volunteering, charitable, or helpful behavior licensed individuals to later choose more self-indulgent consumer options compared to utilitarian ones, thus demonstrating that the behavior that grants the moral license and the domain in which licensing effects occur need not be the same.

If current or future moral behavior is enough to establish moral credentials, perhaps even thinking about oneself in a morally favorable way is sufficient to elicit such effects. Sachdeva et al. (2009) found that individuals who thought about moral traits in a handwriting task (ostensibly creating moral credits) donated significantly less money to charity and were less cooperative than those who experienced a threat to their moral self-concept by thinking about immoral traits, or those who wrote about neutral traits. As evidence that this was driven by the activation of the self-concept and not just framing effects, these effects were only observed when participants wrote about themselves in the handwriting task as opposed to familiar others.

Other research provides mixed support for Sachdeva and colleague's findings. Conway and Peetz (2012) found that imagining recent past moral behavior led to moral licensing, with participants donating significantly less money to charity than those who recalled past immoral behavior; however, these differences did not extend to traits in the same way. In Study 3, participants wrote about past moral or immoral actions and were compared against participants who wrote about what having either moral or immoral identity traits would mean for their personality. In the identity trait conditions, people donated more money to charity than those in the past moral behavior condition (though less than those who recalled immoral actions), and interestingly, there was no difference in charity donation between the two identity trait conditions. These findings suggest that while thinking about ways that people have previously acted morally may license them to relax their moral strivings, reflecting on what moral attributes mean for one's moral character encourages behavior that is consistent with moral self-views.

Taken together, the literature shows that people may either engage in more self-defensive strategies to affirm the moral self following moral self-threats or take more direct actions to

convince oneself of their moral worthiness, so long as they can maintain balanced or consistent moral self-views.

A Primary Approach for Regulating Moral Self-Threats?

I have argued that the moral self may be an aspect of the self-concept that necessitates a more direct than indirect regulation approach when threatened. This hypothesis is based on the idea that morality is a core feature of the self-concept (Strohminger & Nichols, 2014); further, that viewing oneself as a person who adheres to moral values and behaviors set by important ingroups and larger society is not only an important source of self-worth (Yetzer et al., 2018), it has important implications for belonging and group acceptance (e.g., Ellemers & van den Bos, 2012). Given that morality is both strongly linked to belonging and posited to be a basic psychological need in and of itself (Prentice et al., 2019), it is reasonable to propose that threats to moral self-views require, or at least benefit more from direct compensatory strategies to resolve self-discrepancies, and to a greater extent than other aspects of the self where direct or indirect compensatory strategies might equally suffice.

Theories of self-esteem maintenance would suggest that different sources of self-esteem are interchangeable, and when one experiences a threat to self-esteem in one domain, they may effectively address the self-threat by bolstering self-esteem in another domain (Steele, 1988; Tesser, 2000; Tesser et al., 2000). Broad evidence for the substitutability of direct and indirect self-esteem maintenance strategies to restore self-worth has been found to be effective for a variety of self-threats (for a review, see Sherman & Cohen, 2006), and some research has shown that indirect strategies are often preferred, easier to accomplish, or more effective at reducing

self-defensive processes than direct strategies (e.g., Arndt & Greenberg, 1999; Blanton et al., 1997; Sivanathan et al., 2008; Tesser, 2000).

Interestingly, a core tenant of self-affirmation theory (Steele, 1988) is that global self-integrity and self-worth is achieved and maintained by sustaining a "phenomenal experience of the self…as having adaptive and moral adequacy…" (p. 289; see also Sherman & Cohen, 2006), which could be taken to imply that moral self-worth is the key to global self-worth. Bearing in mind the structurally distinct, yet covarying nature of morality and self-esteem observed by Prentice and colleagues (2019), it is reasonable to consider that self-esteem may be primarily constitutive of the ability to maintain a view of oneself as sufficiently moral. Steele further proposed that affirming aspects of the self that are more important to the self than the threat will restore psychological equanimity (see Galinsky et al., 2012), which might suggest that viewing the self as moral is the ultimate affirmation of the self, and that bolstering one's morality would be a stronger self-affirmation strategy overall than affirming other valued self-aspects. In support of this, Jordan and Monin (2008) found that when participants' rationality (or competence) was challenged though upward social comparisons of a confederate's behavior, they moralized their behavior to establish moral superiority over the other participant—an effect not observed for other self-enhancement opportunities that were simultaneously presented (i.e., intelligence, confidence, sense of humor). Thus, even from the self-affirmation literature, it may be inferred that moral self-views are a special or unique form of self-esteem that when threatened, would not be effectively regulated by substituting other forms of self-affirmation.

Despite this, some theorists view the moral self as dynamic and argue that moral self-regard may be reflexively defended in direct as well as indirect ways, such as through self-

affirmation (Monin & Jordan, 2009). In a study on the rejection of moral rebels, Monin and colleagues (2008) found that participants expressed greater resentment toward a participant who refused to complete a racist task based on principled grounds after they had already complied with the task; however, this effect was attenuated when participants were first given an opportunity to write about a recent experience that demonstrated a cherished value or personal attribute (Study 4). While this appears to support the idea that the moral self may be safeguarded by affirming self-integrity via bolstering an alternative valued self-aspect, the values written about by participants in the self-affirmation condition included traits of virtue (e.g., patience) and morality (e.g., loyalty, honesty, generosity, ability to help others, concern/care for someone in need). Consequently, this was not a clear test of indirect, non-moral self-affirmation to assuage moral self-threats.

A critical limitation of self-affirmation tasks to consider more generally is that the values people frequently write about in such tasks often include traits of moral relevance (e.g., kind, honest, friendly, compassionate, good-hearted and caring; see McQueen & Klein, 2006), and other research has found individuals' most important value to center on social life and religion (e.g., being loving, giving, sympathetic/empathetic, humble) to a greater extent than other types of values (Crocker et al., 2008). This makes it difficult to draw strong conclusions from the existing literature as to whether compensatory strategies to address moral self-threats are substitutable.

If maintaining moral self-views is a fundamental need over and above general self-esteem maintenance processes, then threats to such views may require domain-specific repair where substituting indirect approaches would not be inadequate. In other words, generally bolstering

self-esteem through alternate means should be an ineffective strategy that would likely not eliminate the need to regulate moral self-threats. For example, when the basic psychological need to belong (Baumeister & Leary, 1995) has been threated, it motivates individuals to compensate for such threats directly, as alternative compensatory approaches (e.g., affirming other positive aspects of the self) serve as ineffective substitutions (Knowles et al., 2010). In a series of studies conducted by Knowles and colleagues (2010), they found that belonging threats increased the proportion of threat-relevant (i.e., direct) compensatory strategies over threat-irrelevant (i.e., indirect) strategies to regulate such threats, whereas threats to intelligence increased the proportion of threat-irrelevant strategies for self-repair. While they also observed that individuals used both threat-irrelevant and threat-relevant strategies to regulate belonging threats, they detected a primacy and preference for threat-relevant strategies. In fact, the more threat-irrelevant traits that were affirmed following belonging threat, the more participants derogated the false feedback task suggesting that self-worth had not effectively been restored.

There is some preliminary evidence that might indicate moral self-threats necessitate direct compensatory strategies for adequate self-repair. Woodyatt and Wenzel (2014) investigated the effectiveness of different affirmation approaches on self-repair following interpersonal transgressions in two longitudinal studies. They found that following a recent real-life personal transgression, only directly affirming the value that was violated by the transgression led to greater self-trust and more genuine self-forgiveness immediately following the affirmation task, as well as a week later. These effects were not found for those who affirmed their belonging, nor for those who affirmed an important, but unrelated value. The authors did not make clear what types of important values participants wrote about; nonetheless, failing to

directly uphold the value violated by the transgression by using an indirect compensatory approach led to poorer self-repair outcomes. Notably, affirming social connection by recalling a time one felt loved or accepted was also insufficient for enduring self-repair after a personal transgression.

These studies provide a tentative foundation for the hypothesis that moral self-threats require more direct compensatory approaches to adequately repair the self and restore psychological equanimity, but a direct test of this proposition is necessary to further substantiate such claims. Moreover, utilizing methods that move beyond traditional self-affirmation manipulations would strengthen the generalizability of findings.

Identity Threats and Compensatory Consumer Behavior

While much of the previous discussion has reviewed biased cognitive processes and more overt behavior to compensate for moral self-threats, individuals can also resolve threats to the moral self by obtaining symbols that serve as direct evidence to support self-views of one's moral worth. According to *symbolic self-completion theory* (Wicklund & Gollwitzer, 1981), people define themselves according to valued identities, which in turn act as goals that motivate individuals to acquire identity-relevant symbols that define the self. Following threats to self-defining identities, people seek to "complete" the self by using available identity markers that serve as evidence that one does possess the identity in question. Achieving a sense of identity completeness subsequently relaxes individuals' identity-relevant strivings. One way we can obtain symbols that we possess an important identity is through consumer behavior.

An abundance of research has demonstrated that identity is a powerful motivator of consumer behavior (for reviews, see Bagozzi et al., 2021; Mandel et al., 2017; Reed et al., 2012;

see also Oyserman, 2009), and many studies have shown that individuals may achieve symbolic self-completion following self-threats through compensatory consumption. For example, Braun and Wicklund (1989) found that when valued identities were insecure (e.g., committed beginner tennis players, business students) participants reported stronger preferences for and evaluations of identity-relevant material symbols (e.g., branded tennis clothing, prestige/fashion of business-relevant travel). In another series of studies, Gao, Wheeler, and Shiv (2009) found that temporarily challenging one's confidence in their intelligence led individuals to choose an identity-bolstering product (i.e., fountain pen) over another option (i.e., M&Ms). They further observed that preferences for self-view bolstering products as opposed to products in a non-activated identity domain extended to self-doubt primes in other contexts (e.g., excitement) as well.

Compensatory Consumer Strategies for Self-Discrepancies. Although this research demonstrates that individuals are drawn to identity-relevant products to compensate for self-threats, Mandel and colleagues (2017) reviewed several compensatory consumer strategies that people use to resolve self-discrepancies—many of which illustrate some of the self-defense and affirmation processes discussed previously. In addition to the strategy of symbolic self-completion, which allows individuals to address discrepancies in a less overt manner, individuals may engage in more explicit consumer behavior to resolve the self-discrepancy (i.e., *direct resolution*). This involves specific goal-directed behavior, such as joining a gym or health club when one experiences a disparity between their current and ideal weight. Another strategy is *dissociation*, whereby people decrease their connection with or purchases of identity threat-related brands or products. This can include tactics like motivated forgetting. As an illustration,

Dalton and Huang (2014) found that identity threats led strongly-identified participants to avoid (or lose interest in) identity-related news, and increased motivated forgetting of identity-linked brands in a process dissociation task. This approach differs from the strategy of *escapism*, wherein individuals avoid thinking about self-discrepancies or distract themselves by redirecting their attention often toward more hedonic (i.e., pleasurable, relaxing) consumption outlets—for example, through "retail therapy" or binge-eating (e.g., Atalay & Meloy, 2011; Heatherton & Baumeister, 1991).

Finally, individuals can engage in *fluid compensation*. Rooted in *self-affirmation theory* (Steele, 1988, see Cohen & Sherman, 2006), individuals can engage in consumer behavior that affirms an alternate aspect of the self that is distinct from the threatened domain in order uphold self-integrity and reduce defensiveness. For instance, one of the studies conducted by Gao and colleagues (2009; Study 2a) found that affirming an alternative valued aspect of the self after threatening intelligence attenuated the effect of the threat on participants' tendency to choose an intelligence-related product. As another example, consumers bolstered their intelligence through economically rational consumption choices after experiencing an attractiveness threat by comparing themselves to idealized advertising models (Sobol & Darke, 2014). Fluid compensation is distinct from escapism in that it directs people to engage in consumer behavior that affirms an unthreatened aspect of their self-concept to actively repair self-integrity rather than "escape" the self to by engaging in consumption that *feels* good, ultimately leaving the self-threat unaddressed.

These compensatory consumer strategies can be more broadly categorized under two umbrellas: direct or indirect—or as termed in the consumer behavior literature, *within-domain* or

across-domain strategies (e.g., Brannon, 2019; Lisjak et al., 2014). Direct compensatory consumer strategies include direct resolution, symbolic self-completion, and dissociation as they are aimed at addressing the domain of self-threat in some way, whereas consumer strategies such as escapism and fluid compensation would be categorized as indirect compensatory strategies as they engage consumer behavior intended to bolster other valued self-aspects unrelated to the threatened domain, or to distract from/escape the self all together in order to circumvent the aversive feelings that result from self-threats.

Moral Identity Threats and Consumer Behavior. There is not a great deal of work focusing on moral self-threats and various compensatory consumer strategies; however, some research is beginning to explore the connection between moral identity and ethical consumer brands. Newman and Trump (2017) examined the use of ethical brands as a means of regulating guilt, and the extent to which this varies as a function of moral identity centrality. The researchers induced guilt (i.e., a moral self-threat) in their participants and found that guilt increased self-brand connections with a brand when it was framed as ethical, but not when the same brand was framed as unethical. Moreover, they found that strong self-connection with an ethical brand mediated the relationship between guilt and increased brand purchase intentions, and that this effect was stronger for those who placed high self-importance on being a person of moral character. That is, when feeling guilty, participants reported a greater likelihood of purchasing an ethical brand because they felt a strong personal connection to it, and this was especially the case for those where the private, internal aspect of moral identity was central to their self-concept. In a follow-up study, they found this effect was attenuated when guilty individuals were first given a chance to donate to charity. Interestingly, after recalling a guilt-

inducing experience, participants low on internal moral identity reported weaker self-brand connection with a brand when it was viewed as ethical (as opposed to unethical).

These studies demonstrate how individuals identify more strongly with ethical consumer brands to regulate guilt, particularly for those who place high importance on the internal dimension of moral identity (see Reed, 2004); however, they don't illuminate how the moral self is regulated more generally. The researchers only assessed direct compensatory consumer strategies (i.e., brand connection and consumer purchase intentions within the domain of threat), so we know very little about whether indirect compensatory consumer strategies (e.g., fluid compensation) would similarly work for moral self-repair after threat. As argued, the moral self is hypothesized to be one self-aspect that requires direct compensatory consumer behavior for effective self-repair when threatened. Therefore, research comparing direct vs. indirect consumer strategies for self-repair following moral self-threats is needed.

Taken together, there are several gaps in the psychological and compensatory consumer behavior literature that require further investigation. First, how do moral self-threats impact individuals' ethical consumption preferences and motivation to obtain ethical brands and products? How effective are these direct compensatory consumer strategies for restoring self-worth following moral self-threats compared to indirect compensatory consumer strategies? Finally, how does this compare to other self-threats—that is, is there something unique about the way moral self-threats need to be regulated?

Overview of Present Studies

The primary goal of this research was to develop empirical support for the *moral self-maintenance perspective*. If the moral self is the core of identity (Strohminger & Nichols, 2014)

and a basic psychological need (Prentice et al., 2019), then compensatory strategies that fail to directly affirm the moral self after threat should be less effective for self-repair and restoring psychological equanimity. That is, indirect strategies that affirm an alternate positive self-aspect or that are aimed at mood repair are not substitutable for strategies in the moral domain for adequately addressing moral self-threats. The present research studies induced moral self-threats via retrospective accounts of and the hypothetical perpetration of social harm, then investigated the motivation to consume ethical brands or products as compensation after a moral self-threat vs. other threats (Studies 1-2), as well as examined the core hypothesis that indirect compensatory strategies will be less effective for moral self-repair following moral threat as they fail to adequately affirm the self (Studies 3-5).

Compensatory strategies for this line of work were designed in the domain of consumer behavior for self-repair—that is, the use of consumer brands and products, connection with brands, and consumer spending behavior to affirm the moral self. I chose to focus on consumer brands and products as they help individuals clarify, maintain, and communicate their identity (e.g., Roese & Gardner, 2019; Schembri et al., 2010) and serve as identity-relevant symbols to support individuals' self-perceptions (Solomon, 1983) and address self-threats (e.g., Braun & Wicklund, 1989; Gao et al., 2009; for a review, see Mendel et al., 2017). Studies 1-2 examined people's motivation to obtain ethical brands/products as symbols of the moral self following moral threat compared to other threats. Study 3 investigated the effectiveness of engaging with identity-relevant (i.e., ethical or intelligence) products on self-repair after a moral self-threat vs. a threat to intelligence. Study 4 examined whether self-brand connection acted as a potential mechanism through which consumer brands symbolically affirm the moral self after threat.

Finally, in Study 5, I investigated both the immediate and enduring impact of prosocial vs. self-indulgent consumer spending behavior on self-repair after moral self-threat.

In Studies 3-5, evidence that self-repair had occurred was assessed via the extent to which one derogated the source of threat (i.e., the threat manipulations). As previously discussed, a common defense strategy against threatening information regarding important aspects of the self-concept (e.g., one's morality or intelligence) is to dismiss, challenge, or even attack the source of threatening information to repair the self and restore a sense of self-worth. However, if the self has been affirmed via an alternative strategy (e.g., symbolically through self-symbolizing products), then the need to be defensive against the source of threat should be diminished. Thus, less self-defensiveness indicates relaxed identity defense striving and serves as the proxy for self-repair, whereas greater self-defensiveness indicates that the self is still attempting to compensate for the threat.

Hypotheses

Across studies, four core hypotheses about moral self-threats and the use of direct vs. indirect compensatory strategies for moral self-repair after threat were explored:

Hypothesis 1: Moral self-threats will increase the motivation to obtain (i.e., positive behavioral intentions toward) consumer brands viewed as ethical, demonstrate stronger preference for ethical products, and report stronger self-brand connections with ethical brands/products, and to a greater extent than other threats (tested in Studies 1-4).

Hypothesis 2: Moral self-threats will increase the motivation to avoid (i.e., negative behavioral intentions toward) consumer brands viewed as unethical to a greater extent than other threats (tested in Studies 1 and 2).

Hypothesis 3: Regulating moral self-threats will differ from other self-threats in that they will be less adequately addressed by indirect compensatory consumer strategies. As such, direct compensatory strategies will have a stronger effect on moral self-repair after threat than indirect compensatory strategies (tested in Studies 3-5).

Hypothesis 4: The extent to which one places self-importance on possessing moral traits will magnify the effects of moral threats on consumer brand purchase intentions, as well as the effectiveness of direct vs. indirect compensatory consumer strategies for self-repair (moral identity moderation of the effects in H1, H2, and H3; tested in all studies).

Inclusion and Exclusion Criteria. Inclusion criteria across studies required that participants were born and currently resided in the United States to ensure familiarity with American consumer brands. Across studies, participants were consistently excluded from analysis who did not complete experimental manipulation tasks or did not comply with instructions, or who were extreme outliers (> 3SDs) on manipulation checks or dependent variables.

Additionally, because past research suggests that consumer's self-esteem may affect the types of consumer strategies they use to compensate for self-discrepancies (e.g., Mandel et al., 2017; see also Brown & Dutton, 1995; Crocker & Park, 2004), self-esteem was measured as a potential covariate. Experimental stimuli and measures used across all studies can be found in Appendix A, and descriptions and results of pilot tests are reported in Appendix B. Finally, all supplemental analyses, including models that control for potential covariates (i.e., mood, self-esteem, symbolic moral identity) are reported in Appendix C.

Chapter 2. Studies Examining Moral Self-Threats and Compensatory Consumer Strategies

2.1 Study 1: Moral Self-Threat and Ethical Purchase Intentions

Study 1 compared a moral threat to a moral affirmation control and looked at behavioral intentions toward consumer brands/products (referred to as brand[s] herein). Affirming one's moral identity should relax moral strivings (e.g., Jordan et al., 2011; Miller & Effron, 2010; Sachdeva et al., 2009), thereby creating an ideal comparison condition. Participants completed an autobiographical recall task where they either wrote about a recent time when they had acted inconsistently or consistently with moral traits. In an ostensibly separate study, participants then reported their perceptions of brand ethics and behavioral intentions toward a broad array of consumer brands.

I hypothesized that moral self-threats would increase positive behavioral intentions toward consumer brands viewed as ethical compared to affirming moral identity (H1). Mirroring this hypothesis, because unethical brands impede symbolic self-completion, it is also possible that moral threats may lead individuals to avoid brands they view as unethical as a compensation strategy (H2). Finally, I hypothesized that these effects would be moderated by moral identity wherein they would be magnified for those who place greater self-importance on being a person of moral character (H4).

2.1 Participants

One hundred sixty-two participants were recruited online from Prolific who took part in the study for financial compensation. Twenty-nine participants were removed for not completing the threat manipulation, leaving a final sample of 133 (M_{age} = 29.70, SD_{age} = 7.02). The sample was mostly female (51.9%; male: 44.4%, gender non-conforming: 2.3%, would rather not say:

1.5%), White (60.9%; Black: 10.5%, Asian: 8.3%, LatinX: 6.8%, Multiracial: 9.8%, Other or would rather not say: 3.8%), liberal (M = 2.82, SD = 1.50; 1 = *very liberal*, 7 = *very conservative*), and of average socioeconomic status when considering reported family household income (56.2% <$75k; $0-$350k) and individuals' perception of their family's socioeconomic status (M = 5.24, SD = 1.73; 1 = *lowest*, 10 = *highest*).

2.1 Materials and Procedure

Participants completed the study online and were told that researchers were interested in self-processes and consumer attitudes. First, participants were randomly assigned to one of two threat conditions: moral threat or moral affirmation. In the moral threat condition (n = 63), participants viewed several moral traits (e.g., *kind*, *generous*, *fair*) and were asked to recall a time in the past six months when they acted *inconsistently* with those traits. In the moral affirmation condition (n = 70), participants viewed the same traits and were asked to recall a time in the past six months when they acted *consistently* with those traits.

After writing for at least two minutes, participants then completed the Brief Mood and Introspection Scale (BMIS; Mayer & Gaschke, 1988). The BMIS is a 16-item measure used to assess mood; participants rated single mood items (e.g., "Peppy," "Grouchy") on a 4-point Likert scale (1 = *definitely do not feel*; 4 = *definitely feel*) based on how they felt in that moment. The BMIS creates a relative mood score where averaged ratings on "unpleasant" mood items (e.g., gloomy, nervous; α = .84) are subtracted from averaged ratings on "pleasant" items (e.g., calm, happy; α = .81). Scores range from positive to negative, with negative scores indicating feeling more unpleasant relative to pleasant. The BMIS was modified to include additional emotion items (*ashamed*, *guilty*) as a manipulation check to avoid arousing suspicion.

Consumer Brand Ratings. The next part of the survey assessed participants' consumer preferences via their behavioral intentions as a means of symbolic self-completion. To ensure a broad array of consumer brands, a two-phase pilot study ($N = 179$) was conducted to obtain a stimulus list of consumer brands that could be characterized as ethical, unethical, or neutral.[1] The nine consumer brands selected from the pilot were matched on three consumer contexts, including clothing (*Patagonia*, *Fast Fashion* [Forever 21/Shein], *Hanes*), brick-and-mortar retailers (*Whole Foods*, *Walmart*, *Walgreens*), and home-use products (*Method*, *Ziploc*, *Dial Soap*), and were displayed to participants in randomized order. Participants first rated how familiar they were with the brand on a 5-point scale (1 = *not familiar at all*; 5 = *extremely familiar*), then for each brand they indicated at least some familiarity with (more than not at all) they rated it on several 7-point (scale range: 3 to -3; 0 = neutral) bipolar scales (*good-bad*, *like-dislike*, *ethical-unethical*, *moral-immoral*). Participants also rated how much they agreed that purchasing or using the brand's products and/or services would make them feel good about themselves as a person on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).[2]

Behavioral intentions were assessed through multiple measures. Participants first reported the likelihood of purchasing products or using services from the brand on a scale from 1 (*extremely unlikely*) to 7 (*extremely likely*). Next, participants were given a base rate for a neutral brand, then asked how much more they would be willing to pay for the brand compared to an alternative brand—for example, participants would read, *If a non-Method all-purpose home cleaning product costs $2.50, how much more would you be willing to pay for Method all-*

[1] See Appendix B for pilot test details and results.
[2] Participants who reported no familiarity with a brand did not complete the consumer ratings for that brand.

purpose home cleaner, then respond if they would *not pay more than regular cost*, or would pay *5%*, *10%*, *25%*, *50%*, or *100%* more. In addition, they reported how much more they would be willing to pay to switch away from the brand to one whose values align with their own (*would not pay more/would not switch away*, *5%*, *10%*, *25%*, *50%*, *100%*). After completing these ratings, participants were asked to report if they had ever purchased the brand.

After the consumer brand portion of the survey, participants completed a 10-item measure of moral identity centrality (Aquino & Reed, 2002) that assessed both the private (i.e., internalization, α = .78; e.g., *It would make me feel good to be a person who has these characteristics*; *Being someone who has these characteristics is an important part of who I am*) and public (i.e., symbolization, α = .86; e.g., *The types of things I do in my spare time [e.g., hobbies] clearly identify me as having these characteristics; I am actively involved in activities that communicate to others that I have these characteristics*) aspects of moral identity. Participants were presented with a list of moral characteristics (e.g., *kind*, *generous*) and asked to rate their agreement with each statement on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Only the internalization subscale (referred to as *moral identity* herein) was of interest for moral self-defenses and was used in moderation analyses across studies, as moral self-perceptions are germane to self-repair over reputational repair or impression management motivations.[3] Afterward, they completed the Single-Item Self-Esteem Scale (SISE; Robins et al., 2001) where they rated the statement, *I have high self-esteem* on a scale from 1 (*not very true of me*) to 5 (*very true of me*) and a demographics questionnaire.

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[3] The symbolization subscale was used as a covariate in significant moral identity moderation models across all studies to test whether effects are unique to the self-importance of moral traits when accounting for the signaling of one's morality to others. Relevant covariate models are reported in Appendix C.

2.1 Results

The following analyses tested the main hypothesis that compared to moral identity affirmation, moral identity threats will lead to more positive behavioral intentions towards consumer brands perceived as ethical (H1), as well as the parallel hypothesis that such threats will increase negative behavioral intentions toward consumer brands perceived as unethical (H2). I also examined whether these effects would be magnified for those high on moral identity (H4).

Data Preparation and Analytic Plan

Bipolar ratings from the consumer rating task were recoded to be on 1 to 7 scales prior to averaging them to create other measures. Perceptions of brand ethics were assessed by creating a mean score of the extent to which individuals rated a brand as moral and ethical (r = .94).

A series of two-level multilevel models with random intercepts were conducted on the consumer brand outcomes using IBM SPSS Statistics (Version 29), as consumer brand ratings were nested within participants. Level 1 predictors (i.e., brand familiarity, perceptions of brand ethics) were mean centered within participants to capture within-person variance—for instance, the extent to which an individual rates a given brand as more or less ethical. Level 2 predictors capture the between-participant variance (i.e., the effects between participants); as such, potential secondary Level 2 predictors (e.g., moral identity) were grand mean centered prior to use in the models. Finally, moral threat conditions were re-coded (moral affirmation = -.5; moral threat = .5) and entered as a Level 2 predictor. Interactions involving threat condition were probed using simple slopes analyses with dummy-coded variables to spotlight each condition (moral threat = 1, 0; moral affirmation = 0, 1); continuous variables were probed at +1SD and -1SD of their respective within-centered (i.e., perceptions of brand ethics) or grand (i.e., moral identity) mean.

For all models, the moral threat contrast, perceptions of brand ethics, and their interaction were entered as predictors while controlling for within-person brand familiarity. [4]

Manipulation Checks

Independent t-tests conducted to assess the effect of moral threat condition on manipulation checks revealed that those in the moral threat condition reported feeling more ashamed (M = 1.95, SD = 0.97), $t(130) = -2.88$, $p = .005$, $d = -.50$, 95% CI [-.85, -.15], and guilty (M = 2.14, SD = 1.03), $t(112.93) = -4.16$, $p < .001$, $d = -.73$, 95% CI [-1.08, -.38] than those who affirmed their moral identity (M = 1.51, SD = 0.80; M = 1.49, SD = 0.77). In addition, they felt less pleasant (M = 2.92, SD = 7.09) than controls (M = 6.23, SD = 8.04), $t(131) = 2.50$, $p = .013$, $d = .44$ 95% CI [.09, .78]. These results indicate that the threat manipulation had the intended effect.

2.1 Consumer Behavioral Intentions

The outcome of interest is people's preference for brands that would help them restore threats to their moral self-views as reflected in their behavioral intentions, including their purchase intentions for brands they view as ethical (H1), how much more individuals would be willing to pay for brands they view as ethical (H1), and how much they would pay to switch away from brands they view as unethical (H2). [5]

Looking at individuals' reported likelihood of purchasing a brand, there was a main effect of brand ethics such that participants reported a stronger intention to purchase brands they

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[4] Consumer attitudes analyses for Studies 1-2b are reported in Appendix C.

[5] A principal component analysis revealed that the amount willing to pay for a brand, the amount willing to pay to switch away from a brand, and purchase intentions did not load as unidimensional factor, and are thus analyzed and presented as separate outcomes.

viewed as ethical, $b = .44$, $SE = .03$, $t(864.83) = 12.82$, $p < .001$, 95% CI [.37, .51]. Importantly, a significant moral threat x brand ethics interaction effect was also observed, $b = .24$, $SE = .07$, $t(864.75) = 3.45$, $p < .001$, 95% CI [.10, .37]; see Figure 1.[6]

Simple slopes analyses to probe the interaction indicated that brand ethics increased purchase intentions for individuals following a moral identity threat, $b = .56$, $SE = .05$, $t(865.93) = 11.01$, $p < .001$, 95% CI [.46, .66] to a greater degree than for those who affirmed their moral identity, $b = .32$, $SE = .05$, $t(863.42) = 6.95$, $p < .001$, 95% CI [.23, .41]. Supporting hypothesis 1, individuals who experienced a moral threat reported a stronger likelihood of purchasing a brand they viewed as highly ethical compared to those who affirmed the moral self, $b = .31$, $SE = .16$, $t(220.80) = 1.98$, $p = .049$, 95% CI [.00, .63]; however, there were no significant differences in purchase intentions between conditions when a brand was viewed as unethical, $b = -.21$, $SE = .16$, $t(216.82) = -1.33$, $p = .186$.

Figure 1

Study 1: Moral Threat by Perceptions of Brand Ethics Interaction on Purchase Intentions

[6] Groups did not differ on self-esteem, $t(130) = -0.51$, $p = .613$. Controlling for mood and self-esteem did not alter the significance of the interaction effect; see Appendix C.

When examining individuals' willingness to pay more for a brand, a significant effect of brand ethics was observed, $b = .25$, $SE = .02$, $t(863.95) = 10.36$, $p < .001$, 95% CI [.20, .30], such that people were willing to pay more for brands they viewed as ethical; however, there was no effect of moral threat condition, $b = -.06$, $SE = .11$, $t(131.46) = -0.50$, $p = .617$, nor an interaction, $b = .06$, $SE = .05$, $t(863.84) = 1.20$, $p = .229$. Similarly, perceptions of brand ethics significantly impacted the amount people would pay to switch away from a brand, $b = -.25$, $SE = .03$, $t(866.34) = -9.25$, $p < .001$, 95% CI [-.30, -.20], such that people would pay less to switch away from brands they view as ethical, indicating that such brands align with their own values; but again, there was no effect of moral threat condition, $b = -.03$, $SE = .16$, $t(133.13) = -0.21$, $p = .831$, nor an interaction, $b = -.02$, $SE = .05$, $t(866.27) = -9.25$, $p = .655$. Hypothesis 2, in the current study, was not supported.

2.1 Moral Identity Moderation

Given that identity threats are particularly motivating for individuals for whom the threatened self-aspect is central to who they view themselves to be, a moderation analysis with

moral identity was conducted to test the hypothesis that stronger purchase intentions for ethical brands following moral self-threat will be magnified for those high on moral identity (H4).[7] Results of the analysis included the previous effects observed, including brand ethics, $b = .42$, $SE = .04$, $t(858.85) = 12.08$, $p < .001$, 95% CI [.35, .49], and the moral threat x brand ethics interaction, $b = .21$, $SE = .07$, $t(858.80) = 3.05$, $p = .002$, 95% CI [.08, .35]. Additionally, a brand ethics x moral identity interaction was found, $b = .20$, $SE = .07$, $t(858.60) = 3.03$, $p = .003$, 95% CI [.07, .33]—see Figure 2.[8]

Figure 2

Study 1: Moral Identity by Perceptions of Brand Ethics Interaction on Purchase Intentions

[7] There was a significant difference between moral threat conditions on (internal) moral identity, $t(116.49) = -2.35$, $p = .021$, $d = -.40$, 95% CI [-.74, -.05]; those in the moral self-threat condition ($M = 4.64$, $SD = 0.43$) reported stronger self-importance of moral identity than those in the moral affirmation condition ($M = 4.41$, $SD = 0.70$).

[8] Groups did not differ on symbolic moral identity, $t(130) = -0.06$, $p = .949$; controlling for this variable did not alter results (see Appendix C).

Results of the simple slopes analysis indicated that perceptions of a brand's ethics were significantly more influential in setting purchase intentions for participants high on moral identity, $b = .54$, $SE = .05$, $t(860.10) = 11.50$, $p < .001$, 95% CI [.45, .64], than those low on moral identity, $b = .30$, $SE = .06$, $t(857.80) = 5.13$, $p < .001$, 95% CI [.19, .42], such that those high on moral identity had stronger purchase intentions for brands they perceived as highly ethical, $b = .38$, $SE = .15$, $t(226.55) = 2.48$, $p = .014$, 95% CI [.08, .69]; there was no impact of moral identity when brand ethics perceptions were low, $b = -.19$, $SE = .15$, $t(223.62) = -1.21$, $p = .227$. Although these two-way interactions were observed, the 3-way interaction was non-significant ($p = .931$), providing no support for hypothesis 4.[9]

2.1 Discussion

Study 1 provided initial evidence that ethical concerns loom larger in forming behavioral intentions for consumer brands/products following moral self-threat. Results supported the hypothesis that moral threats magnify people's motivation to obtain consumer brands they view as ethical to a greater extent than when individuals affirmed their moral self (H1), presumably because they are drawn to acquire identity-relevant symbols to "complete" the moral self when it has been threatened. While this difference was especially the case for brands people viewed as ethical, in contrast to hypothesis 2, it did not emerge when brands were viewed as unethical. One explanation for these findings is that obtaining ethical brands as moral symbols to complete the self reduces or resolves the self-discrepancy caused by moral self-threats—a discrepancy that did not need to be addressed for those who affirmed their moral self. Conversely, unethical brands

[9] Controlling for symbolic moral identity did not change results; see Appendix C.

pose as contrasting symbols that thwart moral self-goals; thus, it is reasonable to infer that people similarly wanted to avoid purchasing such brands as doing so might threaten (or continue to threaten) moral self-views.

Despite individuals expressing stronger purchase intentions for ethical brands after experiencing a moral self-threat, this did not extend to how much more they would be willing to spend to obtain these identity-relevant symbols or the amount they would be willing to spend to switch to a brand that aligns with their own values, thus providing mixed support for hypothesis 1. It is possible that the threat manipulation was not strong enough to influence these aims, or that both people attempting to obtain moral-self completeness, as well as those whose moral self was affirmed would similarly pay for ethical brands. Alternative explanations are considered further in the General Discussion.

Finally, I did not find support for the hypothesis 4 that effects obtained would be particularly strong for individuals who place great self-importance being a person of moral character. Rather, findings suggest that while individuals for whom being a person of moral character is central to their self-concept are particularly sensitive to considerations of brand ethics when setting their purchase intentions, so are people more generally after they experience a threat to their moral self-view. This implies that obtaining identity-relevant markers of morality are just as important for addressing general threats to the moral self as they are for individuals for whom being a moral person is an important part of how they view themselves.

2.2a Study 2a: Moral vs. Negative Self-Threats and Ethical Purchase Intentions

In Study 1, people reported a stronger motivation to obtain ethical consumer brands following moral self-threats compared to morally affirmed individuals. The goal of Study 2a was

to investigate whether these effects are specific to moral self-threats or if individuals are similarly drawn to ethical consumer brands as positive identity-relevant symbols that affirm the self more generally following other negative, but non-moral self-threats. Study 2a utilized the same research protocol as in Study 1, but compared a moral self-threat against a negative, non-moral self-threat.

Analogous to Study 1 predictions, it was hypothesized that following a moral self-threat, individuals would have more positive behavioral intentions toward brands they view as ethical compared to a negative, non-moral self-threat (H1), as well as the parallel hypothesis that individuals would have more negative behavioral intentions toward brands they view as unethical (H2). Finally, it was expected that these effects would be magnified for those who place high self-importance on moral traits (H4).

2.2a Participants

One hundred thirty Northwestern undergraduate students from the Psychology 110 participant pool took part in the study for partial course credit. Eleven participants were excluded for not completing the threat manipulation, leaving a final sample of 119 (M_{age}= 18.78, SD_{age} = 0.91). The sample was mostly female (55.5%; male: 44.5%), white (52.1%; Asian: 16.0%, Black: 10.1%, LatinX: 8.4%, Multiracial: 10.1%, Other or would rather not say: 3.3%), liberal (M = 2.32, SD = 1.19; 1=*very liberal*, 7=*very conservative*), and of higher socioeconomic status when taking family household income ($0-500k+; 66.2% >100K) and individuals' perceptions of their family's socioeconomic status (M = 7.01, SD = 1.90; 1=lowest, 10=highest) into account.

2.2a Materials and Procedure

The study protocol was the same as in Study 1; however, the self-threat manipulation compared a moral self-threat (n = 56) against a generally negative, non-moral self-threat (n = 63). Participants in the negative self-threat condition were presented with a list of negative, non-moral traits (e.g., *absentminded, clumsy, disorganized*) and asked to recall a time in the last six months when they acted *consistently* with those traits.

2.2a Results

The following analyses tested the hypotheses that compared to a negative, but non-moral self-threat, moral self-threats will increase positive behavioral intentions towards perceived ethical brands (H1) and increase negative behavioral intentions towards perceived unethical brands (H2); further, that these effects will be magnified by moral identity (H4).

Data Preparation

All analytic approaches utilized in Study 1 were repeated in these analyses. The contrast code for self-threat condition was used as a Level 2 predictor in the models (negative self-threat = -.5; moral self-threat = .5). Interactions were probed with simple slopes analyses involving dummy coded self-threat variables to spotlight each condition (negative self-threat = 0, 1; moral self-threat = 1, 0), and continuous variables were probed at +1SD and -1SD of their respective within-centered (i.e., perceptions of brand ethics) or grand (i.e., moral identity) mean.

Manipulation Checks

Independent t-tests assessed the effect of moral threat condition on single shame and guilt items and BMIS (pleasant: α = .81; unpleasant: α = .80) scores. There were no significant differences between conditions in reporting feeling ashamed, $t(117) = -0.76$, p = .450, or guilty,

$t(117) = 1.11$, $p = .271$, nor did they differ in relative mood, $t(117) = -1.15$, $p = .252$; thus, the manipulation similarly threatened participants in both conditions. Although it was generally anticipated that those who experienced a moral self-threat would report stronger feelings of shame and guilt, this was not formally hypothesized, particularly given that these emotions may also be felt as the result of goal incongruence or failure to meet an ego ideal (Lazarus, 1991)—this is addressed further in the discussion. Moreover, similar feelings of shame and guilt cannot explain the predicted interaction.

2.2a Consumer Behavioral Intentions

As in Study 1, there was a main effect of brand ethics on purchase intentions such that participants would be more likely to purchase brands they viewed as ethical, $b = .42$, $SE = .03$, $t(777.06) = 13.30$, $p < .001$, 95% CI [.36, .48]. The effect of self-threat condition was not significant ($p = .112$), but a trending self-threat x brand ethics interaction effect was observed, $b = .11$, $SE = .06$, $t(777.12) = 1.82$, $p = .069$, 95% CI [-.01, .24].[10]

Probing the interaction, simple slopes with spotlight analyses indicated a significant relationship between brand ethics perceptions and purchase intentions following a moral self-threat, $b = .48$, $SE = .05$, $t(777.35) = 10.28$, $p < .001$, 95% CI [.38, .57], that was descriptively stronger than when individuals experienced a negative, but non-moral self-threat, $b = .36$, $SE = .04$, $t(776.79) = 8.47$, $p < .001$, 95% CI [.28, .44]. Supporting hypothesis 1, individuals who experienced a moral self-threat reported a stronger likelihood of purchasing a brand they viewed as highly ethical compared to those who experienced a negative self-threat, $b = .30$, $SE = .15$,

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[10] Self-threat conditions did not differ on self-esteem, $t(117) = -1.11$, $p = .271$. Results hold when controlling for self-esteem; see Appendix C.

$t(216.71) = 1.97$, $p = .050$, 95% CI [-.00, .59]; there were no significant differences in purchase intentions between conditions when brands were viewed as unethical, $b = .04$, $SE = .14$, $t(242.21) = 0.31$, $p = .756$; see Figure 3.

Figure 3

Study 2a: Self-Threat by Perceptions of Brand Ethics Interaction on Purchase Intentions

In terms of individuals' willingness to pay more for a brand, a significant effect of brand ethics was observed, $b = .33$, $SE = .03$, $t(776.23) = 12.19$, $p < .001$, 95% CI [.28, .38]—as perceptions of brand ethics increased, people were willing to pay more for brands. There was no effect of self-threat condition nor an interaction (ps > .55). A similar pattern emerged when analyzing the amount individuals would pay to switch away from a brand toward one that aligns with their own values. There was a significant effect of perceptions of brand ethics, $b = -.37$, $SE = .03$, $t(776.16) = -12.13$, $p < .001$, 95% CI [-.43, -.31], such that people would pay less to switch

away from brands they view as ethical, indicating that such brands align with their own values; no additional effects were significant (*p*s > .50). Hypothesis 2 was again unsupported.

2.2a Moderation: Moral Identity

An additional multilevel model with moral identity as a moderator was conducted to investigate the hypothesis that effects of moral self-threat on purchase intentions would be magnified for those high on moral identity (H4).[11] The previous effects of brand ethics, $b = .42$, $SE = .03$, $t(776.09) = 13.00$, $p < .001$, 95% CI [.35, .48], and marginal self-threat x brand ethics interaction, $b = .12$, $SE = .06$, $t(776.13) = 1.82$, $p = .067$, 95% CI [-.01, .24], were observed. Additionally, a main effect of moral identity emerged, $b = .38$, $SE = .13$, $t(129.40) = 2.97$, $p = .004$, 95% CI [.13, .64], indicating that the self-importance of moral identity was positively associated with stronger purchase intentions for brands are in general. No additional effects nor interactions were significant (*p*s > .08); thus, hypothesis 4 was not supported.

2.2a Discussion

Results of Study 2a were consistent with findings from Study 1—notably, that moral self-threats increased individuals' purchase intentions for brands they viewed as ethical (H1), and to a greater extent compared to negative, but non-moral threats. As in Study 1, this difference was particularly the case for ethical brands, but not when brands were viewed as unethical (H2). These results again provide mixed support for hypothesis 1 as the effect of moral self-threats did not extend to one's willingness to pay more for an ethical brand, or the amount willing to pay to switch away from an unethical brand. Finally, the hypothesis that this effect would be magnified

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[11] Self-threat conditions did not differ on moral identity, $t(117) = 0.38$, $p = .703$.

for those high on moral identity was not supported (H4). In contrast to Study 1, there was a lack of evidence in this sample that those who place high self-importance on being a person of moral character were particularly sensitive to their considerations of brand ethics when setting their purchase intentions for consumer brands.

A potential limitation of Study 2a was that the self-threat conditions did not differ on shame and guilt in the manipulation check. However, while these emotions are often situated in the moral domain, they are not exclusive to it. Indeed, shame and guilt can be experienced as the result of goal incongruence or failing to live up to an ego-ideal (Lazarus, 1991). Looking at the types of experiences that undergraduates in the negative, non-moral self-threat condition wrote about in their open-ended responses, a central theme appeared in that many of the experiences were related to behaviors that negatively impacted educational goals and outcomes. Given that failures of academic achievement or performance can also induce shame and guilt (e.g., de Hooge et al., 2010), this may have attenuated some group differences. Moreover, this is likely to be intensified within the context of an academically competitive university such as Northwestern, where undergraduates' academic identity is likely a central or particularly salient aspect of their self-concept, and deeply tied to views of one's own competence. The difference in moral framing nonetheless exerted some expected differences; however, the interpretation of these differences remains tentative. Study 2b addressed through a conceptual replication of 2a using a different self-threat manipulation.

2.2b Study 2b: Conceptual Replication and Extension of Study 2a

The goal of Study 2b was to conceptually replicate Study 2a using an alternative identity threat manipulation to more cleanly discriminate between moral self-threats and negative, but

non-moral self-threats. A positive control was also included for comparison to draw stronger inferences about the use of ethical consumer brands for symbolic self-completion following self-threats. Study 2b also addressed an alternative explanation that it is the priming of morality that increased motivation to obtain ethical consumer brands and products as opposed to changes in the moral self-concept, per se (see Conway & Peetz, 2012; Sachdeva et al., 2009). To rule out this explanation, a moral other-threat condition was included to examine whether others' socially harmful behavior similarly impacts individuals' consumer behavioral intentions.

As in Studies 1 and 2a, it was hypothesized that threats to moral self-views would increase positive behavioral intentions toward brands people view as ethical (H1), as well as negative behavioral intentions toward unethical brands (H2), to a greater extent than those who experience a negative, but non-moral self-threat, as well as those who imagine others' socially harmful behavior; further, that these effects would be magnified for those who place high self-importance on being a moral person (H4).

2.2b Participants

Participants were 352 Northwestern undergraduate students from the Psychology 110 participant pool who participated in partial fulfillment of course research requirements. Of these participants, 19 were excluded for not completing the manipulation task, leaving a final sample of 333 (M_{age} = 19.01, SD_{age} = 1.02).[12] The sample was mostly female (56.2%; male: 40.2%, gender non-conforming: 2.7%, would rather not say: 0.9%), white (48.9%; Asian: 19.5%, Black: 8.7%, LatinX: 6.6%, Multiracial: 11.1%, Other or would rather not say: 5.1%), liberal (M = 2.45,

[12] An a priori power analysis conducted in G*Power (3.1) indicated a minimum sample size of 180 to find the medium effect size observed in the manipulation pilot.

SD = 1.15; 1 = *very liberal*, 7 = *very conservative*), and of higher socioeconomic status when considering reported family household income (68.4% >$100k; $0-$500k+) and individuals' perception of their family's socioeconomic status (*M* = 7.36, *SD* = 1.82; 1 = *lowest*, 10 = *highest*).

2.2b Materials and Procedure

Participants completed the study online and were told that they would be engaging in several unrelated tasks. In the first part of the study, participants were told that the researchers were interested in imagination skills and that they would select a behavior from a random list of four, then write a detailed paragraph about how they personally would perform that behavior. Participants were given the following example:

> *Act athletic in a physical competition, act creative in your daily life, act comedic in an unusual situation*
>
> To write about acting athletic, you might say,
>
> To act athletic in a physical competition, I would first warm up my muscles so I can do some light active stretching before the competition starts. The stretch of my muscles feels good as I breathe deeply through each one. I sharpen my mental focus on the relay I am about to compete in by visualizing the race and what each of my body parts will do throughout it. I will breathe in through my nose and out through my mouth while pushing off the balls of my feet while running. When I feel the baton touch my hand, I will tighten my grip, then narrow my focus to the space in front of me while pushing with every fiber in my muscles toward the finish line…

Participants were then randomly assigned to one of four threat conditions: negative (non-moral) self-threat, moral self-threat, moral other-threat, or a positive control. In the *negative self-threat* condition, participants were presented with the following list of actions: *Act forgetful when thinking about what you did last week, act impractical considering a solution to a problem, act impulsive when shopping, act indecisive about choosing a restaurant or activity*. Importantly,

the behaviors here were designed to be more general, negative self-threating options that move further away from traits that might clearly threaten competence.[13] In both the *moral self-threat* and *moral other-threat* conditions, participants were presented with the following list of actions: *Act uncaring toward a person who is sad, act indifferent toward a person in pain, take greedily from a person in need, act mean toward another person*; however, those in the *moral other-threat* condition were asked to write a story about how another Northwestern student would perform the behavior—that is, they would describe how someone else would enact socially-harmful behavior. For the *positive control* condition, participants are given the following list of behaviors: *Act responsible at work or school, act creative in your daily life, act comedic in an unusual circumstance, act well-informed with others*. After viewing the behavior list, participants then selected one to write vividly about how they (or someone else) would perform that behavior.

Following the writing task, participants completed the modified BMIS (pleasant: $\alpha = .81$; unpleasant: $\alpha = .81$) as a manipulation check, as well as the State Shame and Guilt Scale (SSGS; Marschall, et al., 1994). The SSGS is a 10-item indirect measure that captures more of the phenomenological feelings of self-conscious moral emotions, with five items that assess shame (e.g., *I feel like I am a bad person*, *I feel humiliated, disgraced*) and five that assess guilt (e.g., *I feel tension about something I have done*, *I feel like apologizing, confessing*) on a scale from 1 (*not feeling this way at all*) to 5 (*feeling this way very strongly*). Responses for each subscale are summed to form composite scores, each ranging from 5 to 25 (SSGS-shame: $\alpha = .81$; SSGS-

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[13] Results of a pilot test ($N = 108$) found that the negative self-threat and moral self-threat did not differ in relative mood, but significantly differed on two measures of shame; see Appendix B.

guilt: α = .81). Participants then completed the consumer brand rating tasks, the moral identity measure, SISE, and a demographics questionnaire.

2.2b Results

Unless otherwise specified, all analytic approaches utilized in Studies 1 and 2a were repeated here. For this study, three linear contrast codes were created to analyze the planned contrasts between threat conditions. The first contrast compared the positive control (-.75) against the experimental conditions (.25) to serve as a manipulation check, the second contrasted the negative self-threat (-.5) against the moral self-threat (.5) as the core comparison of interest, and the third compared the moral other-threat (-.5) against the moral self-threat (.5) to address the alternative hypothesis regarding changes in the moral self-concept. Interactions involving threat conditions were probed using simple slopes analyses with dummy coded variables to spotlight each group in the contrast.

The following analyses tested the hypotheses that compared to a negative, non-moral self-threat, or imagining others' immoral behavior, moral self-threats would increase positive behavioral intentions towards perceived ethical brands (H1), increase negative behavioral intentions toward perceived unethical brands (H2), and that these effects would be magnified for those high on moral identity (H4).

Manipulation Checks

One-way ANOVAs with planned were conducted on BMIS scores, single-item shame and guilt, and SSGS shame and guilt scores. Overall, it was hypothesized that self-threat conditions would feel relatively less pleasant, more ashamed, and more guilty than controls. More specifically, that the moral self-threat condition would feel these emotions more strongly

than the negative self-threat or moral other-threat conditions. Descriptive statistics for the threat conditions on each of the manipulation check items are displayed in Table 1.

Table 1

Study 2b: Threat Condition Descriptives for Mood and Moral Emotion Manipulation Checks

	Relative Mood	Shame	Guilt	SSGS-Shame	SSGS-Guilt
Threat Condition	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Positive Control (*n* = 81)	1.79 (7.19)	1.63 (0.70)	1.77 (0.71)	9.00 (4.21)	9.02 (4.06)
Negative-Self (*n* = 83)	0.80 (6.97)	1.72 (0.89)	1.87 (0.92)	9.22 (4.40)	9.58 (5.22)
Moral-Other (*n* = 85)	-0.19 (8.06)	1.88 (0.91)	1.89 (0.89)	9.86 (4.24)	9.92 (4.88)
Moral-Self (*n* = 84)	1.04 (8.20)	1.96 (0.91)	2.13 (0.98)	9.64 (4.65)	11.00 (4.90)

Note. Relative mood = BMIS scores (pleasant scores – unpleasant scores). Shame and guilt = single-item scores. SSGS = State Shame and Guilt Scale (range: 5-25).

Results of the analyses found that experimental threat conditions significantly differed from controls on single-item shame, $t(329) = 2.07$, $p = .039$, $d = .20$, 95% CI [.01, .39], and marginally on single-item, $t(329) = 1.77$, $p = .078$, $d = .17$, 95% CI [-.02, .36], and indirect, $t(329) = 1.86$, $p = .063$, $d = .18$, 95% CI [-.01, .37], measures of guilt. Those in the moral self-threat condition differed from those in the negative self-threat condition on guilt, $t(329) = 1.93$, $p = .054$, $d = .14$, 95% CI [-.01, .29], indirect guilt, $t(329) = 1.92$, $p = .056$, $d = .14$, 95% CI [-.01, .29], and marginally on shame, $t(329) = 1.82$, $p = .069$, $d = .13$, 95% CI [-.02, .29]; however, they did not differ from those in the moral other-threat condition on these outcomes (ps > .08).

Finally, none of the threat condition contrasts for relative mood nor SSGS shame scores were significant (*p*s > .20).

These results indicate that the threat manipulation generally had the intended effect, particularly in terms of differentiating self-conscious moral emotions between the moral self- and negative self-threat conditions. In contrast to hypotheses, the moral other-threat condition did not differ from the moral self-threat condition on these outcomes.

2.2b Consumer Behavioral Intentions

In line with the previous studies, behavioral intentions were assessed through purchase intentions, how much more individuals would be willing to pay for the brand, and how much they would pay to switch away from the brand to one that aligns with their own values.

Purchase Intentions. Multilevel models using the individual threat condition contrasts were conducted to assess the effect of threat condition on purchase intentions. First, in comparing the experimental conditions against positive controls, there was a main effect of brand ethics, $b = .43$, $SE = .02$, $t(2180.58) = 22.81$, $p < .001$, 95% CI [.40, .47], and importantly, a threat condition x brand ethics interaction, $b = .14$, $SE = .04$, $t(2180.37) = 3.37$, $p < .001$, 95% CI [.06, .23]. Simple slopes analyses indicated that perceptions of brand ethics was a significant predictor of purchase intentions for those in the experimental conditions, $b = .47$, $SE = .02$, $t(2180.85) = 21.10$, $p < .001$, 95% CI [.43, .51], and to a greater extent than controls, $b = .33$, $SE = .04$, $t(2180.06) = 8.94$, $p < .001$, 95% CI [.25, .39], wherein those in the experimental threat conditions reported being significantly less likely to purchase brands they viewed as unethical than controls, $b = -.26$, $SE = .02$, $t(533.46) = -2.52$, $p = .012$, 95% CI [-.46, .-.06]. There was no difference between conditions when brands were viewed as highly ethical, $b = .01$, $SE = .11$,

$t(485.17) = -0.06$, $p = .952$. These findings indicate that experiencing some type of threat successfully heightened the role of ethics perceptions on purchase intentions compared to controls.

For the core comparison that experiencing a moral self-threat would increase individuals' purchase intentions for brands they view as ethical compared to those who experienced a negative, but non-moral self-threat, there were significant main effects of threat contrast and brand ethics that were qualified by a significant threat condition x brand ethics interaction—effect estimates are presented in Table 2.[14]

Table 2

Study 2b: Results of Simple Slopes Analysis of Negative Self- vs. Moral Self-Threat by Brand Ethics Interaction on Purchase Intentions

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.70	.06	79.70	174.76	[4.59, 4.82]	< .001
Familiarity	.77	.04	20.66	1205.65	[.70, .85]	< .001
Threat Condition	-.28	.11	-2.40	161.27	[-.50, -.05]	.018
Brand Ethics	.43	.03	15.54	1088.41	[.38, .49]	< .001
Threat x Ethics	.16	.06	2.80	1087.39	[.05, .26]	.005
Simple Slopes Analysis						
Moral Self-Threat: Ethics	.51	.04	12.82	1642.40	[.43, .59]	< .001
Neg Self-Threat: Ethics	.36	.04	9.26	1087.64	[.28, .43]	< .001
High Ethics: Threat	-.10	.14	-0.71	242.27	[-.38, .18]	.481
Low Ethics: Threat	-.40	.13	-3.05	267.05	[-.66, -.14]	.003

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Threat condition (Threat) = threat contrast (negative self-threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Simple slopes analyses were probed using dummy-

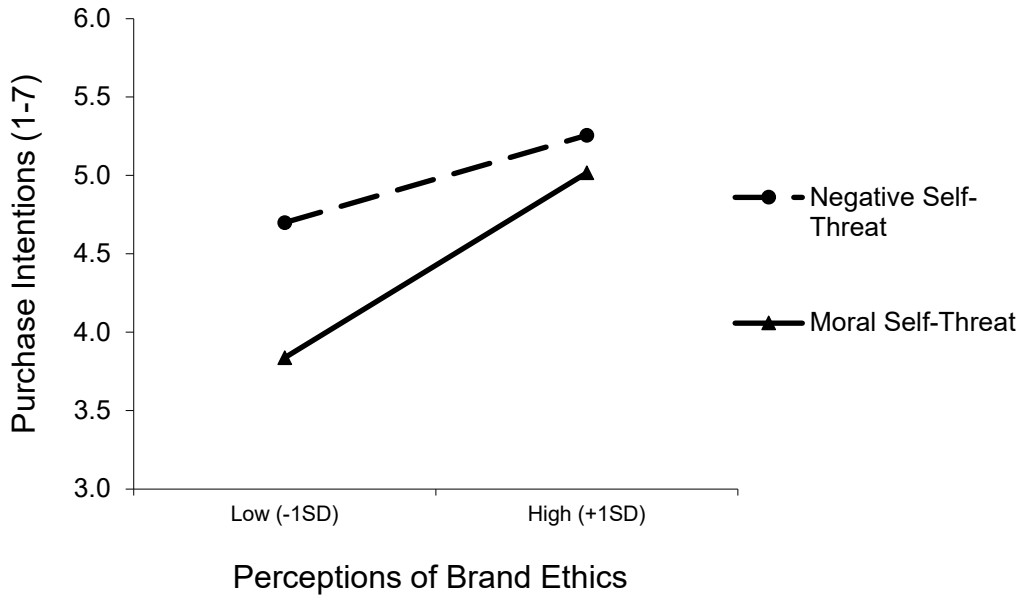
[14] Groups did not differ overall on self-esteem, $F(3, 327) = 0.81$, $p = .487$, or in pairwise comparisons ($ps > .15$). Controlling for self-esteem did not change the results; see Appendix C.

coded threat condition variables (0, 1; 1, 0), and ± 1SD of the within-person centered mean of brand ethics. Unstandardized estimates are presented.

Supporting hypothesis 2, those who experienced a moral self-threat were less likely to purchase brands they viewed as unethical compared to those who experienced a negative self-threat; see Figure 4.

Figure 4

Study 2b: Negative Self- vs. Moral Self-Threat by Brand Ethics Interaction on Purchase Intentions



Finally, in comparing the two moral threat conditions, a main effect of brand ethics was observed, $b = .53$, $SE = .03$, $t(1088.08) = 19.05$, $p < .001$, 95% CI [.48, .58], as well as a marginal effect of threat condition, $b = -.20$, $SE = .11$, $t(163.42) = -1.86$, $p = .064$, 95% CI [-.41, .01]; however, the threat contrast x brand ethics interaction was not significant ($p = .526$). The hypothesis that the effect of writing about one's own socially harmful behavior on purchase

intentions for ethical and unethical brands would be stronger compared to writing about another Northwestern student's harmful behavior was not supported.

Willingness to Pay. The next series of multilevel models looked at the effect of threat condition on how much individuals would be willing to pay for a brand. Comparing the experimental threat conditions to controls, there were significant main effects of threat condition, b = -.20, SE = .08, t(327.63) = -2.66, p = .008, 95% CI [-.35, -.05], and brand ethics, b = .31, SE = .02, t(2191.36) = 20.07, p < .001, 95% CI [.28, .34], that were qualified by a marginal threat x brand ethics term, b = -.07, SE = .03, t(2191.15) = -1.92, p = .055, 95% CI [-.13, .00]. Simple slopes analyses with dummy-coded variables indicated that perceptions of brand ethics significantly predicted willingness to pay more for a brand for those in the positive control condition, b = .36, SE = .03, t(2190.88) = 12.15, p < .001, 95% CI [.30, .42], and this was unexpectedly somewhat stronger than for those in the experimental conditions, b = .29, SE = .02, t(2191.61) = 16.22, p < .001, 95% CI [.26, .33]. In contrast to expectations, when perceptions of brand ethics were high, those in the control condition were willing to pay more for a brand compared to those in the experimental conditions, b = -.33, SE = .09, t(485.51) = -3.53, p < .001, 95% CI [-.52, -.15]; there was no difference between conditions when ethical perceptions were low, b = -.12, SE = .09, t(541.95) = -1.35, p = .178.[15]

For the remaining two threat contrasts, there were main effects of brand ethics when comparing negative- and moral self-threats, b = .28, SE = .02, t(1093.08) = 13.87, p < .001, 95% CI [.24, .32], and when comparing moral self- and other-threat conditions, b = .30, SE = .02,

[15] The interaction term remains constant when controlling for self-esteem, b = -.07, SE = .03, t(2181.54) = -1.89, p = .060, 95% CI [-.13, .00].

$t(1091.33) = 13.56$, $p < .001$, 95% CI [.25, .34], as well as a significant difference between moral threat conditions, $b = -.25$, $SE = .10$, $t(167.91) = -2.57$, $p = .011$, 95% CI [-.45, -.06], such that those in the moral other-threat condition were willing to pay more for brands in general (regardless of brand ethics) than those in the moral self-threat condition. No other effects in these models were significant (ps > .28).

Pay to Switch Away from a Brand. Finally, how much participants would be willing to pay to switch away from a brand to one that aligns with their own values was investigated through a series of models using the three threat contrasts. As a reminder, the low end of the scale indicated that one would not pay to switch away from the brand as it aligned with their values, so lower scores on this outcome are more indicative of sticking with a brand because they symbolize one's values, whereas higher scores indicate that one would pay more to move away from the brand due to a values mismatch.

First, comparing the control condition to the experimental conditions, there were main effects of threat condition, $b = -.23$, $SE = .12$, $t(329.28) = -2.00$, $p = .046$, 95% CI [-.46, -.00], brand ethics, $b = -.40$, $SE = .02$, $t(2188.66) = -22.22$, $p < .001$, 95% CI [-.44, .37], and a significant threat condition x brand ethics interaction, $b = -.08$, $SE = .04$, $t(2188.51) = -1.99$, $p < .046$, 95% CI [-.16, -.00].[16] Simple slopes analyses indicated that brand ethics perceptions were important for those in the control condition, $b = -.34$, $SE = .03$, $t(2188.31) = -9.84$, $p < .001$, 95% CI [-.41, -.27], however, to a descriptively lesser extent than for those in the threat conditions, $b = -.42$, $SE = .04$, $t(2188.83) = -19.95$, $p < .001$, 95% CI [-.46, -.38], such that participants in the experimental threat conditions were less likely to pay to switch away from an ethical brand, b = -

[16] The interaction drops to marginal significance when controlling for self-esteem; see Appendix C.

.28, *SE* = .12, *t*(469.02) = -2.36, *p* = .019, 95% CI [-.52, -.05], compared to participants in the control condition; there were no group differences when brands were viewed as unethical, *b* = -.17, *SE* = .14, *t*(428.33) = -1.26, *p* = .210.

When assessing differences between negative self- and moral self-threat conditions, only a main effect of brand ethics emerged, *b* = -.38, *SE* = .02, *t*(1090.47) = -15.73, *p* < .001, 95% CI [-.43, -.33] (all other *p*s > .16). When comparing moral threat conditions, in addition to a main effect of brand ethics, *b* = -.42, *SE* = .03, *t*(1090.97) = -16.29, *p* < .001, 95% CI [-.47, -.37], a threat condition x brand ethics interaction was observed, *b* = .14, *SE* = .05, *t*(1090.61) = 2.81, *p* = .005, 95% CI [.04, .25]—see Figure 5.[17]

Figure 5

Study 2b: Moral Self- vs. Moral Other-Threat by Brand Ethics Interaction on Amount Willing to Pay to Switch Away from a Brand to One Whose Values Align

[17] Controlling for self-esteem did not alter results; see Appendix C.

Note. Results of the simple slopes analysis of the moral self-threat vs. moral other-threat contrast by brand ethics interaction on the amount willing to pay to switch away from a brand to one whose values align with one's own. The dependent variable was assessed on a 6-pt Likert scale with 1 = *I would not switch/this brand's values align with my own*, 2 = *5% more*, 3 = *10% more*, 4 = *25% more*, 5 = *50% more*, 6 = *100% more*. 0% on the graph = *I would not switch/this brand's values align with my own*.

In probing the interaction, simple slopes analyses revealed that brand ethics played a significant role in the amount willing to spend to switch away from a brand for those in the moral other-threat condition, b = -.49, SE = .04, t(1090.49) = -13.69, p < .001, 95% CI [-.56, -.42], and in contrast to expectations, to a greater extent than those in the moral self-threat condition, b = -.35, SE = .04, t(1644.17) = -9.65, p < .001, 95% CI [-.42, -.28], wherein when brands were viewed as unethical, those in the moral other-threat condition were willing to pay more to switch

away from the brand compared to those in the moral self-threat condition, b = -.35, SE = .16, t(214.83) = -2.15, p = .032, 95% CI [-.67, -.03]; there were no differences when brands were viewed as ethical, b = -.04, SE = .14, t(244.83) = -0.28, p = .778.

To summarize, people who experienced a threat (regardless of source) were highly sensitive to the ethics of a brand when considering how much they would pay for a brand, as they were less willing to switch away from brands they viewed as ethical to a greater extent than those who did not experience a threat. Unexpectedly, brand ethics especially mattered for those in the moral other-threat condition, indicating they would pay approximately 2% more than those in the moral self-threat condition to switch away from brands they viewed as unethical.

Overall, the findings for consumer brand behavioral intentions are mixed. In partial support of hypothesis 2, people expressed a stronger motivation to steer clear of unethical brands following moral self-threats compared to negative self-threats; however, this did not extend to all behavioral intentions. Further, in contrast to hypotheses, these differences were not observed when compared to those who wrote about another Northwestern student's socially harmful behavior—these participants were also willing to pay more money to switch away from brands they viewed as unethical. Finally, there was no support for hypothesis 1 in this sample—people generally held similar positive behavioral intentions toward brands they viewed as ethical.

2.2b Moderation: Moral Identity

The hypothesis that moral identity would magnify any differences in outcomes is only relevant when comparing a moral threat condition against a non-moral threat condition. Therefore, a moral identity moderation analysis was conducted on the negative self-threat x

moral self-threat interaction on purchase intentions.[18] The previous main effects of threat condition, b = -.26, SE = .11, t(158.15) = -2.29, p = .023, 95% CI [-.49, -.04], and brand ethics, b = .44, SE = .03, t(1073.12) = 15.60, p < .001, 95% CI [.38, .49], as well as the threat condition x brand ethics interaction, b = .15, SE = .06, t(1072.14) = 2.66, p = .008, 95% CI [.04, .26], were observed. Additionally, a main effect of moral identity emerged, b = .30, SE = .13, t(160.94) = 2.28, p = .024, 95% CI [.04, .55], such that the stronger the self-importance of moral traits, the stronger purchases intentions for brands in general, regardless of brand ethics perceptions; no other effects were significant (ps > .26). Therefore, hypothesis 4 was not supported as moral identity did not moderate the effect of moral self-threat on purchase intentions.

2.2b Discussion

The goal of Study 2b was to replicate the moral self-threat effect from Study 2a, as well as extend to rule out an alternative explanation that it is the activation of morality that is driving effects rather than a change to the moral self-concept, per se. As in Study 2a, people had stronger future purchase intentions for brands perceived as ethical; however, this did not differ between groups (no support for H1). Rather, when one experienced a threat to their moral self-views, they were keen to avoid brands they viewed as unethical to a greater extent than experiencing a negative self-threat. This finding partially supports the parallel hypothesis (H2) that moral self-threats lead people to avoid brands or products that are the symbolic antithesis of morality, presumably because they thwart moral self-goals. These results complement the previous findings as they demonstrate that brand ethics matter a great deal more to people who have

[18] Groups did not differ on moral identity overall, F(3, 326) = 0.40, p = .753, nor between negative- and moral self-threat conditions specifically (p = .280).

experienced a moral self-threat when they make decisions about whether purchasing from a brand is in line with their identity goals. In line with the previous studies, the impact of moral self-threats did not appear to extend to how much one would be willing to pay for a brand or the amount willing to pay to switch away from a brand.

As in previous studies, effects obtained were not magnified for those who place high self-importance on being a person of moral character (H4), indicating that the desire to avoid unethical brands was pronounced for those who recently experienced a moral self-threat irrespective of how central moral identity is to their self-concept.

Finally, the expectation that those in the moral self-threat condition would also differ from those in the moral other-threat condition was not observed. Thus, Study 2b failed to rule out an alternative explanation that the effects obtained were due to the activation of morality rather than a change in the moral self-concept as behavioral intentions towards brands generally did not differ as a function of whether individuals wrote about how they or another Northwestern student would perform socially harmful behaviors. It is possible that using an ingroup member (instead of a stranger) may have blurred the distinction between self and non-self. This result is explored in more detail in the General Discussion.

2.3 Study 3: Direct vs. Indirect Compensatory Strategies—Identity-Symbolic Products

Studies 1-2b support a general tendency for individuals to compensate for threats to moral self-views using a direct compensatory strategy—that is, the motivation to obtain consumer brands or products that are moral self-symbolizing, or to avoid those that thwart moral self-goals. While the data from the previous studies provide initial evidence regarding how people approach ethics-based consumption following moral self-threats, how this subsequently

affects self-repair is still an open question. Moreover, because these prior studies limited the scope of consumer brands and products to the ethical domain, the question of whether using indirect compensatory strategies (e.g., purchasing something that affirms a positive, but not necessarily ethical feature of the self) would equally suffice in self-repair after moral self-threats remains unanswered.

Indeed, a self-affirmation perspective (Steele, 1988; Cohen & Sherman, 2006) would suggest that bolstering other valued aspects of the self-concept should similarly soothe such threats and quell identity-striving motivations, which has been found to be an effective strategy for addressing threats to other positive aspects of the self (e.g., Knowles et al., 2010; Sobol & Darke, 2014). However, if viewing oneself as a moral person is a core aspect of the self (Strohminger & Nichols, 2014; Prentice et al., 2019), then this alternate strategy should be less effective for repairing the self after threat as fundamental needs require threat-relevant solutions (Knowles et al., 2010).

Study 3 addressed this possibility by testing a direct vs. an indirect compensatory consumer strategy to observe which was more effective for self-repair after experiencing a moral self-threat. This was contrasted against a threat to an alternatively important aspect of the self (i.e., competence/intelligence) that is presumably secondary to the need for moral self-worth (see Jordan & Monin, 2008; Prentice et al., 2019) to establish if regulating moral self-threats differs from regulating threats to other valued self-aspects. If moral self-worth holds a unique hierarchical position over other sources of self-esteem, then a direct compensatory strategy that affirms morality would be more effective for regulating moral self-threat than an indirect strategy of affirming intelligence. Similarly, if affirming aspects of the self that are presumably

more important to the self than the eliciting self-threat can restore psychological equanimity (Steele, 1998; see Galinksy et al., 2012), then both direct (affirming intelligence) and indirect (affirming morality) compensatory strategies will be effective for regulating threats to intelligence.

In Study 3, it was therefore hypothesized that an asymmetry in self-defensiveness would be observed between direct and indirect compensatory strategies following a moral self-threat that would not be observed following an intelligence threat. Specifically, engaging with ethical products would be similarly effective in reducing self-defensiveness for both moral and intelligence threats; however, engaging with intelligence-related products would only be effective for reducing self-defensiveness following intelligence threats (H3). Further, it was hypothesized that the asymmetry in self-repair effectiveness would be magnified for those high on moral identity (H4). In addition to these core hypotheses, it was expected that both intelligence and moral self-threats would increase preference for and connection with either intelligence or ethical products compared to controls, but that this would be pronounced for ethical products after moral self-threat (H1); that is, following moral self-threat, people would demonstrate a preference for a direct repair strategy over an indirect repair strategy.

2.3 Participants

Participants were 1005 individuals recruited online through Prolific and received financial compensation for their participation. From this sample, three were removed for revoking consent to use their data following the debrief, two for failing two attention checks, one due to technical error, 15 for failing the self-threat manipulation check, and 36 due to being extreme outliers (> 3SDs) on emotion assessments. The final sample included 948 (M_{age}= 38.68,

SD_{age} = 12.93) [19] predominantly white (76.3%; Black: 7.6%; LatinX: 7.0%; Asian: 4.6%; Multiracial: 3.1%; Other or would rather not say: 1.4%) somewhat liberal (*M* = 3.26, *SD* = 1.78; 1 = *very liberal*, 7 = *very conservative*) individuals, with a generally balanced binary gender representation (male: 52.2%; female: 45.9%; gender non-conforming: 1.9%). Overall, the sample reported having some college or more (i.e., bachelor/grad/professional degree; 84.2%) and slightly less than average socioeconomic status when considering reported family household income (*M* = 3.40, *SD* = 2.16; 1 = *$0-25k*, 13 = *$300k+* [61.7% <$75k]) and individuals' perception of their family's socioeconomic status (*M* = 4.91, *SD* = 1.76; 1 = *lowest*, 10 = *highest*).

2.3.3 Materials and Procedure

Participants completed the study online through Qualtrics and were told that they would be taking part in several unrelated tasks, with the first task focusing on task performance and emotion.

Threat Manipulation. Participants completed a hybrid version of the pilot-tested (*N* = 42) threat manipulation [20] where they were told they would be completing a 10-item timed "assessment task" designed from two well-known assessments in the literature: the Emotion

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[19] An *a priori* power analysis was conducted using G*Power (version 3.1). Based on results of the false feedback pilot, and large effect sizes Knowles and colleagues (2010) obtained using the original paradigm (*d*s = .85 - 2.25), a medium effect (Cohen's *d* = .50) was hypothesized for the mean difference between self-threat conditions, which indicated a sample size of 128 (64/cell). Along with more recent guidance that suggested twice the number of participants per cell in a 2x2 between-subjects design to find the same effect of a 2-cell design (Simonsohn, 2014), a minimum sample size of 512 was needed to achieve the same effect (the control condition would not be a comparison of focus in the main analyses). To assess the sample size needed to power an assumed small interaction effect (Cohen's *f* = .02) with a continuous linear moderator (i.e., moral identity), an additional power analysis for a multiple regression that included the linear group contrasts, the moderator, and their interactions, indicated a minimum sample size of 725.

[20] See Appendix B for pilot test results.

Recognition Task (ERT) and the Remote Associates Task (RAT; Mednick, 1962). Participants were instructed that the ERT is *a valid measure of morality*, and that the RAT is *a valid measure of intellectual aptitude (or intelligence) and creative problem solving*. The ERT portion consisted of five black and white photos of facial expressions and participants were tasked with identifying both the primary and secondary emotions displayed and their intensity. For the 5-item RAT portion, participants were presented with a sequence of three words (e.g., opera/hand/dish) and asked to identify the fourth word that connects the three (e.g., soap). Participants were given two minutes to complete all questions, with each question displayed for 12 seconds and presented in randomized order. To enhance believability of the false feedback aspect of the task, participants were instructed to attempt to answer all questions and not leave any blank.[21]

After completing the task, participants were randomly assigned to one of three false feedback conditions: moral threat, intelligence threat, or control. In the *moral threat* condition, participants were told their performance on the ERT portion of the task placed their moral rank in the 40th percentile compared to other participants, and that this lower percentile rank indicates that they are more likely to be dishonest, untrustworthy, and unkind compared to other people. In the *intelligence threat* condition, participants were told their performance on the RAT portion of the task placed their intelligence rank in the 40th percentile compared to other participants, and that this lower percentile rank indicates that they are more likely to have lower intellectual aptitude and poor creative problem-solving skills compared to other people. Participants in the control condition did not receive any feedback. Participants then completed the modified BMIS

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[21] On average, 1.69 (SD = 1.36) RAT questions were left blank. Moral threat (M = 1.67, SD = 1.35) and intelligence threat (M = 1.68, SD = 1.33) conditions did not differ in the number of RAT questions left unanswered, $t(631) = 0.04$, $p = .965$.

(pleasant: α = .89; unpleasant: α = .85), and as an additional manipulation check, participants in the self-threat conditions reported what percentile their performance on the task placed them compared to other participants (1 = *30th percentile*; 5 = *70th percentile*).

Consumer Product Preference Task. In an ostensibly unrelated task, participants were told that researchers are interested in learning more about consumer brand/product (referred to as *products* herein) preferences. Participants completed a consumer product rating task where they were randomly assigned to engage with either intelligence-symbolic products or ethical products. In each condition, there were 11 experimental consumer products matched with a "control" product for comparison, and participants rated their preferences for each of the product pairs. In the ethical product condition, comparison products were more neutral or conventional choices (e.g., Kroger Marketplace vs. Whole Foods Market; conventional meat burger vs. Beyond Meat burger; plastic vs. compostable utensils). In the intelligence product condition, comparison products were more neutral or fun choices (e.g., New York Times crossword vs. Mad Libs; Jeopardy vs. Storage Wars; Rubik's cube vs. Magic 8-Ball). Product pairs were placed on either end of a 6-pt. Likert scale to assess relative preference strength for one product over the other.[22]

After rating their product preferences, participants were then presented one at a time with the 11 experimental products in their repair condition (e.g., Stasher in the moral repair; The Economist in the intelligence repair) and asked to rate their self-brand connection (Escalas, 2004) with the product using two items (*This brand/product reflects who I am*; *I consider this brand/product to be "me" [it reflects who I consider myself to be or the way that I want to*

[22] Results of a two-phase pilot test (N = 85) indicated that ethical products implied one was more moral and ethical than intelligence products, and that intelligence products implied a person was more intelligent than ethical products; see Appendix B for pilot details and results.

present myself to others]) on a 7-pt. Likert scale (-3 = *not at all*; 0 = *neutral*; 3 = *extremely well*).[23]

Participants in the *moral threat/direct repair* (*n* = 165) condition rated their preferences and self-brand connection (SBC) for the ethical product comparisons, whereas those in the *moral threat/indirect repair* (*n* = 160) condition rated their preferences and SBC for intelligence product comparisons. Conversely, participants in the *intelligence threat/direct repair* (*n* = 156) condition rated their preferences and SBC for intelligence product pairs; those in the *intelligence threat/indirect repair* (*n* = 152) condition rated their preferences and SBC for the ethical product pairs.

Evidence of Self-Repair. After the product rating task, participants reported how ashamed, guilty, happy, and anxious they were feeling (the latter two included to avoid suspicion) on a scale from 1 (*not at all*) to 5 (*very*) to assess change in moral emotions (shame and guilt) after engaging with the experimental products. Then the core metric of self-repair in this study was assessed by providing participants with an opportunity to derogate the assessment task (i.e., the source of self-threat). Specifically, participants reported the extent to which they thought the task they completed at the beginning of the study that gave them a percentile rank compared to other participants is reliable (1 = *not at all reliable*; 10 = *very reliable*), the extent to which they thought the task measured their moral (intellectual) aptitude well (1 = *not at all*; 10 = *very well*), and the extent to which people who know them well would think their performance on the task is a good reflection of their moral (intellectual) aptitude (1 = *not at all*; 10 = *a great deal*). Participants in the control condition responded to the same items, however, they reported

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[23] The label values displayed to participants; however, survey data was scaled on 1 – 7 Likert scales.

the extent to which the assessment task would be a reliable, adequate, and reflective measure of one's intellectual and moral aptitude. The three items were reverse scored, then averaged to create a measure of self-defensiveness ($\alpha = .93$), which served as the key measure of self-repair. As a reminder, a common defense against threatening information regarding important aspects of the self-concept (e.g., one's morality or intelligence) is to dismiss, challenge, or even attack the source of threatening information to repair the self and restore a sense of self-worth. However, if the self has been affirmed via an alternative strategy (e.g., symbolically through self-symbolizing products), then the need to be defensive should be diminished. Thus, lower ratings on self-defensiveness indicate relaxed identity defense striving, whereas greater self-defensiveness indicates that the self is still attempting to compensate for the threat. For the final portion of the study, participants completed the moral identity measure ($\alpha = .80$), self-esteem, and demographics questionnaire.

2.3 Results

The control condition was used for comparison to demonstrate differences on manipulation checks and overall self-defensiveness compared to self-threat conditions; however, the main comparisons of interest for self-repair analyses focused on differences between self-threat conditions (i.e., moral and intelligence threats). The analyses here test the following hypotheses: that engaging with ethical products will similarly quell self-defensiveness regardless of self-threat, but that engaging with intelligence-related products will not be effective for reducing self-defensiveness after moral self-threat (H3); this asymmetry in self-repair efficiency will be magnified for those high on moral identity (H4). Finally, that the preference for and

connection with ethical products will be pronounced after moral self-threat (H1) compared to other conditions as evidence of a preference for a direct self-repair strategy.

Manipulation Checks

The moral and intelligence threat conditions did not differ on the false feedback percentile manipulation check, χ^2 (1) = 1.13, p = .321, indicating that individuals in both self-threat conditions similarly recalled that the feedback they received about their performance in the task placed them at the 40th percentile compared to other participants.

One-way ANOVAs with planned contrasts revealed significant differences between self-threat conditions and controls on relative mood, t(945) = -1.92, p = .055, d = -.27, 95% CI [-.54, .01], shame, t(771.92) = 4.17, p < .001, d = .53, 95% CI [.26, .80], and guilt, t(755.37) = 2.87, p = .004, d = .37, 95% CI [.10, .64]. Additionally, the intelligence threat condition significantly differed from the moral threat condition on mood, t(945) = 2.64, p = .008, d = .21, 95% CI [.05, .36], and shame, t(595.80) = -2.78, p = .006, d = -.22, 95% CI [-.38, -.07], but not guilt t(628.34) = -1.00, p = .317. Those who experienced a threat to their intelligence reported feeling less pleasant (M = 3.89, SD = 8.65) and more ashamed (M = 1.66, SD = .93) than those who experienced a moral threat (M = 5.73, SD = 9.00;[M = 1.47, SD = 0.76) and controls (M = 5.97, SD = 8.59; M = 1.36, SD = 0.66);[24] however, both intelligence threat (M = 1.32, SD = 0.60) and moral threat (M = 1.28, SD = 0.60) conditions reported feeling similarly more guilty than controls (M = 1.20, SD = 0.49). This suggests the manipulation had the intended effect.

[24] The moral threat condition also significantly differed from controls on shame, t(629.52) = 2.05, p = .041, d = .16, 95% CI [.01, .32].

2.3 Product Preferences and Self-Brand Connection

To investigate the potential mechanisms through which self-repair is occurring, analyses were conducted on product preferences and self-brand connection ratings across stimuli. It was hypothesized that individuals who had experienced a threat to moral self-views would report a stronger preference for and self-brand connection with ethical products compared to other groups (H1). Moreover, it was hypothesized that those who experienced a threat to their intelligence should similarly prefer and report self-brand connections with ethical and with intelligence products, because both should serve to repair the self.

Product Preferences. First, each of the product rating pairs were coded for discrete product choices, then a product preference proportion score was created by summing the number of times an experimental product was preferred and dividing by 11. A 3(self-threat: moral, intelligence, control) x 2(product: ethical, intelligence) factorial ANOVA on product preference proportion scores was conducted as a manipulation check; however, the model was non-significant (*p*s > .23). Participants who either experienced a moral threat (M = .63, SD = .20) or an intelligence threat (M = .66, SD = .22) preferred experimental products to the same extent as controls (M = .65, SD = .21).

Follow-up analyses were conducted to assess differences in product preference strength between conditions using two multilevel models with random intercepts. Linear contrast codes were created for the threat manipulation conditions that first compared the control condition (-.667) against the self-threat conditions (.333), then for the core comparison of the self-threat conditions (intelligence threat = -.5, moral threat = .5). A linear contrast code was also created for the product condition comparison (intelligence products = -.5, ethical products = .5). Threat

and product contrast codes and their interaction term were entered as Level 2 predictors in the models.

For the model comparing the self-threat conditions against controls, there were no significant main nor interaction effects (*p*s >.56). In the model comparing the self-threat conditions, there was a marginal effect of self-threat condition, b = -.13, SE = .07, $t(633)$ = -1.90, p = .057, 95% CI [-.26, .00], such that individuals in the intelligence threat condition reported a slightly stronger preference for both intelligence and ethical experimental products than those in the moral threat condition; again, there were no additional significant effects (*p*s > .65).

Self-Brand Connection. To investigate whether stronger self-brand connections with the experimental products differed as a function self-threat and product condition, the same multilevel analyses were performed on self-brand connection (SBC) ratings. First, the relationship between the two SBC scale items was assessed for each of the 11 products in both categories. The scale items were highly correlated for both ethical products (r = .94) and intelligence products (r = .94), thus were averaged to create a mean SBC score for each of the 11 products, which were entered into the model as the repeated measures dependent variable.

When comparing the self-threat conditions against the control condition, a main effect of product category emerged, b = .17, SE = .09, $t(948)$ = 2.02, p = .044, 95% CI [.01, .34], whereby participants reported a stronger self-brand connection with ethical products compared to intelligence products; no other effects were significant (*p*s > .70). This effect fell to non-significance (p = .161) when comparing just the self-threat conditions, and there were similarly no additional significant effects (*p*s > .42).

In sum, the hypothesis that following a moral self-threat, individuals would significantly prefer and report a stronger connection with ethical products compared to other groups was not supported (H1).[25]

2.3 Evidence of Self-Repair

To assess evidence of self-repair, analyses examined change in self-conscious moral emotions following the consumer product preference task but focused on the key outcome of self-defensiveness (i.e., derogation of the source of self-threat). It was hypothesized that both direct (i.e., engaging with intelligence products) and indirect (i.e., engaging with ethical products) compensatory strategies would similarly quell self-conscious moral emotions, and result in comparable levels of self-defensiveness for those who experienced a threat to their intelligence. In contrast, for individuals who experienced a threat to their moral self-views, the indirect compensatory strategy (i.e., engaging with intelligence products) was hypothesized to be less effective for self-repair compared to other groups (H3)—it was expected that these individuals would report stronger feelings of shame and guilt and be more self-defensive than other groups.

Planned contrast codes representing these hypotheses were created to probe any interactions, including the effectiveness of both direct vs. indirect strategies for an intelligence threat (intel threat/intel products = -.5; intel threat/ethical products = .5), the effectiveness of ethical products for both self-threats (moral threat/ethical products = -.5; intel threat/ethical

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[25] Two additional MLM models were conducted to observe for evidence of moral identity moderation on product preference strength and SBC. There was no evidence of moderation on self-brand connection, 3-way interaction: b = -.22, SE = .27, $t(948)$ = -0.81, p = .418, nor on product preference strength, 3-way interaction: b = -.20, SE = .18, $t(948)$ = -1.14, p = .254.

products = .5), and the ineffectiveness of an indirect strategy for moral self-threats compared to other self-threat compensatory strategy combinations (other threat/repair conditions = -.25; moral threat/intel products = .75).

Change in Shame and Guilt. Shame and guilt scores at Time 1 (post-false feedback; r = .53) and at Time 2 (post-product preference task; r = .71) were averaged to form respective indices of self-conscious moral emotions. Each index was z-scored, then entered into a 2(self-threat: moral, intelligence) x 2(product: ethical, intelligence) x 2(time: Time 1, Time 2) mixed ANOVA to assess change in self-conscious moral emotions. There was a within-subjects main effect of time, $F(1, 629) = 4.38$, $p = .037$, $\eta_p^2 = .01$, such that self-conscious moral emotions diminished from Time 1 ($M = .09$, $SE = .04$) to Time 2 ($M = .01$, $SE = .04$). There were also between-subjects effects of self-threat condition, $F(1, 629) = 6.92$, $p = .009$, $\eta_p^2 = .01$, and product condition, $F(1, 629) = 6.93$, $p = .009$, $\eta_p^2 = .01$. Participants in the intelligence threat condition reported stronger overall feelings of shame and guilt ($M = .15$, $SE = .05$) than those in the moral threat condition ($M = -.05$, $SE = .05$), and those who were in the ethical product condition felt more ashamed and guilty ($M = .15$, $SE = .05$) than those in the intelligence product condition ($M = -.05$, $SE = .05$); however, there were no significant interactions (ps > .20).

Self-Defensiveness. The core metric of self-repair in this study was the extent to which individuals derogate the source of self-threat (i.e., the assessment task); that is, they are defending the self against threatening information regarding their morality or their intelligence.

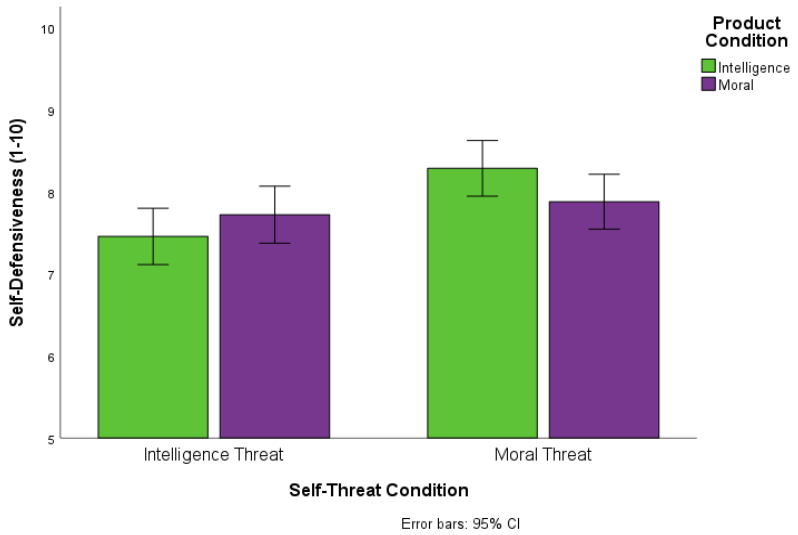
First, a 3(self-threat: moral, intelligence, control) x 2(product: ethical, intelligence) factorial ANOVA with a planned contrast was conducted on self-defensiveness scores to serve as a manipulation check that the self-threat conditions were more defensive than controls. A

significant main effect of self-threat condition, $F(2, 942) = 60.60$, $p < .001$, $\eta_p^2 = .11$, emerged; controls ($M = 6.22$, $SD = 2.29$) were less self-defensive than both intelligence ($M = 7.59$, $SD = 2.29$) and moral ($M = 8.08$, $SD = 2.09$) threat conditions ($M_{diff} = -1.62$, $SE = .15$, $p < .001$, 95% CI [-1.93, -1.32]); the other effects were not significant ($ps > .10$). This indicated that again, the threat manipulation had the intended effect.

To focus on self-repair following self-threat, a 2(self-threat: moral, intelligence) x 2(product: ethical, intelligence) factorial ANOVA with planned contrasts was conducted on self-defensiveness scores. The overall model was significant, $F(3, 629) = 4.00$, $p = .008$, $\eta_p^2 = .02$, with a main effect of self-threat condition, $F(1, 629) = 8.11$, $p = .005$, $\eta_p^2 = .02$, and a marginally significant interaction effect, $F(1, 629) = 3.73$, $p = .054$, $\eta_p^2 = .01$;[26] see Figure 6.

Figure 6

Study 3: Self-Threat by Self-Repair Strategy Interaction on Self-Defensiveness



[26] A 2(self-threat: moral, intelligence) x 2(product: ethical, intelligence) factorial ANOVA did not find significant group differences on self-esteem ($ps > .11$), and the interaction term on self-defensiveness remained constant when controlling for self-esteem, $F(1, 628) = 3.76$, $p = .053$.

The interaction was probed using the planned contrasts. As hypothesized, individuals who experienced a threat to their intelligence did not differ in how defensive they were as a function of whether they used a direct (M = 7.46, SD = 2.36) or an indirect (M = 7.72, SD = 2.22) compensatory repair strategy following threat, $t(306) = -1.01$, $p = .312$. Moreover, engaging with ethical products similarly impacted self-defensiveness after self-threat, $t(315) = -0.64$, $p = .524$, as those in the intelligence threat condition derogated the assessment task to the same extent as those in the moral threat condition (M = 7.88, SD = 2.23), for whom this was a direct repair strategy. Notably, there was a significant difference in self-defensiveness between those in the moral self-threat condition who used an indirect compensatory strategy compared the other conditions, $t(320.18) = -3.24$, $p = .001$, $d = -.27$, 95% CI [-.45, -.09], such that engaging with intelligence products as an indirect means of repairing a threat to moral self-views (M = 8.29, SD = 1.92) was the least effective compensatory strategy compared to other self-threat-repair strategies (M = 7.69, SD = 2.27). [27] In sum, these results support H3, particularly that moral self-threats are regulated differently than other threats as they are not adequately repaired using indirect compensatory strategies.

2.3 Moderation: Moral Identity

The final analysis investigated the hypothesis that moral identity would magnify effects of compensatory strategy on self-defensiveness following moral self-threats (H4). An analysis of moderation was conducted using the PROCESS macro (Version 4.2; Hayes, 2022) for IBM SPSS. The linear contrast codes created previously for the self-threat condition (intelligence

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[27] People were more self-defensive when they used an indirect compensatory strategy after moral threat; however, the reduction for those who used a direct compensatory strategy did not reach significance, $t(318.77) = -1.77$, $p = .079$, $d = -.20$, 95% CI [-.41, .02].

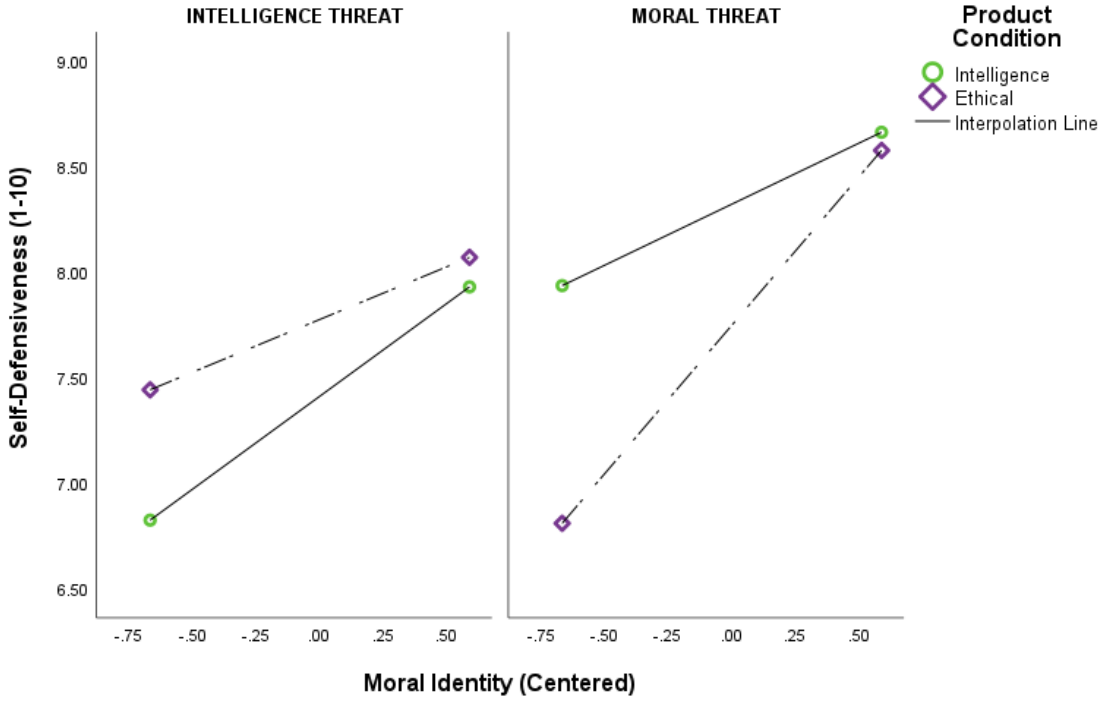
threat = -.5; moral threat = .5) and product condition (intelligence products = -.5; ethical products = .5) were utilized as predictors. Moral identity was mean centered prior to entry as the moderator in the model (model 3; 5000 bootstrap samples), and interactions were probed using simple slopes analyses with planned threat contrasts (model 1; 5000 bootstrap samples) at ±1 SD the mean of moral identity.[28]

The overall model was significant, $F(7, 625) = 8.26$, $p < .001$, $R^2 = .09$, with main effects of self-threat condition, $b = .44$, $SE = .17$, $t(625) = 2.60$, $p = .010$, 95% CI [.11, .78], and moral identity, $b = .84$, $SE = .13$, $t(625) = 6.52$, $p < .001$, 95% CI [.59, 1.10], were observed, as well as the self-threat x product interaction, $b = -.94$, $SE = .34$, $t(625) = -2.77$, $p = .006$, 95% CI [-1.61, -.27]. Importantly, there was a significant 3-way interaction, $b = 1.21$, $SE = .52$, $t(625) = 2.34$, $p = .019$, 95% CI [.20, 2.22]; see Figure 7.[29]

Figure 7

Study 3: Moral Identity Moderation of Self-Threat by Self-Repair Strategy Interaction on Self-Defensiveness

[28] As in prior studies, 1 SD above the mean is above the maximum observed in the data for moral identity centrality, so conditional effects and interaction plots are 1 SD below the mean, the mean, and the maximum.
[29] Controlling for symbolic moral identity did not change the interaction term, $b = 1.24$, $SE = .51$, $t(624) = 2.45$, $p = .014$, 95% CI [.25, 2.24].



Note. Estimated simple effects are plotted at 1 SD below the mean and the maximum as 1 SD above the mean is above the maximum observed in the data for moral identity.

The self-threat x product interaction was significant at low levels of moral identity, $F(1, 625) = 12.83$, $p < .001$, but not high levels, $F(1, 625) = 0.25$, $p = .619$. Results of simple slopes analysis using planned threat contrasts to probe the interaction are presented in Table 3.[30]

[30] Results of simple slopes analysis with conditional effects of main model without planned contrasts are reported in Appendix C.

Table 3

Study 3: Results of Simple Slopes Analysis with Planned Contrasts of Moral Identity, Self-Threat, and Compensatory Strategy Interaction on Self-Defensiveness

Effect	*b*	*SE*	*t*	*p*	95% CI
Contrast 1 (Intelligence Threat: IP v. EP)					
C1	.37	.26	1.45	.148	[-.13, .88]
Moral ID	.69	.19	3.73	<.001	[.33, 1.06]
C1 x Moral ID	-.38	.37	-1.03	.305	[-1.11, .35]
Contrast 2 (Ethical Products: IT v. MT)					
C2	-.03	.24	-0.11	.912	[-.51, .45]
Moral ID	.95	.19	4.98	<.001	[.58, 1.33]
C2 x Moral ID	.91	.38	2.37	.019	[.15, 1.66]
Contrast 3 (Other v. MT/IP)					
C3	.65	.20	3.31	.001	[.26, 1.03]
Moral ID	.79	.13	6.19	<.001	[.54, 1.04]
C3 x Moral ID	-.28	.28	-0.98	.328	[-.84, .28]
C2: Conditional Effects of Ethical Product Strategy					
Low Moral ID: Moral v. Intel Threat	-.62	.35	-1.75	.082	[-1.31, .08]
High Moral ID: Moral v. Intel Threat	.51	.33	1.55	.123	[-.14, 1.15]

Note. CI = confidence interval. IT = intelligence threat. MT = moral threat. IP = intelligence products. EP = ethical products. Moral ID = moral identity (Low = -1SD, High = maximum). Contrast 1 (C1) = (IT/IP = -.5; IT/EP = .5). Contrast 2 (C2) = (IT/EP = -.5; MT/EP = .5). Contrast 3 (C3) = (Other conditions = -.5; MT/IP = .5). Unstandardized estimates are presented.

As illustrated in the figure and table, a main effect of moral identity was observed, such that the more self-important moral identity is to the self, the more self-defensive people were across the board. There was also evidence that moral identity moderated the effectiveness of ethical products for self-repair between the threat conditions, wherein those low on moral identity were somewhat, though not significantly, less defensive after using this direct compensatory strategy following moral threat compared to those who used this indirect strategy

following intelligence threat. However, many of the previous findings remained constant and were not moderated by moral identity (no support for hypothesis 4).

An exploratory contrast testing whether moral identity moderated the effectiveness of compensatory strategy on self-defensiveness following moral threat returned a main effect of threat/repair contrast (moral threat/ethical products = -.5; moral threat/intel products = .5), b = .56, SE = .22, $t(321) = 2.50$, p = .013, 95% CI [.12, .99], moral identity, b = .99, SE = .18, $t(321)$ = 5.56, $p < .001$, 95% CI [.64, 1.35], and a significant interaction, b = -.83, SE = .36, $t(321)$ = -2.32, p = .021, 95% CI [-1.53, -.13]. The pattern of the interaction revealed that differences in self-defensiveness between indirect vs. direct compensatory strategies following moral threat were attenuated for those high moral identity, b = .09, SE = .30, $t(321) = 0.29$, p = .775, 95% CI [-.50, .67]; in contrast, using a direct compensatory strategy significantly reduced self-defensiveness for those low on moral identity compared to using an indirect strategy, b = 1.08, SE = .32, $t(321) = 3.37$, p = .001, 95% CI [.45, 1.72]. [31]

Thus, the original hypothesis that the compensatory strategy asymmetry on self-defensiveness following moral self-threat would be magnified for those high on moral identity was not supported (H4). Rather, moral identity exerted a suppression effect such that for those who are deeply invested in being a person of moral character, neither self-repair strategy was effective in buffering the need to derogate the source of self-threat, whereas for those who are only moderately or less concerned about possessing moral traits, using a direct self-repair

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[31] A 2x2 factorial ANOVA on moral identity returned a significant self-threat x product interaction, $F(1, 629)$ = 8.59, p = .003, such that self-importance of morality was stronger after intelligence threat for intelligence repair (M = 4.47, SD = 0.67) than ethical repair (M = 4.31, SD = 0.72; M_{diff} = .16, p = .038); for ethical repair (M = 4.51, SD = 0.56) than intelligence repair (M = 4.36, SD = 0.70) after moral threat (M_{diff} = .15, p = .040); and for ethical repair after moral threat compared to after intelligence threat (M_{diff} = .20, p = .008).

strategy was significantly more effective than an indirect strategy for buffering self-defensiveness.

2.3 Study 3: Discussion

Findings in Study 3 provide mixed support for hypotheses; however, results showed that threats to the moral self are regulated differently than other self-threats. Specifically, both direct and indirect compensatory strategies had a similar impact on self-defensiveness for those who experienced an intelligence threat, but an indirect compensatory strategy was comparatively ineffective for affirming the self and buffering the need to be defensive for those who experienced a threat to moral self-views (H3), and these effects held regardless of moral identity. Interestingly, evidence of a moral identity boundary condition emerged when exploring the magnitude of self-repair efficiency between compensatory strategies for those who experienced a threat to moral self-views. Moral identity actually *suppressed* (rather than magnified; H4) the asymmetry, such that the direct compensatory strategy was particularly effective for those who don't place much importance on being a moral person; however, for those for whom this is a central self-concern, engaging with overtly, or "face valid," ethical products was not sufficient for reducing self-defensiveness. While the brands/products used were consensually viewed as ethical from the pretest, they may not be the same for these individuals. It might be the case that these individuals are much more discerning when it comes to evaluating consumer brands and products as suitable symbols for moral self-repair. This possibility was addressed in Study 4.

2.4 Study 4: Direct vs. Indirect Compensatory Strategies—Self-Brand Connection

Study 3 supported expectations that indirectly addressing a moral self-threat by engaging with products that symbolically affirm a positive, but non-moral aspect of the self is not an

effective compensatory strategy for moral self-repair. Yet simply engaging with products generally viewed as ethical did not suffice for affirming the moral self and reducing the need to be defensive against the source of threat for those who place high self-importance on being a person of moral character. To be sure, people who chronically attend to their moral self-regard have probably already formed strong self-brand connections with consumer brands/products they view as ethical than the brands/products that were presented. Knowing the importance of people's own perceptions of brand ethics observed in Studies 1-2b, these individuals may have different criteria for what establishes a brand/product as ethical and might require more information about a consumer brand/product's ethics before they can effectively use them for symbolic moral self-repair.

The goal of Study 4 was to investigate whether providing more information about a brand's ethical contributions and corporate practices would supply the evidence needed to establish the brand as a useful symbol to affirm the moral self, particularly for the more morally-discerning individuals. To ask this question, the brand was held constant, but the basis of the brand attitude was shaped to be one of two equivalently positive foundations —innovation vs. ethics. This design was also vital to demonstrate that it is a particular characteristic of the brand (e.g., being ethical vs. being exciting/innovative) that is driving self-repair effects as opposed to generally viewing a brand more positively (Newman & Trump, 2017). For this study, Patagonia was used as the brand as it has contributed many exciting innovations to their field, while also engaging in a broad array of socially responsible and environmentally sustainable practices.

In Study 4, participants were randomly assigned to read about Patagonia's exciting and innovative or ethical contributions, then rated the extent to which they viewed Patagonia as a

reflection of who they are as a person after experiencing a moral threat as a means to affirm the self and buffer from threat. It was hypothesized that following moral threat, individuals would report a stronger self-brand connection with an ethical Patagonia vs. an exciting/innovative Patagonia (H1), particularly for those high on moral identity (H4), and that stronger self-brand connection on an ethical basis (i.e., direct compensatory strategy) would affirm the moral self and lead individuals to be less defensive against the source of moral threat (H3).

2.4 Participants

Participants were 283 individuals recruited online from Prolific who received financial compensation for their participation. Additional exclusion criteria for this study involved removing participants assigned to the *Patagonia-Exciting* condition who were familiar with Patagonia's ethical production and social responsibility practices. Based on this and the overall exclusion criteria, 11 participants were removed for not completing one or more of the manipulation tasks, and 12 from the *Patagonia-Exciting* condition for having previous knowledge of Patagonia's ethical practices, leaving a final sample of 260 participants.[32]

Characteristics of the sample (M_{age} = 43.07, SD_{age} = 15.44; range 18-91 years) included mostly female (50.4%; male: 44.6%; gender non-conforming: 5.0%), white (73.1%; Black: 11.2%; LatinX: 7.7%; Asian: 3.8%; Multiracial: 2.3%; Other or would rather not say: 2.0%), somewhat liberal (M = 3.30, SD = 1.78; 1 = *very liberal*, 7 = *very conservative*) participants who reported having a bachelor's degree or higher (52.7%) and slightly less than average

[32] An *a priori* power analysis using G*Power (version 3.1) indicated a sample size of 128 to find the hypothesized medium effect (d = .50). An additional power analysis was conducted for a planned moderated mediation model. Assuming a small-medium effect (Cohen's f^2 = .09), a minimum sample of 138 was recommended to power the analysis.

socioeconomic status when considering reported family household income (M = 3.15, SD = 2.46; 1 = *$0-25k*, 13 = *$300k+* [52.8% <$50k]) and individuals' perception of their family's socioeconomic status (M = 4.73, SD = 1.81; 1 = *lowest*, 10 = *highest*).

2.4 Materials and Procedure

Participants completed the study online via the Qualtrics survey platform and were told they would complete several unrelated tasks. For the first portion of the study, they were told that researchers were interested in what individuals have heard about particular consumer brands. Participants were randomly assigned to read a brief article about either the ethical and sustainable contributions (i.e., *Patagonia-Ethical*; n = 136) or the exciting and innovative contributions (i.e., *Patagonia-Exciting*; n = 124) that Patagonia has made. Afterwards, they were asked to identify three takeaways from the article that gave them the impression that Patagonia was either an ethical or exciting/innovative company, respectively.

In an ostensibly unrelated task, participants were told that researchers want to know more about individual differences in problem solving and emotional responding. To induce a moral threat, all participants engaged in a moral dilemma where they made a difficult decision regarding human lives.

Moral Dilemma Task. The dilemma task was based off the classic Trolley Problem (Foot, 1967). Presented as a mental-imagery task, participants were asked to imagine themselves in a particular scenario and then write about what they would do, sense, think, feel, etc. in each part of the scenario as it unfolded across several screens. In the first portion of the task, participants imagined themselves as the driver of a trolley and described their experience as they drove the trolley along the tracks. Next, participants were told that the brakes of their trolley

failed and that a small child was stuck on the track ahead. There was a track to the right they could switch the trolley's path onto, however, there were five service workers from their trolley company on that track who would also not be able to get out of the path of the trolley in time. Participants were asked to describe what they were thinking and feeling in the moment as they were faced with this dilemma, then on the subsequent screen, they decided whether to turn the trolley to the right and kill the five service workers or refrain from turning the trolley and kill the small child. Following their decision, participants were then asked to describe the aftermath of their decision (e.g., what was happening as they continued down the track they chose), including what they were thinking and feeling. After the dilemma task, participants completed the modified BMIS (*pleasant*: α = .85; *unpleasant*: α = .83) as a manipulation check.

Next, participants reported the extent to which they connected with and viewed Patagonia as symbolic of who they were as a person by completing the 7-item Self-Brand Connection Scale (Escalas, 2004). Participants rated each item (e.g., *Patagonia reflects who I am*, *I feel a personal connection to Patagonia*, *I consider Patagonia to be "me" [it reflects who I consider myself to be or the way that I want to present myself to others]*) on a 7-pt. Likert scale (-3 = *not at all*; 0 = *neutral*; 3 = *extremely well*); α = .96.[33]

Evidence of Self-Repair. Along with the core metric of self-defensiveness against the source of threat (i.e., the trolley dilemma task), additional approaches were used to evaluate self-repair. First, participants completed single emotion items to assess if there was a change in moral emotions (shame and guilt) after they rated their self-brand connection (SBC) with Patagonia.[34]

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[33] The label values displayed to participants; however, survey data was scaled on 1 – 7 Likert scales.
[34] They also rated how happy and anxious they were as filler items to mask the moral emotion items.

Next, they completed the State Self-Forgiveness Scales (SSFS; Wohl et al., 2008)—a 17-item measure of current feelings, actions, and self-beliefs individuals may experience as they consider something they did wrong in the past. The SSFS instructions were modified to ask participants to think back to the trolley task they completed earlier in the study, then respond to measure items while considering the choice they made. Participants then rated their agreement with each statement (e.g., *feel accepting of myself*, *punish myself* [reverse-scored], *believe I am worthy of love*) on a 7-point scale ranging from 1 (*not at all*) to 7 (*completely*). A 12-item version of the SSFS was used (α = .97) removing extreme statements (e.g., *believe I am horrible*; *believe I am rotten*) to avoid additional self-threat.

Trolley Derogation Task. Finally, participants were given an opportunity to derogate the trolley task (i.e., the source of moral self-threat) as the key metric of self-repair. On 10-point Likert scales, participants rated the extent to which they thought the task was a reliable simulation of how they might manage a dilemma (1 = *not at all reliable*; 10 = *very reliable*), as well as the degree to which they thought that people who know them well would say that their actions in the task are a good reflection of who they are as a person (1 = *not at all*; 10 = *a great deal*). These two items were reversed scored, then averaged to provide an index of self-defensiveness (r = .44), with lower ratings indicating relaxed identity defense striving (i.e., the need to defend the self against the source of threat has been buffered). Finally, participants completed the moral identity centrality measure, the SISE, and a demographics questionnaire.

2.4 Results

It was hypothesized that following a moral threat, individuals who were first given an ethical basis to form an attitude about Patagonia would report a stronger self-brand connection

with Patagonia following a moral threat (H1) than those who were first given an alternative positive, but non-moral basis. It is this connection with a brand on an ethical basis that is hypothesized to be the mechanism through which the threatened moral self is symbolically repaired (i.e., affirmed), consequently buffering the need to be defensive against the source of threat. Thus, to the extent that people more strongly connect with Patagonia on an ethical basis following moral threat, they should feel less shame and guilt, be more self-forgiving, and be less self-defensive than those who were given a positive, but non-moral basis to connect with Patagonia (H3). Finally, this self-repair pathway should be magnified for those high on moral identity (H4).

Manipulation Checks

Independent t-tests were conducted to assess whether the Patagonia essay conditions (referred to as *ethical* or *exciting* herein) differed on relative mood or self-conscious moral emotions following the moral threat task. Participants who read about Patagonia's exciting contributions did not differ in reported mood ($M = 0.15$, $SD = 10.40$), shame ($M = 2.02$, $SD = 1.20$), or guilt ($M = 2.35$, $SD = 1.25$) from those who read about Patagonia's ethical contributions ($M = -1.78$, $SD = 8.83$; $M = 2.13$, $SD = 1.21$; $M = 2.44$, $SD = 1.28$, respectively) following the moral dilemma task ($ps > .10$). All participants therefore felt relatively unpleasant, ashamed, and guilty after the moral threat manipulation.

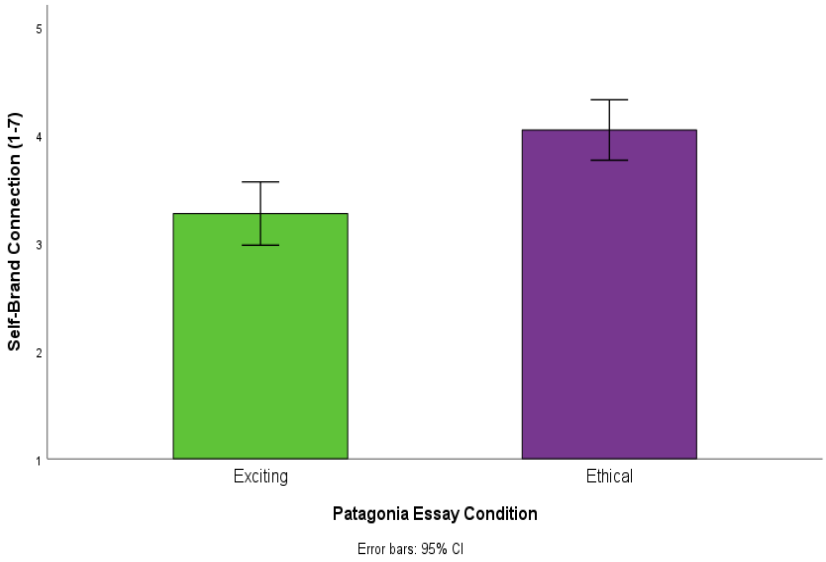
2.4 Self-Brand Connection with Patagonia

Self-brand connection scores capture how people may form a strong connection to Patagonia, viewing the brand as a representation of their true self, or they may disengage from Patagonia to the extent that they view the brand as the antithesis or unrepresentative of who they

are as a person. Indeed, such an asymmetry emerged in self-brand connection with Patagonia between the essay conditions, $t(258) = -3.76$, $p < .001$, $d = -.47$, 95% CI [-.71, -.22], such that those in the ethical condition reported that Patagonia was more representative of who they are as a person ($M = 4.05$, $SD = 1.67$), compared to those in the exciting condition who viewed Patagonia as less representative ($M = 3.28$, $SD = 1.65$) following a moral threat (see Figure 8).[35]

Figure 8

Study 4: Effect of Essay Condition on Self-Brand Connection with Patagonia After Moral Threat



This finding supports hypothesis 1 that when people experience a threat to their moral self-views, they are drawn to a brand on an ethical basis. This indicates a preference for a direct compensatory strategy after moral self-threat as opposed to an indirect compensatory strategy of

[35] Essay conditions significant differed on self-esteem, $t(258) = 2.22$, $p = .027$, $d = .28$, 95% CI [.03, .52]; those in the exciting condition reported higher self-esteem ($M = 3.02$, $SD = 1.36$) than those in the ethical condition, ($M = 2.66$, $SD = 1.27$). Controlling for self-esteem did not alter SBC results, $F(1, 257) = 21.67$, $p < .001$, $\eta_p^2 = .08$.

connecting with a positive, but non-moral aspect of the brand that might bolster an alternative self-aspect or allow for individuals to affectively escape the self-threat.

2.4 Evidence of Self-Repair

Effect of Essay Condition on Self-Repair Outcomes. First, to assess change in self-conscious moral emotions, shame and guilt items following the moral dilemma task and post-SBC ratings were averaged (respectively) to create Time 1 (r = .81) and Time 2 (r = .92) indices of self-conscious moral emotions, then standardized for comparison. A 2(Patagonia essay condition: ethical, exciting) x 2(time: time 1, time 2) repeated measures ANOVA looking at the effect of essay condition on change in self-conscious moral emotions did not return any significant between or within effects, nor any interactions (ps > .45). As reported earlier, those in the ethical essay condition did not differ in shame and guilt at Time 1 (M = .04, SD = 1.02), nor at Time 2 (M = .04, SD = 0.99), from those in the exciting essay condition (M = -.05, SD = 0.98; M = -.04, SD = 1.01).

Likewise, independent t-tests did not reveal significant differences between essay conditions on self-forgiveness, $t(258) = 1.75$, p = .082, or self-defensiveness, $t(258) = -1.64$, p = .103. In contrast to what was expected, those in the ethical essay condition were similarly self-forgiving (M = 3.99, SD = 1.82) and self-defensive (M = 5.03, SD = 1.98) as those in the exciting essay condition (M = 4.38, SD = 1.72; M = 4.60, SD = 2.31). Together, these findings are unsupportive of hypothesis 3.

Indirect Effect Through SBC: Moral Emotions and Self-Forgiveness. Despite a lack of support for hypothesis 3, the role of self-brand connection with Patagonia was tested to investigate its role in self-repair outcomes. Three PROCESS (model 4; 5000 bootstrap samples)

mediation models were conducted on each of the self-repair outcomes. A linear contrast code for the essay condition was created (exciting = -.5; ethical = .5) for use in the models, and all continuous predictors were mean centered prior to entry in the models.

First, a mediation analysis was conducted to examine whether stronger SBC with Patagonia impacted post-moral dilemma task self-conscious moral emotions, with Time 1 self-conscious moral emotions entered as a covariate. While those in the ethical essay condition more strongly connected with Patagonia following moral threat, $b = .76$, $SE = .21$, $t(257) = 3.71$, $p < .001$, 95% CI [.36, 1.17], SBC with Patagonia did not indirectly influence a difference in shame and guilt, $b = .04$, $SE = .05$, $t(256) = 0.68$, $p = .498$ (indirect effect: $b = .03$, $SE = .05$, 95% CI [-.07, .13]). As in previous results, there was no evidence that essay condition influenced differences in shame and guilt independent of its effect on self-brand connection, $b = .03$, $SE = .18$, $t(256) = 0.14$, $p = .886$.

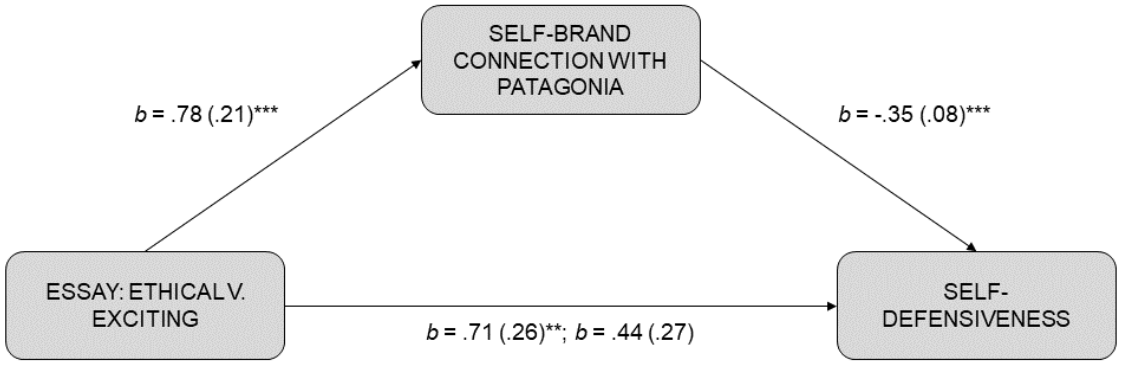
Next, a mediation analysis on self-forgiveness was conducted and revealed that while those who read about Patagonia's ethical contributions prior to experiencing a moral self-threat formed a stronger self-brand connection with Patagonia than those who first read about Patagonia's exciting and innovative contributions, $b = .78$, $SE = .21$, $t(258) = 3.76$, $p < .001$, 95% CI [.37, 1.18], this connection did not indirectly influence self-forgiveness, $b = .09$, $SE = .07$, $t(257) = 1.28$, $p = .204$; indirect effect: $b = .07$, SE .06, 95% CI [-.04, .19]. Again, there was no evidence that essay condition resulted in differences in self-forgiveness independent of SBC with Patagonia, $b = -.38$, $SE = .22$, $t(258) = -1.75$, $p = .082$.

Indirect Effect Through SBC: Self-Defensiveness. Finally, a strong test of whether a self-repair strategy has effectively affirmed the self to buffer threat is to assess whether the

strategy reduced the need to be defensive against the source of self-threat. From the mediation analysis on self-defensiveness scores, evidence emerged that SBC with Patagonia indirectly influenced the extent to which participants derogated the trolley task (indirect effect: b = -.27, SE = .10, 95% CI [-.49, -.11]); this indirect relationship is depicted in Figure 9.

Figure 9

Study 4: Indirect Effect of Essay Condition on Self-Defensiveness After Moral Threat Through Self-Brand Connection with Patagonia



Note. PROCESS mediation model 4 (5000 bootstrap samples) predicting the indirect effect of Patagonia essay condition on self-defensiveness through self-brand connection with Patagonia. Patagonia essay contrast: exciting = -.5, ethical = .5. Unstandardized regression coefficients are presented; standard errors are in parentheses.

**p < .01. ***p < .001.

As illustrated in the figure, participants who first formed an attitude about Patagonia on an ethical basis reported that the brand more strongly reflects who they are as a person after experiencing a threat to moral self-views, t(258) = 3.76, p < .001, 95% CI [.37, 1.18], and this

connection with Patagonia buffered the need to defend the self against the trolley task, $t(257) = -4.52$, $p < .001$, 95% CI [-.50, -.20]. As in previous analyses, and in contrast to hypothesis 3, there was no evidence that the essay conditions differed in the extent to which they derogated the source of self-threat independent of the effect on SBC with Patagonia, $t(258) = 1.64$, $p = .103$.[36]

Interestingly, when accounting for the effect of this direct repair strategy in the model, a difference between essay conditions was observed, $t(257) = 2.69$, $p = .008$, 95% CI [.19, 1.23], indicating that those who read about Patagonia's ethical contributions before harming others in a hypothetical moral dilemma were more self-defensive than those who read about Patagonia's exciting contributions when accounting for the buffering effect of a strong attachment to an ethical Patagonia.[37] These results are considered further in the discussion, but do appear to provide partial support for hypothesis 3.

In sum, these findings support hypothesis 1 that people are drawn to the ethical aspects of a brand after moral threat but provide only partial support for hypothesis 3. Moral self-threat strengthened self-brand connections with an ethical brand (H1) and affirming the moral self by connecting with a brand on an ethical basis led people to be less self-defensive after moral threat (H3); however, in contrast to the hypothesis, they were not less defensive than those provided an opportunity to connect with the same brand on a positive, but non-moral basis. Moreover, the hypotheses that a strong attachment to Patagonia as an ethical brand would also assuage self-

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[36] Effects hold when controlling for self-esteem; see Appendix C.

[37] A similar difference was observed for self-forgiveness (although an indirect effect of SBC was not supported), $b = -.45$, $SE = .23$, $t(257) = -1.99$, $p = .047$, 95% CI [-.89, -.01], with those in the ethical essay condition being less self-forgiving following their actions in the trolley task when the effect of SBC was controlled for.

conscious moral emotions and result in more self-forgiveness following moral threat were not supported.[38]

2.4 Moderation: Moral Identity

The final analysis investigated the hypothesis that the mediational relationship on self-defensiveness would be magnified for those high on moral identity centrality (H4).[39]

To investigate this hypothesis, a moderated mediation model was conducted using PROCESS (model 8; 5000 bootstrap samples) to simultaneously assess moral identity moderation at the *a* and *c* pathways of the model. The essay condition contrast (exciting = -.5, ethical = .5) was entered as the predictor, SBC with Patagonia as the mediator, moral identity as the moderator, and self-defensiveness served as the outcome variable; both SBC and moral identity were mean centered prior to entry in the model, and interactions were probed using simple slopes analysis with conditional effects. The index of moderated mediation was significant, b = -.24, SE = .13, 95% CI [-.54, -.03], indicating that moral identity exerted a significant influence on indirect effect; results of the model are presented in Table 4.[40]

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[38] Exploratory analyses were conducted to assess if SBC moderated the effect of essay condition on self-forgiveness and self-defensiveness. There was no evidence of moderation as both the interaction term on self-forgiveness, b = -.09, SE = .13, $t(256)$ = -0.64, p = .523, and self-defensiveness, b = .11, SE = .16, $t(256)$ = 0.69, p = .492, were not significant.

[39] Groups did not differ on moral identity, $t(258)$ = 1.72, p = .086.

[40] As in prior studies, 1 SD above the mean is above the maximum observed in the data for moral identity centrality, so conditional effects and interaction plots are 1 SD below the mean, the mean, and the maximum.

Table 4

Study 4: Model Coefficients for Moderated Mediation Analysis with Moral Identity on Self-Defensiveness

	SBC (M)				Self-Defensiveness			
Effect	*b*	*SE*	*t*	95% CI	*b*	*SE*	*t*	95% CI
Constant	3.69***	.10	36.24	[3.49, 3.89]	6.04***	.31	19.36	[5.42, 6.65]
Essay	.82***	.20	4.03	[.42, 1.22]	.59*	.26	2.26	[.08, 1.10]
Moral ID	.34*	.15	2.23	[.04, .65]	-.71***	.19	-3.70	[-1.09, -.33]
SBC (M)	--	--	--	--	-.33***	.08	-4.23	[-.48, -.17]
Essay x Moral ID	.74*	.31	2.41	[.14, 1.35]	.60	.39	1.55	[-.16, 1.36]
Conditional Direct Effects								
Low Moral ID: Essay	.33	.29	1.13	[-.25, .90]	.19	.36	0.53	[-.52, .90]
High Moral ID: Essay	1.25***	.27	4.67	[.72, 1.77]	.93**	.34	2.70	[.25, 1.61]

Note. CI = confidence interval. Essay = essay contrast (Patagonia-Exciting = -.5, Patagonia-Ethical = .5). Moral ID = moral identity (Low = -1SD, High = maximum). SBC = self-brand connection with Patagonia. M = mediator. Unstandardized estimated effects are presented. Conditional effects estimates are based on simple slopes analysis at -1SD and the maximum of the mean of moral identity (+1SD is above the maximum observed in the data).

*$p < .05$. **$p < .01$. ***$p < .001$.

Main effects of essay condition and moral identity on SBC scores emerged that were qualified by an essay x moral identity interaction. Supporting hypothesis 4, the effect of essay condition on SBC was magnified for those high on moral identity; and in line with the previous analysis, SBC had a significant negative effect on self-defensiveness. Estimates of the indirect conditional effect for those low and high on moral identity indicated that the indirect effect of essay condition on self-defensiveness through SBC with Patagonia was significant for those high

on moral identity, b = -.41, SE = .14, 95% CI [-.73, -.17], but not low, b = -.11, SE = .10, 95% CI [-.32, .10].[41] This indicates that a strong SBC with an ethical Patagonia to buffer self-defensiveness was a particularly effective direct compensatory strategy for those invested in being a person of moral character, but not relevant for those who are less concerned with such an aim.

2.4 Discussion

Study 4 supported the hypothesis that people would form stronger connections with an ethical brand following threats to moral self-views (H1), as well as partial support for the hypothesis that connecting the self with a moral brand would affirm the moral self and buffer from moral self-threat (H3). Moreover, this was a particularly useful strategy for those who place high self-importance on being a person of moral character (H4). While self-brand connection explained the reduction in self-defensiveness for those who first formed their brand attitude on an ethical basis, it unexpectedly reduced it to the same level as those who formed an attitude about Patagonia on a different basis. In contrast to expectations, individuals did not differ in how defensive they were against the source of moral-threat, and when accounting for the buffering effect of connecting with an ethical Patagonia, those who read about Patagonia's ethical contributions and then committed harm to others in a hypothetical moral dilemma were more self-defensive than those who read about Patagonia's exciting and innovative contributions prior to committing social harm.

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[41] Controlling for symbolic moral identity altered some of the estimates, but not the overall conditional direct and indirect effects (see Appendix C).

There are two potential explanations for this finding. First, it is possible that reading about Patagonia's socially and environmentally responsible activities primed morality ahead of the moral dilemma, which may have heightened the impact of the moral threat and need to defend against it to a greater extent than when morality was not primed by reading about Patagonia's exciting and innovative activities. Building on this moral priming effect, the essay about Patagonia's ethical contributions presented the brand as a type of moral exemplar that after subsequently making a decision that hypothetically harmed others, potentially increased the salience of one's morally-transgressive actions or highlighted a discrepancy between others morality and one's own that increased a sense of moral inferiority (see Monin, 2007). Yet, rather than distance oneself from moral paragon Patagonia, individuals connected more strongly with the brand, and this reduced their need to be defensive against the source of threat. In either case, those in the ethical condition may have experienced a more complex—or at the very least, dissimilar—moral threat than those in the exciting condition, providing some insight as to why individuals were similarly defensive after threat despite the effective use of a direct compensatory strategy.

Another potential interpretation for these findings is simply that the indirect strategy was similarly effective, albeit through a different pathway than people who affirmed the moral self through a strong connection with an ethical brand. As previously mentioned, indirect strategies for regulating self-threats also include hedonic pursuits aimed at positive affect or escaping the self. Reading about exciting innovations can foster a positive mood and/or allow individuals to escape the self into an imaginary world of new possibilities that don't affirm the self but might

nonetheless temporarily buffer the sting of self-threats. This alternative explanation is explored in Study 5.

Finally, Study 4 shed more light on the potential boundary conditions created by the self-importance of moral identity. As previously discussed, those who place strong self-importance on being a person of moral character may be particularly sensitive to their own attitudes about a brand's (or product's) ethics for it to serve as an effective symbol for moral self-repair. By first presenting individuals with information about Patagonia's social and environmentally responsible contributions, it provided a strong basis from which they could form an attitude about Patagonia's ethics, thereby giving these more discerning individuals the evidence they need to make an informed decision about whether the brand can serve as an identity-relevant symbol of morality. Providing details about Patagonia's ethics led those who are invested in being a moral person to draw closer to the brand after a moral threat and buffered their need to be defensive; however, this was not observed for those who are less concerned with their morality. Implications for this are examined further in the General Discussion.

2.5 Study 5: Direct vs. Indirect Compensatory Strategies—Consumer Spending

In Study 4, affirming the moral self through connection with a moral brand was an effective strategy for buffering moral self-threats, and this was especially the case for those for whom being a moral person is central to their self-concept. Unfortunately, evidence did not support that this was more effective than an indirect strategy. While several possible explanations were considered, it is reasonable to surmise that potential methodological imbalances obfuscated the ability to draw clear inferences about whether direct compensatory strategies are superior to indirect strategies for moral self-repair. Study 5 addressed this issue

through a conceptual replication using the same moral self-threat manipulation, then assigned participants to a compensatory repair strategy afterward. Further, Study 5 utilized a different compensatory strategy manipulation using actual consumer spending behavior. Another key goal of Study 5 was to extend previous findings by investigating the enduring effects of direct vs. indirect compensatory strategies on moral self-repair using a 24-hour follow-up study to provide evidence as to whether such strategies serve as temporary salves or result in enduring self-repair.

In Study 5, participants experienced the same moral self-threat, were randomly assigned to spend prosocially on others (direct compensatory strategy; spending aimed at moral self-repair) or hedonically on themselves (indirect compensatory strategy; spending aimed at mood repair) in the next 24 hours, and then completed a follow-up survey 24 hours later. This study expanded on the previous studies in a few ways. First, it examined if simply knowing one will engage in future prosocial or hedonic consumption will differentially initiate self-repair processes. Second, it also tested the enduring effect of direct vs. indirect compensatory strategies on moral self-repair by examining differences in self-defensiveness a day later. Third, it moved beyond the lab and leveraged actual consumer behavior.

The overall hypotheses for Study 5 were that following a threat to moral self-views, prosocial consumer spending will have a stronger effect on self-repair than self-indulgent consumer spending (H3)—on a more granular level, the prospect of spending on others will initiate self-repair processes to a greater degree than the prospect of spending on oneself, and spending on others will have a stronger enduring effect on self-repair than spending on oneself. Finally, it was expected that these effects would be magnified for those who place strong self-importance on being a person of moral character (H4).

2.5 Participants

Participants were 176 undergraduates recruited from the Northwestern University Psychology 110 participant pool. Additional exclusion criteria for this study involved removing participants from analysis who were assigned to the self-indulgent spending condition, but spent prosocially (i.e., on others; on ethical products), and who took more than 24 hours to complete the follow-up survey. From these exclusion criteria and the overall criteria, data were removed from eight participants assigned to self-indulgent spending who spent prosocially, and nine participants for follow-up survey issues (eight took 24+ hours to complete; one did not complete key tasks), leaving a final sample of 159 participants. [42]

The sample (M_{age} = 18.64, SD_{age} = 0.86) included mostly female (62.9%; male: 33.3%; gender non-conforming: 3.8%), white (54.7%; Black: 14.5%; Asian: 14.5%; LatinX: 5.0%; Middle Eastern: 2.5%; Multiracial: 8.8%), liberal (M = 2.57, SD = 1.29; 1 = *very liberal*, 7 = *very conservative*) participants of higher than average socioeconomic status when considering reported family household income (M = 8.53, SD = 4.28; 1 = *$0-25k*, 13 = *$300k+* [54.8% >$175k]; 8.2% did not report) and individuals' perception of their family's socioeconomic status (M = 6.94, SD = 1.97; 1 = *lowest*, 10 = *highest*).

2.5 Materials and Procedure

Participants came to the lab in groups of 1 to 3, but completed tasks in private, individual cubicles. As in previous studies, they were told that the session was shared by multiple

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[42] Results from a similar 24-hour follow-up study conducted in our lab comparing hedonic to virtuous activities following the moral dilemma paradigm resulted in moderate effect sizes (βs = .26-.44). Taking this into account, an *a priori* power analysis using G*Power (version 3.1) for a hypothesized medium effect (Cohen's d = .50), which indicated a sample size of 128.

researchers investigating different questions and would be engaging in unrelated tasks over the course of the hybrid study. First, they were told that researchers were interested in how decision-making processes impact emotion—for the lab-portion of the study, they would complete a vivid mental imagery decision-making task where they would imagine themselves as the protagonist in a scenario and write about their experience as the scenario unfolds, then respond to a few subsequent emotion questions. In an ostensibly unrelated task, participants were told that researchers were interested in how college students spend money—they would receive a gift card to a randomly chosen website that they must spend in the next 24 hours, and that they would complete a follow-up survey 24 hours later with questions about what they spent the money on.

In-Lab Session. The goal of the in-lab portion of the study was to induce a moral threat, then manipulate self-repair strategy by randomly assigning participants to a direct compensatory strategy (i.e., prosocial spending aimed at affirming the moral self) or an indirect compensatory strategy (i.e., self-indulgent spending aimed at mood repair), followed by an assessment of the immediate effects on strategy on some of the self-repair outcomes from Study 4. First, to induce moral threat, participants completed the moral trolley problem from Study 4, then completed the modified BMIS (pleasant: $\alpha = .80$; unpleasant: $\alpha = .63$) as a manipulation check. Next, participants were randomly assigned to one of two gift card conditions: Donors Choose (direct: prosocial spending; $n = 80$) or Amazon (indirect; self-indulgent spending; $n = 79$). Donors Choose is a nonprofit organization that helps public school teachers in need get funding for a wide range of classroom supplies for their students, many of whom are from marginalized and/or low-income communities. Teachers from Pre-K through 12th grade post their funding requests to the website and website visitors can view and choose which requests they would like to donate

toward. Similar in ways to an online Amazon shopping experience, individuals can find a classroom request to support by using a variety of search filters (e.g., educational subject, project materials requested, amount needed, etc.) on the website, as well as add or remove projects from their shopping cart.

In each gift card condition, participants were told that they would receive a $10 gift card for their respective website that they must spend it in the next 24 hours, as well as provided instructions of how to use the website. To highlight how participants were to use the gift card, those in the Donors Choose condition were told they would be spending the gift card on others, whereas those in the Amazon gift card condition were specifically told to splurge on a small, indulgent treat for themselves.[43] Thus, the Donors Choose condition represents spending behavior that is generous and altruistic toward others, whereas the Amazon condition represents spending behavior that is pleasurable, fun, or relaxing for the self.

Initiation of Self-Repair Processes. To assess the initiation of self-repair processes as a function of gift card assignment, following the gift card spending instructions, participants completed the single shame and guilt items (including anxious and happy as distractors), and a modified 3-item SSFS measure from Study 4. As in Study 4, while keeping their actions in the trolley task in mind, participants rated the extent to which they felt dislike towards themselves, believed they were acceptable, and put themselves down on a scale from 1 (*do not agree at all*) to 7 (*completely*); negative items were reverse scored so that higher scores indicated greater self-

[43] No specific examples of self-indulgent items were mentioned; however, targeted images of snacks, small stress-relief toys, etc. were displayed to participants (and included on the instruction printouts provided to participants with their gift card).

forgiveness (α = .80). Finally, participants completed the SISE and a demographics questionnaire.

At the end of the in-lab session, participants were told they will be emailed a link for the follow-up survey in 24 hours with questions regarding their purchases. Participants were instructed to complete the follow-up survey within 24 hours of receipt (i.e., 24-48 hours after the moral self-threat manipulation), and to increase adherence to this timeframe, they were told that those who completed the survey within 24 hours would be entered into a raffle for a $50 gift card. Participants were provided with an envelope containing their gift card, along with instructions describing their respective website and instructions on how to use the gift card.

Follow-up Survey. As noted, participants completed the follow-up survey within 24 hours after their lab session. First, participants were asked which gift card they received, and were then asked to describe the Amazon purchase(s)/Donors Choose project(s) they spent the money on, including what they found appealing about it(them). Next, they were asked if they spent more than the $10 gift card, and if so, how much more. Individuals in the Donors Choose condition were also asked if the project(s) they donated to double or tripled their donation—if so, the amount of the final donation and if they selected the optional 15% Donors Choose donation support (of the project's donation) for each project.

Evidence of Enduring Self-Repair. To assess the enduring effects of direct vs. indirect strategy on self-repair, after reporting details about their purchase(s), participants completed the same emotion items and modified SSFS from the in-lab session (this time asking participants to keep their actions from the dilemma task they completed the day before in mind; α = .82). To ascertain the need to defend the self against the source of threat, participants then completed the

same 2-item trolley derogation task from Study 4—also modified to have participants think back to the trolley decision-making task they completed the day prior.

Participants were then told about the two gift cards people received in the study and that the participant randomly selected for the $50 gift card at the end of data collection will get to choose whether the gift card is for Amazon or Donors Choose; they subsequently indicated which they would choose should they win the gift card lottery. This served as an exploratory measure of additional self-defense striving, with the idea that those assigned to the hypothetically less effective indirect self-repair strategy (i.e., self-indulgent spending on Amazon) might select the Donors Choose card as a means to directly repair the moral self after threat.

Finally, participants completed the moral identity measure and reported their political orientation, then were reminded not to discuss their gift card assignment of purchases with other students to ensure the research integrity of the study.

2.5 Results

Across analyses, it was hypothesized that after experiencing a threat to moral self-views, self-repair outcomes would be stronger for those who directly affirmed the moral self by spending prosocially on others compared to those who engaged in mood repair by spending indulgently on themselves (H3). This overall hypothesis consists of several study-specific hypotheses. First, that simply knowing that one will be donating to support others in the next 24 hours (i.e., planning for future moral behavior) would initiate self-repair processes to a greater extent than knowing one will be spending money on themselves (i.e., planning for mood repair), as evidenced by feeling less ashamed and guilty, and be more self-forgiving after their actions in the moral dilemma at the end of the in-lab portion of the study. That is, the prospect of moral

opportunity would initiate self-repair processes—a process hypothesized to strengthen and endure as one engages in the behavior—to a greater extent than the prospect of rewarding, hedonic opportunity. Second, that engaging in prosocial spending following a moral threat would exert a more enduring effect on self-repair than engaging in self-indulgent spending (i.e., indirect repair strategy), such that the difference in self-repair processes between compensatory strategies observed at Time 1 would persist at Time 2, although it was anticipated there would be an overall decrease in shame and guilt, and an increase in self-forgiveness over time for both compensatory strategies. Importantly, it was expected that those who used a direct repair strategy following moral threat would be less defensive against the source of threat (i.e., the trolley task) 24 hours later compared to those who used an indirect repair strategy. Third, it was expected that differences in self-conscious moral emotions and self-forgiveness would mediate the effect of direct vs. indirect repair strategy on self-defensiveness. Finally, it was hypothesized that any differences would be magnified for those high on moral identity (H4).

2.5 Initiation of Self-Repair Processes

First, to assess for initial change in self-conscious moral emotions, shame and guilt items following the dilemma task (r = .65) and post-gift card assignment (r = .79) were averaged, then standardized for comparison. A 2(gift card: Donors Choose, Amazon) x 2(time: post-dilemma, post GC assignment) repeated measures ANOVA on change in shame and guilt did not reveal main effects of gift card condition or time (ps >.50), but there was a significant gift card x time interaction, $F(1, 157) = 5.69$, $p = .018$, $\eta_p^2 = .04$. Probing the interaction, there were no differences in self-conscious moral emotions between gift card conditions post-dilemma task or post-gift card assignment (ps > .13), indicating that all participants were feeling similarly

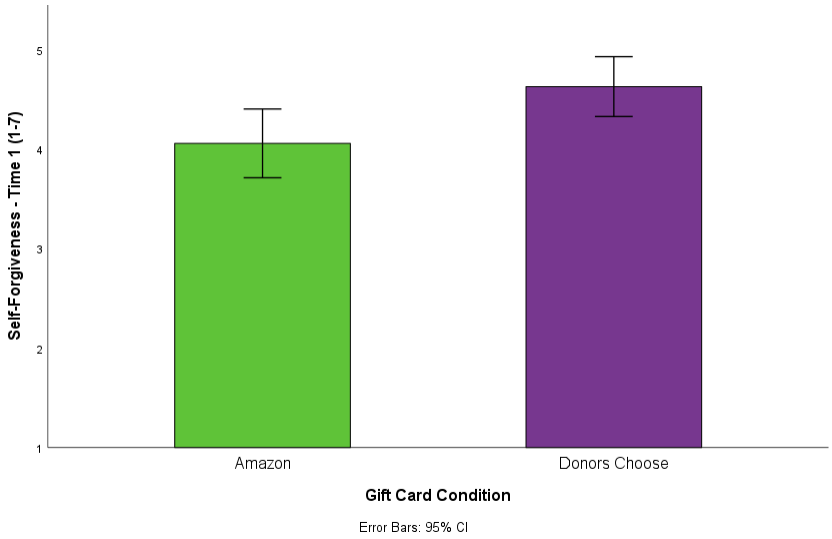
ashamed and guilty after the moral threat manipulation. Post-gift card assignment, there was a small, but non-significant (p = .086) increase in moral emotions for those in the Donors Choose condition, such that they reported feeling somewhat more ashamed and guilty (M = 0.13, SD = 1.08) than immediately after the trolley task (M = -0.01, SD = 1.07). Conversely, there was a small, but non-significant (p = .102) decrease in moral emotions for those in the Amazon condition, such that they reported feeling somewhat less ashamed and guilty post-gift card assignment (M = -.11, SD = 0.90) than immediately after the trolley task (M = .03, SD = 0.92).

To investigate whether anticipating future prosocial spending would lead individuals to be more self-forgiving after their actions in the moral dilemma compared to anticipating future self-indulgent spending, an independent samples t-test revealed a significant difference between the two gift card conditions, $t(157) = -2.48$, p = .014, d = -.39, 95% CI [-.71, -.08]. As illustrated in Figure 10, people who learned they would be spending prosocially on others in the next 24 hours (M = 4.63, SD = 1.35) forgave themselves after their actions in the trolley task to a greater extent than those who learned they would be spending on themselves (M = 4.05, SD = 1.54).[44]

[44] Groups did not differ on self-esteem at Time 1, $t(157) = 0.32$, p = .747. Controlling for Time 1 self-esteem did not alter results, $F(1, 156) = 6.27$, p = .013, η_p^2 = .04.

Figure 10

Study 5: Effect of Gift Card Condition Assignment on Self-Forgiveness Following Moral Threat



In sum, while the expected reduction in self-conscious moral emotions was not observed for those who were anticipating the opportunity to spend prosocially in the next 24 hours compared to those anticipating the opportunity to spend self-indulgently, the hypothesized preliminary increase in self-forgiveness was observed; this provides partial support for hypothesis 3.

2.5 Evidence of Enduring Self-Repair

To assess the enduring impact of compensatory strategy on self-repair, a series of analyses tested the effect of gift card condition on change in self-conscious moral emotions and self-forgiveness from the end of the in-lab session (Time 1) to the follow-up survey 24 hours later (Time 2), as well as self-defensiveness against the trolley problem at Time 2.[45]

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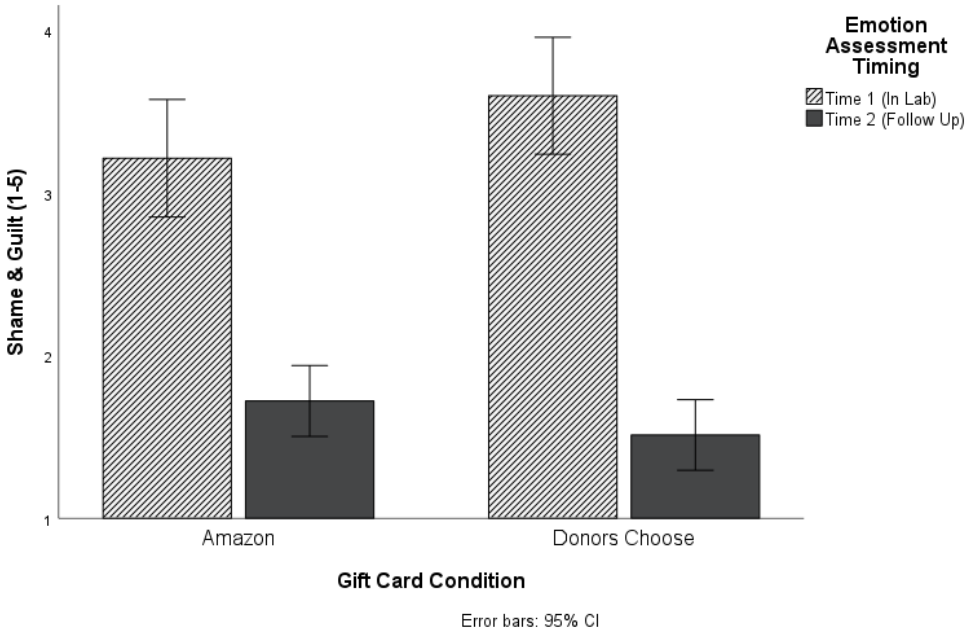
[45] Gift card conditions did not differ in the amount of time taken to complete the follow-up survey. Results and additional descriptive and qualitative analyses of gift card purchases are reported in Appendix C.

Change in Moral Emotions and Self-Forgiveness at Time 2. The enduring effect of direct vs. indirect compensatory strategy was examined by looking at the change in self-conscious moral emotions and self-forgiveness using two 2(gift card: Donors Choose, Amazon) x 2(time: Time 1, Time 2) repeated measures ANOVAs. Single-item shame and guilt scores from the follow-up survey were averaged to create a Time 2 index of self-conscious moral emotions (r = .81). For change in self-conscious moral emotions, there was a significant main effect of time, $F(1, 157) = 169.51$, $p < .001$, and a significant gift card x time interaction, $F(1, 157) = 4.66$, p = .032, indicating that the change in moral emotions was significantly affected by the type of spending one engaged in. As expected, there was a significant reduction in shame and guilt over time for both the Amazon condition, $F(1, 157) = 58.61$, $p < .001$, and the Donors Choose condition, $F(1, 157) = 115.93$, $p < .001$. Illustrated in Figure 11, the magnitude of the difference from Time 1 ($M = 3.60$, $SD = 1.77$) to Time 2 ($M = 1.51$, $SD = 0.95$) was larger ($M_{diff} = 2.09$, 95% CI [1.71, 2.47]) for those who spent prosocially than those who spent self-indulgently (M = 3.22, $SD = 1.47$; $M = 1.72$, $SD = 1.01$; $M_{diff} = 1.49$, 95% CI [1.11, 1.88]); however, there were no significant differences in moral emotion strength between gift card conditions at Time 1 or Time 2 (ps > .13).

Figure 11

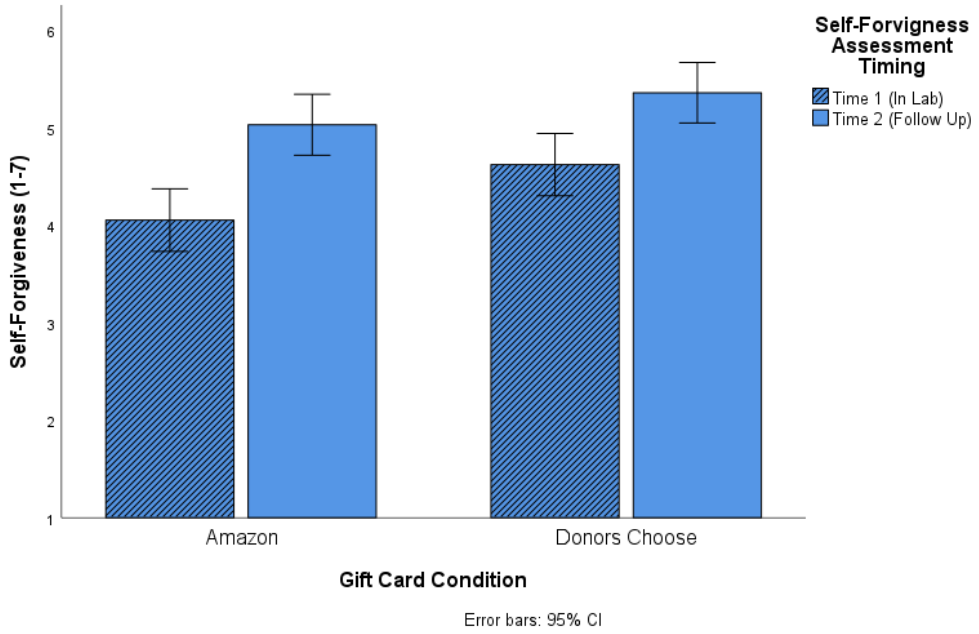
Study 5: Effect of Gift Card Condition on Change in Shame and Guilt from Time 1 to Time 2



As for change in self-forgiveness, there was a main effect of time, $F(1, 157) = 68.20$, $p < .001$, and of gift card condition, $F(1, 157) = 4.98$, $p = .027$; however, the interaction was not significant ($p = .247$). As expected, self-forgiveness increased over time (Time 1; $M = 4.34$, $SD = 1.47$; Time 2: $M = 5.20$, $SD = 1.41$), and supporting hypothesis 3, those in the Donors Choose gift card condition ($M = 4.99$, $SD = 1.18$) were more self-forgiving after considering their actions in the moral dilemma on average than those in the Amazon gift card condition ($M = 4.54$, $SD = 1.35$); see Figure 12.

Figure 12

Study 5: Effect of Gift Card Condition on Change in Self-Forgiveness from Time 1 to Time 2



This difference appears to be driven primarily by the group differences in self-forgiveness at Time 1, $F(1, 157) = 6.16$, $p = .014$, as the gift card conditions do not differ in self-forgiveness at Time 2, $F(1, 157) = 2.17$, $p = .143$ (Donors Choose: $M = 5.36$, $SD = 1.30$; Amazon: $M = 5.03$, $SD = 1.51$).

Self-Defensiveness. Finally, to investigate which compensatory strategy exerted a more enduring effect on moral self-repair after threat, an independent samples t-test was conducted on self-defensiveness scores 24 hours later. Unlike previous studies, the two self-defensiveness items were not highly correlated ($r = .26$); therefore, separate analyses were conducted on each item. As a reminder, the first self-defensiveness item asked people to report the extent to which the trolley dilemma task was a reliable simulation of how they might manage a dilemma (1 =

very reliable; 10 = *not at all reliable*).[46] Results of the analysis indicated that there were no differences between gift card conditions, $t(147.85) = 0.47$, $p = .638$; individuals in the Amazon condition ($M = 6.06$, $SD = 2.05$) similarly viewed the dilemma task as a somewhat less reliable simulation of how they might manage a moral dilemma as those in the Donors Choose condition ($M = 5.93$, $SD = 1.61$).[47]

The second self-defensiveness item asked participants to rate the extent to which those who knew them well would say their actions in the trolley task were a good reflection of who they were as a person (1 = *a great deal*; 10 = *not at all*). Supporting hypothesis 3, a significant difference between gift card conditions was observed, $t(157) = 2.16$, $p = .033$, $d = .34$, 95% CI [.03, .65]—individuals in the Amazon condition ($M = 5.24$, $SD = 2.23$) were more self-defensive than those in the Donors Choose condition (M = 4.54, SD = 1.88), as they were more likely to report that others wouldn't view their actions in the moral dilemma as a good reflection of their true self; see Figure 13.[48]

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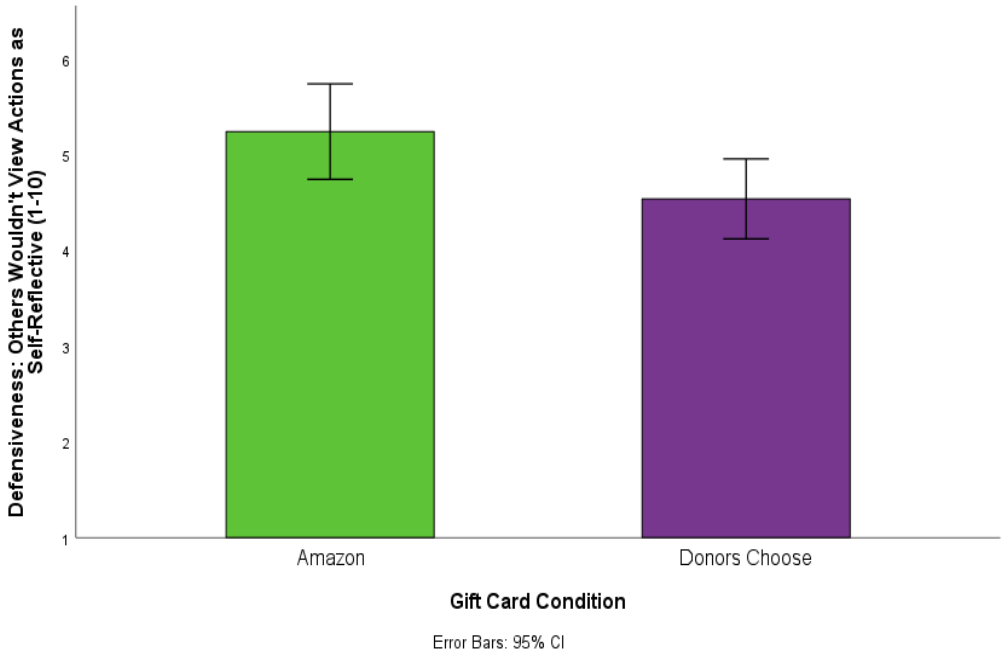
[46] This represents the reverse-scored coding of the scale presented to participants. The same applies to the subsequent self-defensiveness item. Higher scores indicate stronger self-defensiveness.

[47] Many participants remarked about their familiarity with the classic trolley problem to the researcher, so it is possible that this may account for the lack of differences on this item; however, trolley problem familiarity was not assessed in the study.

[48] Groups did not differ on self-esteem at Time 2, t(156) = 0.27, p = .790. Controlling for Time 2 self-esteem did not alter results, $F(1, 156) = 4.78$, $p = .030$, $\eta_p^2 = .03$.

Figure 13

Study 5: Effect of Gift Card Condition on Others' Views of Moral Dilemma Actions as Self-Reflective at Time 2



Taken together, these findings support the general hypothesis that a direct compensatory strategy would have a more enduring effect on self-repair following moral threat than an indirect compensatory strategy (H3), as those in the Donors Choose condition were more self-forgiving, and less defensive after spending prosocially on others than those who spent on themselves in the Amazon condition; however, a clear difference wasn't observed for shame and guilt.

2.5 Mechanisms of Self-Repair: Self-Forgiveness

Given that simply planning for prosocial spending in the next 24 hours initiated self-forgiveness after threat to a greater extent for those in the Donors Choose gift card condition, and that this effect endured overall, a mediation analysis was conducted to investigate whether self-forgiveness at Time 1 was the mechanism through which people were less self-defensive 24

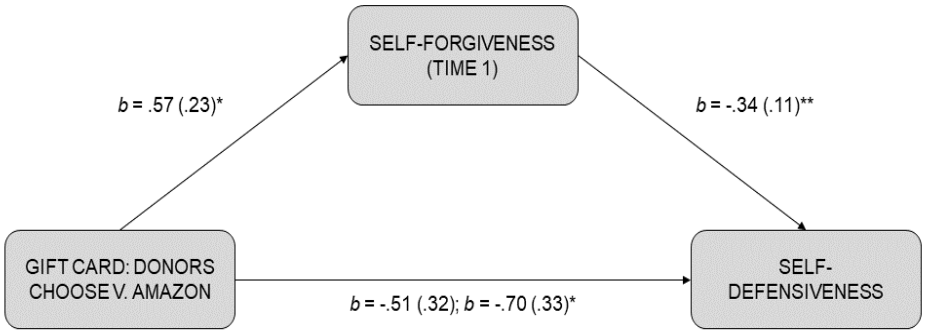
hours later. It was hypothesized that differences between direct and indirect compensatory strategies on self-defensiveness would be explained in part by the enduring effect of self-forgiveness that began at Time 1.

A mediation model was conducted using PROCESS (model 4; 5000 bootstrap samples), with self-defensiveness regressed onto gift card condition (gift card contrast: Amazon = -.5, Donors Choose = .5) and mean-centered Time 1 self-forgiveness scores. As illustrated in Figure 14, those assigned to the Donors Choose condition were more self-forgiving after their actions in the moral dilemma at the end of the in-lab session, $t(157) = 2.48$, $p = .014$, 95% CI [.12, 1.02], and this self-forgiveness decreased self-defensiveness the following day, $t(156) = -3.09$, $p = .002$, 95% CI [-.56, -.12], such that the difference in self-defensiveness between gift card conditions was not independent of the self-forgiveness process started the day prior, $t(157) = -2.16$, $p = .033$, 95% CI [-1.35, -.06]; indirect effect: $b = -.19$, $SE = .11$, 95% CI [-.44, -.03]. There was no difference in defensiveness between gift card conditions when Time 1 self-forgiveness was accounted for, $t(156) = -1.57$, $p = .118$;[49] of note, the indirect effect dropped to marginal significance, $b = -.63$, $SE = .33$, $p = .055$, 95% CI [-1.27, .01] (indirect effect = -.12, SE = .08, 95% CI [-.30, .02]) when controlling for self-forgiveness at Time 2.

[49] Controlling for ratings on the first self-defensiveness item did not alter results; see Figure C1 in Appendix C.

Figure 14

Study 5: Indirect Effect of Gift Card Condition on Self-Defensiveness After Moral Threat Through Self-Forgiveness at Time 1



Note. PROCESS mediation model (5000 bootstrap samples) predicting how self-defensive participants were against the source of self-threat (i.e., the trolley task) as a function of gift card condition, with the mediating effect of self-forgiveness at Time 1. Gift card contrast: Amazon = -.5, Donors Choose = .5. Unstandardized regression coefficients are presented; standard errors are in parentheses.

*$p < .05$. **$p < .01$.

In support of hypothesis 3, spending prosocially as a direct compensatory strategy after moral threat exerted an enduring effect on self-repair compared to spending self-indulgently as an indirect strategy, and this was explained by self-forgiveness processes initiated the day prior after learning of the prospect of a moral opportunity. Although it might appear this initial self-repair process was sufficient for moral self-repair, accounting for self-forgiveness 24 hours later generally attenuated the effect. It thus seems to be the case that differences in self-defensiveness were not solely due to forgiving oneself the day prior, but rather the cumulative effect of self-

forgiveness derived from both planning for and spending prosocially that is accounting for differences in self-defensiveness.

2.5 Moderation: Moral Identity

To investigate the hypothesis that effects would be magnified for those who place high self-importance on being a moral person, a moderated mediation analysis was conducted in PROCESS (model 8; 5000 bootstrap samples) was conducted to assess whether moral identity moderated the indirect effect of gift card condition on self-defensiveness through Time 1 self-forgiveness scores. The model was conducted using the linear contrast code for gift card condition and mean-centered moral identity scores, with interaction terms on path *a* and *c* in the model.[50] Results of the analysis supported a significant moderated mediational relationship (index = -.35, *SE* = .18, 95% CI [-.77, -.05]).[51]

As displayed in Table 5 and supporting hypothesis 4,[52] moral identity moderated the effect of gift card condition on self-forgiveness at Time 1, such that the effect was magnified for those high, but not low on moral identity. There was no evidence that moral identity moderated the effect of gift card condition on self-defensiveness 24 hours later, indicating that the direct effect of gift card condition on self-defensiveness did not vary as a function of moral identity.

Also in support of hypothesis 4, conditional indirect effects indicated that the enduring indirect effect of the direct compensatory strategy (i.e., prosocial spending on Donors Choose)

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[50] Moral identity scores did not differ between gift card conditions, $t(157) = 0.60$, $p = .549$.
[51] Controlling for symbolic moral identity did not alter results; see Appendix C.
[52] One SD above the mean is above the maximum observed in the data for moral identity; thus, conditional effect estimates are at -1SD and the maximum.

on self-defensiveness through self-forgiveness was significant for those high, b = -.36, SE = .17, 95% CI [-.74, -.09], but not low b = -.01, SE = .11, 95% CI [-.25, .20] on moral identity.

Table 5

Study 5: Model Coefficients for Moderated Mediation Analysis with Moral Identity on Self-Defensiveness

	Time 1 Self-Forgiveness (M)				Self-Defensiveness			
Effect	*b*	*SE*	*t*	95% CI	*b*	*SE*	*t*	95% CI
Constant	4.35***	.11	38.28	[4.13, 4.58]	6.37***	.52	12.35	[5.35, 7.38]
GC	.57*	.23	2.50	[.12, 1.02]	-.53	.33	-1.62	[-1.17, .12]
Moral ID	-.02	.22	-0.09	[-.46, .42]	-.36	.31	-1.15	[-.98, .26]
SF-T1 (M)	--	--	--	--	-.34**	.11	-3.02	[-.56, -.12]
GC x Moral ID	1.04*	.45	2.32	[.16, 1.92]	-.13	.64	-0.21	[-1.39, 1.12]
Conditional Direct Effects								
Low Moral ID: GC	.03	.32	0.11	[-.60, .67]	--	--	--	--
High Moral ID: GC	1.06**	.31	3.40	[.45, 1.68]	--	--	--	--

Note. CI = confidence interval. GC = gift card contrast (Amazon = -.5, Donors Choose = .5). Moral ID = moral identity (Low = -1SD, High = maximum). SF-T1 = self-forgiveness at Time 1. M = mediator. Unstandardized estimates are presented. Conditional effects estimates are based on simple slopes analysis at -1SD and the maximum of the mean of moral identity (+1SD is above the maximum observed in the data).

*p < .05. **p < .01. ***p < .001.

2.5 Exploratory: Gift Card Lottery Choice

To the extent that a repair strategy was ineffective in repairing the self after threat, it is possible that participants might continue to pursue identity-relevant objects that symbolize the threatened self-aspect. Because the indirect repair strategy was hypothesized (and found) to be less effective for self-repair than the direct repair strategy, it is possible that participants who spent self-indulgently would choose the Donors Choose as their gift card lottery choice, which might indicate additional identity-relevant striving—even after defending against the source of self-threat. To explore this possibility, a chi-square analysis to compare the gift card lottery choice as a function of direct vs. indirect compensatory strategy (i.e., gift card condition). Results of the analysis indicated that there was no relationship between compensatory strategy and gift card lottery choice, χ^2 (1) = 1.43, p = .268; therefore, the exploratory hypothesis was not supported.

2.5 Discussion

The findings in Study 5 provided partial support for hypotheses 3 and 4. Using actual consumer behavior, it was found that people who planned for and spent prosocially on others following a moral threat were initially more self-forgiving after their actions harmed others in a hypothetical moral dilemma, and were subsequently less defensive against the source of moral self-threat compared to those who planned for and spent self-indulgently—and this was particularly the case for those who place high self-importance on being a person of moral character (H4). Thus, not only did a direct compensatory strategy have a more immediate positive effect on self-repair processes, but it also demonstrated an enduring effect, such that planning for and engaging in prosocial spending after experiencing a threat to moral self-views

had a more durable impact on self-repair than the indirect strategy of planning for and engaging in hedonic spending (H3).

Chapter 3. General Discussion

The moral self is a central feature of who we are (Aquino & Reed, 2002; Conway, 2018; Strohminger & Nichols, 2014) and research has pushed to establish morality as a basic psychological need (Prentice et al. 2019). If viewing the self as a good and moral person is a core need that must be maintained, then engaging in strategies that directly compensate for threats to moral self-views should be key to affirming the moral self and restoring psychological equanimity. The goal of this research was to explore this possibility and develop *the moral self-maintenance perspective* by testing whether direct vs. indirect compensatory strategies were similarly effective for moral self-repair following moral self-threats using consumption as the compensatory medium.

Across five studies with diverse participants using five different threat manipulations and multiple forms of compensatory consumption strategies, I found partial support for the moral self-maintenance perspective. People were drawn to ethical brands and products, particularly after moral self-threats (Studies 1-2 & 4), and the use of direct compensatory consumption strategies appeared more effective at affirming the moral self and restoring psychological equanimity compared to indirect compensatory consumption strategies (Studies 4 & 5). This research also shows that the self-importance of being a moral person sometimes created boundary conditions for the effectiveness of certain types of compensatory strategies for moral self-repair (Study 3). Importantly, this research provided preliminary evidence that threats to moral self-views are regulated differently than other self-threats (Study 3). These findings, while

mixed, appear consistent with the growing consensus that morality should be considered a fundamental need, and suggest continued research to explore the moral self-maintenance perspective could be fruitful.

Theoretical Contributions

Many studies in the psychological literature have examined the effect of moral identity on a broad array of moral behavior (see Hertz & Krettenauer, 2016), but few have focused on consumption to regulate moral self-threats (cf., Newman & Trump, 2017). In the consumer behavior literature, a great deal of research has investigated compensatory consumption for self-threats (Mandel et al., 2017; Rucker & Galinsky, 2013), including the motivations that lead people to choose a direct vs. indirect compensatory strategy (e.g., Brannon, 2019), as well as the impact that these strategies have on self-regulation and subsequent self-repair (Lisjak et al., 2015; Rustagi & Shrum, 2018). Yet, work in these areas has not differentiated between different types of self-threats, particularly from a framework that considers that moral self-threats may be unique from other self-threats in the ways in which they need to be regulated.

As such, this research contributes to the current psychological and consumer behavior literature in several ways. First, these findings add to the growing body of work testing whether morality—particularly the need to view oneself as moral—is a basic psychological need (Prentice et al., 2019; see also Conway, 2018; Strohminger & Nichols, 2014; Tetlock et al., 2000), including the criteria that moral self-views have affective consequences, elicit goal-oriented behavior to satisfy the need to maintain such views, and are not derivative of other motives. For instance, when moral self-views were thwarted, individuals experienced ill effects on mood, particularly painful self-conscious moral emotions, and were more self-defensive.

Moral self-threats also magnified people's motivation to obtain ethical products and draw closer to an ethical brand, and once their need to view themselves as moral was satiated via these moral self-relevant symbols, they relaxed their moral strivings. For example, expressing a stronger motivation to obtain ethical products after a threat to moral self-views appeared sufficient to affirm the moral self as the motivation did not extend to additional behavioral intentions. Moreover, viewing an ethical brand as representative of who one is as a person buffered individuals' need to be defensive against a source of morally threatening information. Finally, direct and indirect compensatory strategies were not fully substitutable to affirm the moral self after threat as engaging with intelligence products led people to be more defensive, whereas engagement with both intelligence and ethical products assuaged the need to be self-defensive after intelligence threats; further, prosocial consumer spending exerted a more enduring effect on self-repair than self-indulgent spending. Taken together, this contributes to work investigating morality as a basic psychological need, as well as how compensatory consumption strategies may differ in the ability to effectively regulate threats to moral self-views.

The present work also expands the knowledge in the compensatory consumption literature considering within-domain (i.e., direct) vs. across-domain (i.e., indirect) consumption strategies to repair self-threats. Prior work suggests that compensatory consumer strategies within the domain of threat can lead to greater rumination about the self-threat and impair subsequent self-regulation (Lisjak et al., 2015), especially when the consumption strategy is explicitly tied to the domain of threat as opposed to implicitly (Rustagi & Shrum, 2018). In contrast, the present studies found that direct compensatory strategies resulted in more effective self-repair following moral threats as evidenced by less defensiveness, and this was the case

when the compensatory strategy was explicit or implicit. For instance, spending a gift card to help teachers and students in need exerted an enduring positive effect on self-repair, in part, through reparative processes initiated immediately after experiencing a moral self-threat that was not observed after spending self-indulgently. Similarly, engaging with products that were by their very nature more ethical or environmentally responsible choices resulted in less defensiveness than engaging with products that affirmed another positive self-aspect. The present work did not measure self-threat rumination nor incorporate self-regulatory tasks, so future research should confirm whether direct compensatory strategies for moral self-threats are effective regardless of rumination, as well as the impact on other metrics of self-regulation.

Other work focusing on the use of within- vs. across-domain compensatory consumer strategies has found that individuals choose within-domain strategies over across-domain strategies when there is a strong self-verification motive (Brannon, 2019). While the present studies did not address the specific motivations through which ethical consumption is affirming the moral self, some of the findings with moral identity centrality may complement and extend this research. For example, moral identity magnified, and in some cases suppressed, the effectiveness of direct compensatory strategies on self-repair. For people for whom being a person of moral character is integral to who they view themselves to be, it is reasonable to infer that they have a strong need to verify and confirm their morality to themselves, and a direct means of doing so would be the most effective. For these individuals, a deep connection with an ethical brand as self-representative allowed them to affirm the moral self and buffer against morally threatening information in Study 4. In contrast, those low on moral identity were less likely to use this strategy to buffer threat—to be sure, these individuals should be less likely to

view an ethical brand as representative of the self if they are less concerned with viewing themselves as moral in the first place. This replicates Newman and Trump's (2017) findings when following a moral threat, those high on moral identity reported stronger self-brand connection with an ethical Nike, whereas those low on moral identity pushed away from the brand, indicating that it was less representative of who they are as a person.

One explanation for these findings might be that those low on moral identity have less of a need to verify their moral self, or as others have generally inferred (Newman & Trump, 2017), pushing away from an ethical brand verifies the lack of importance they place on being moral. On the other hand, rather than indicate that viewing the self as moral isn't a concern for these individuals, perhaps a strong self-brand connection based on ethics is a less useful direct compensatory strategy for them. Instead, they may have lower criteria for moral threat compensation or prefer an implicit compensatory strategy (see Rustagi & Shrum, 2018), but nonetheless benefit from a direct compensatory strategy for moral self-repair. For instance, engaging with face valid ethical products in Study 3 was efficient for moral self-repair, especially for those low on moral identity, yet engaging with intelligence-symbolic products was not. Not only does it appear from these findings that people who place less self-importance on their moral character still need to affirm their moral self after threat, using the direct compensatory strategy was more effective than the indirect strategy for self-repair. Therefore, moral self-threats may engage multiple motivations that shape the qualitative aspects of what makes a compensatory strategy useful but are nonetheless more effective when within the domain of threat. One final caveat is that the present research randomly assigned participants to specific compensatory strategies, so future work should explore individuals' naturalistic

preferences for direct vs. indirect strategies when given the choice (for a discussion, see Galinsky et al., 2012).

A self-verification motive may be one mechanism that increases a preference for direct compensatory consumer strategies, but there are other motivational candidates worth exploring. Roese and Gardner (2019) assert that consumers connect to brands to fulfill several motivations, including the need to clarify one's identity, the need to affirm or signal competence, or the need to affirm or signal social ties with others. Affirming the moral self through consumptive preferences, choices, and behaviors that align with one's moral values and beliefs can potentially increase all three. Given the central nature of morality to the self, consuming ethical products may provide identity coherence. Additionally, the active choice of morally relevant over irrelevant products may enhance a sense of autonomy and competence. Yet given the role of morality in social functioning, emphasizing moral choices may also increase one's sense of social value. The threshold at which these motivations are met, as well as the extent to which the characteristics of the compensatory strategy match the motivation, may differ as a function of moral identity importance. Future research should explore these assumptions in the consumer context.

Limitations & Future Directions

While these findings generate exciting pathways for future theoretical investigation, they are not without their limitations. The present research used several manipulations to threaten the moral self and contend that ethical consumption affirms the moral self. That is, by drawing closer to and setting intentions to obtain consumer brands and products that express one's values, or spending money to help others in need, individuals demonstrate their moral worthiness to

themselves. Affirming the moral self through ethical consumption choices and behaviors ostensibly reduces the discrepancy between current and ideal moral self-views caused by moral self-threats, thereby relaxing the need to be defensive. An alternative hypothesis for these findings is that it is the activation of morality in general rather than a change in the moral self-concept that explains these findings. Study 2b did not rule out this alternative explanation as similar consumer behavioral intentions were observed when writing a story about how one would engage in socially harmful behavior vs. writing about how another Northwestern student would perform such behaviors.

In hindsight, the design of Study 2b may not have represented the clearest test of this alternative hypothesis. It is possible that writing about another Northwestern student committing a moral transgression also served as a moral self-threat, as another ingroup member's immoral behavior could have implications for how one would personally be perceived (e.g., Branscombe et al., 2002; Ellemers et al., 2013; Ellemers & van den Bos, 2012; van der Toorn, 2015; see also Wout et al., 2008; cf., Sachdeva et al., 2014)—particularly as our ingroup's morality is central to our self-image (for a review, see Brambilla & Leach, 2014). To be sure, empathy, belonging, diversity, inclusion, and social justice are common topics and norms discussed in the Northwestern community, so writing about how a fellow student would violate those norms could serve as a powerful social identity threat, and such threats have been found to impact compensatory consumption (White & Argo, 2009). This pairs with parallel findings in the literature that have found vicarious moral licensing through changes in the moral self-concept (Kouchaki, 2011; see also, Decety & Grezes, 2006; Goldstein & Cialdini, 2007; Niedenthal et al. 2005), and some researchers have avoided the direct comparison for this reason (Conway &

Peezt, 2012, Study 2). Nonetheless, the alternative explanation remains an open question. Future work should use an immoral 'stranger' condition to compare against a moral self-threat to rule out this alternative, as well as compare against a moral affirmation and neutral control condition to make stronger inferences.

Another point for future work would be to clarify whether the compensatory strategies are reducing self-defensiveness as opposed to reflecting different degrees of self-defensiveness. For instance, people were more self-defensive after experiencing either an intelligence threat or a moral self-threat than controls in Study 3, regardless of compensatory strategy, when one might expect that compensatory consumption would assuage the need to be self-defensive to levels closer to (although, not the same as) controls. It might also be the case that the type of consumption behavior would differentially impact the magnitude of self-defensiveness—for example, brief online engagement with symbolic products might not be as effective for self-repair as engaging with brands or products one personally views as self-symbolic, or actual ethical consumption. One way to investigate this further would be to include a no-repair control to assess if compensatory consumption strategies reduce self-defensiveness compared to when people are not given an alternate strategy to affirm the self after threat, as well as continue to use a no-threat control condition for comparison across different types of compensatory strategies (see Mullen & Monin, 2016).

Though not mutually exclusive, an additional method of assessing successful moral self-repair after threat would be to test whether people then go on to behave immorally. Work on moral licensing (e.g., Monin & Jordan, 2009; Sachdeva et al., 2009) suggests that when one's past behavior credentials their morality, they may then feel licensed to act immorally, or at the

very least, forgo additional prosocial behavior (see also *moral cleansing*; Tetlock et al., 2000). Even imagining prospective moral behavior has been found to morally license people in the present (e.g., Cascio & Plant, 2015; Khan & Dhar, 2007). Therefore, if compensatory consumer strategies successfully reconfirmed one's moral worthiness to themselves, one might expect that in addition to being less defensive, they would be subsequently less prosocial or even engage in immoral behavior.

Although the present research did not test for moral licensing or cleansing effects, it was observed that the influence of moral self-threats did not extend to other behavioral intentions beyond the likelihood of purchasing brands. It is possible that the threat manipulation was not strong enough to influence these aims. Another explanation might be that expressing plans for future ethical consumption was sufficient to provide evidence of one's moral self-worth, thus relaxing identity-striving to a similar extent as those who affirmed their moral self, or to those whose ethical consumption preferences allowed them to affirm the self more generally after non-moral self-threats. Similarly, the enduring effect of prosocial spending on self-repair was generally accounted for by self-forgiveness processes initiated by the prospect for an upcoming moral opportunity. Whether these findings serve as potential evidence of moral licensing or of moral cleansing needs to be examined in further studies.

Finally, the results of these studies provide preliminary evidence that moral self-threats are regulated differently from other self-threats and contribute to the growing literature on morality as a basic psychological need. An important question for future inquiry is whether the need to view oneself as moral is derivative of other needs (cf., Prentice et al., 2019). Given the importance of morality for both the self and social life, one might wonder whether affirming

belonging would adequately regulate moral self-threats, and similarly, whether affirming the moral self would regulate threats to belonging. Some existing research would suggest that belonging affirmation is not substitutable for moral affirmation, as recalling a time when one felt loved and accepted had no effect on shame or self-forgiveness after committing an interpersonal transgression, and resulted in significantly less self-trust even a week later compared to individuals who directly affirmed the value violated by their transgression (Woodyatt & Wenzel, 2014). However, this may not be a clear test of whether these needs are nonderivative. The relationship with the victim harmed by one's actions was rated as important, which may have posed a more precarious belonging threat that a general belonging affirmation did not adequately address (see Baumeister et al., 1994). The literature would therefore benefit from future work that contrasts compensatory processes for these two needs; though it is recognized that this would be an arduous endeavor.

Practical Implications

As these findings show, ethical brands and products can play a key role in helping individuals repair or buffer threats to their moral self-concept. Offering ethical and sustainable products or engaging in socially responsible corporate activities can appeal to consumers who are looking for ways to maintain their moral self-concept and align with their values. Indeed, Studies 1-2b showed that brand ethics were universally important for setting consumer behavioral intentions and may therefore be central to the judgements and decisions consumers make about future purchase plans or how much one would pay for brands and products. This coincides with findings in the literature that a brand's moral character significantly impacts brand evaluations, purchase and word-of-mouth intentions, and the amount people would be

willing to pay for the brand (Khamitov & Duclos, 2018). Further, research has shown that when a brand is perceived as possessing attributes positively associated with threatened self-aspects, spreading word of mouth about the brand can assuage consumers' psychological discomfort (Thomas et al., 2017).

Yet consumer organizations might wonder how deep of a change or commitment to such efforts is necessary. Ethical consumption is not immune to moral licensing (e.g., Kahn & Dhar, 2006; see also Newman & Brucks, 2018), and basic pro-environmental marketing or packaging might be sufficient to facilitate a positive moral self-concept. However, simple marketing ploys may backfire and lead to moral reactance, particularly when one's moral identity is highly important (Habib et al., 2018). Further, people like to behave consistently with their self-views (e.g., Beverland & Farrelly, 2009; Conway & Peetz, 2012; see Bem, 1972; Cialdini et al., 1995; Festinger, 1957), and as individuals adopt more ethical and environmentally friendly behaviors, the possibility that such behaviors will spillover to additional actions and practices may increase (e.g., Carrico, 2021; Truelove et al., 2014).

While organizations may be slow to adopt any radical changes, they would benefit from thinking prospectively about their customer base. The current generation more than other generations before are deeply concerned about climate change and corporate social responsibility (Deloitte, 2022; Pew Research Center, 2021, 2022), and they are wielding their consumption choices and purchasing power to express their values. Whether it is switching to veganism or supporting food grown from climate-friendly farming practices, looking more closely into a brand's corporate social responsibility activities and reports, or boycotting fast fashion/poor labor practices, people are engaging in consumption that is in line with their moral convictions.

For people to use consumption to meet their moral self-motivations, consumer brands and products need to be adequate symbols of morality. Striving authentically to create more ethical products and/or incorporate socially responsible practices can serve organizations by improving their reputation and building customer loyalty, as research has shown that consumers who identify with a company's values and ethical standards are more likely to be loyal customers (e.g., Thompson et al., 2014; see Bagozzi et al., 2021).

This isn't a trivial suggestion—our possessions have long been understood as extensions of the self (Belk, 1988; James, 1890) and there is an abundance of literature that supports the psychological significance of brands in our personal and social lives (for a review, see Bagozzi et al., 2021). The more symbolic brands are of our important valued identities, the stronger our connections are to such brands (e.g., Escalas & Bettman, 2005)—so much so that we vicariously experience threats to cherished brands (Lisjak et al., 2012), and are inclined to pursue and defend them (e.g., Angle & Forehand, 2016; Cheng et al., 2012) to reinforce our self-concepts.

Conclusion

Morality is a central theme of our personal and social lives—it provides the essential lens through which we view others as well as ourselves. As such, the moral self-concept is a critical aspect of an individual's identity and plays a crucial role in preferences, behavior, and decision making. Evidence suggests the ability to maintain our views of ourselves as good and moral people may even be a fundamental psychological need. This work is a step toward understanding the ways in which moral self-threats need to be regulated to repair the self and restore psychological equanimity, and how ethical consumption can be an effective means to these ends. Making ethical consumer choices that align with one's values and beliefs can make people feel

more capable, in control of their lives, and connected to others, thereby enhancing a sense of self and well-being.

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Appendices

Appendix A

Stimuli and Measures Used Across Studies

1) Threat Manipulations Used Across Studies

Study 1: Threat Manipulation

Moral Self-Threat

Caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, kind

Above are several traits or qualities that are often associated with what it means to be a moral person. Please describe a time within the last six months when you acted *inconsistently* with these traits or qualities. Please write briefly (for 2 minutes) but be as specific as possible.

Moral Affirmation (i.e., Control)

Caring, compassionate, fair, friendly, generous, hardworking, helpful, honest, kind

Above are several traits or qualities that may characterize a person. Please describe a time within the last six months when you acted *consistently* with these traits or qualities. Please write briefly (for 2 minutes) but be as specific as possible.

Study 2a: Threat Manipulation

Negative, Non-Moral Threat (i.e., Control)

Absentminded, clumsy, disorganized, fickle, forgetful, indecisive, impractical, procrastinating, untidy

Above are several traits or qualities that may characterize a person. Please describe a time within the last six months when you acted *consistently* with these traits or qualities. Please write briefly (for 3 minutes) but be as specific as possible.

Study 2b: Threat Manipulation

In this survey, we are testing out a writing task for a future study. We are interested in how deeply people can connect with their imagination. For this task, you will be presented with a list of actions that people may engage in. We would like you to imagine performing ONE of the behaviors listed, then write a paragraph in the first person about how you would perform it. Importantly, you need to translate this into an action where you specifically imagine YOURSELF doing it, not someone else.

For example, let's say you were presented with the following behaviors:
Act athletic in a physical competition, act creative in your daily life, act comedic in an unusual situation

To write about acting athletic, you might say,
"To act athletic in a physical competition, I would first warm up my muscles so I can do some light active stretching before the competition starts. The stretch of my muscles feels good as I breathe deeply through each one. I sharpen my mental focus on the relay I am about to compete in by visualizing the race and what each of my body parts will do throughout it. I will breathe in through my nose and out through my mouth while pushing off the balls of my feet while running. When I feel the baton touch my hand, I will tighten my grip, then narrow my focus to the space in front of me while pushing with every fiber in my muscles toward the finish line…"

Below are some actions that people may engage in:

Behavior 1, Behavior 2, Behavior 3, Behavior 4

Choose ONE of the behaviors you can imagine performing the most vividly, then write a paragraph about how you would perform that behavior. For example, "To act ____, I would…" Please write for at least 2 minutes and be as detailed as possible. Remember, you need to translate this into an action where you specifically imagine YOURSELF doing it, not someone else.

Moral Self-Threat
Act uncaring toward a person who is sad, act indifferent toward a person in pain, take greedily from a person in need, act mean toward another person.

Negative, (Non-Moral) Self-Threat
Act forgetful when thinking about what you did last week, act impractical considering a solution to a problem, act impulsive when shopping, act indecisive about choosing a restaurant or activity.

Positive Control

Act responsible at work or school, act creative in your daily life, act comedic in an unusual circumstance, act well-informed with others

Moral Other-Threat

Choose ONE of the behaviors you can imagine someone performing the most vividly, then write a paragraph about how another Northwestern student would perform that behavior. For example, "To act ____, they would…" Please write for at least 2 minutes and be as detailed as possible. Remember, you need to translate this into an action where you specifically imagine ANOTHER NORTHWESTERN STUDENT doing it, not yourself.

Act uncaring toward a person who is sad, act indifferent toward a person in pain, take greedily from a person in need, act mean toward another person.

Study 3: Threat Manipulation (modified from Knowles et al., 2010)

Assessment Task:

In the following assessment task, you will complete several questions designed to measure intellectual and moral aptitude. These questions are drawn from two well-researched assessments: The Emotion Recognition Task (ERT) and The Remote Associates Test (RAT).

-The ERT was developed by Paul Ekman in 1976 and has since been considered as a valid measure of moral aptitude and ethical potential.

-The RAT was developed by Martha Mednick in 1962 and has since been considered a valid measure of intellectual aptitude.

PLEASE READ THE FOLLOWING INSTRUCTIONS CAREFULLY!

For this assessment task, you will be presented with 10 questions comprised of (5) ERT and (5) RAT items in randomized order.

1) Each ERT question will present a picture of a person with a mixed emotional expression on their face—a dominant primary emotion and a more subtle secondary emotion. Look carefully at the facial expression. You will first indicate whether it is primarily expressing anger, fear, happiness, surprise, or sadness; then rate the intensity of the emotion. You will then identify the secondary emotion and rate its intensity.

2) Each RAT question presents three cue words that are linked by a fourth word. Look at the words, then write the fourth word that connects them in the space provided.

Each expression/question set will be presented for 12 seconds, then will automatically advance to the next expression/question set. This will give you a total of 2 minutes to complete the whole assessment task.
Try to respond to every question, even if you don't think you know the answer - in other words, try not to leave any responses blank or unanswered. When you have completed the assessment task, you will be given feedback based on your performance.

Examples of ERT and RAT questions are on the next page.

Example ERT Question:

	Emotion Displayed					Emotion Intensity				
	Anger	Fear	Happiness	Surprise	Sadness	Not intense at all	Mildly intense	Moderately intense	Intense	Very intense
Primary Emotion			**X**					**X**		
Secondary Emotion					**X**	**X**				

Example RAT Question:

show / life / row : _____

Correct answer: **boat**
1) showboat
2) lifeboat
3) rowboat

Emotion Recognition Task Images

RAT Questions

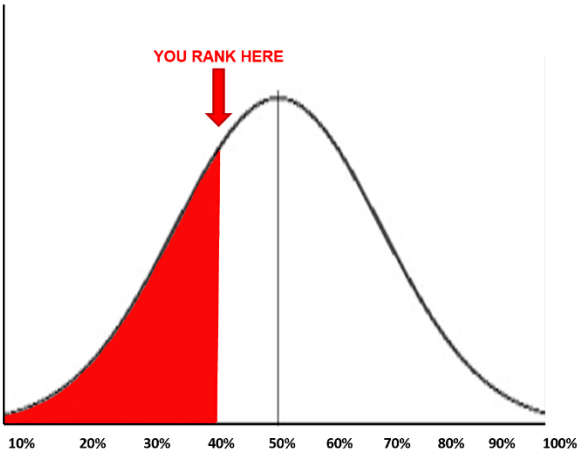
1. piece / mind / dating
2. stick / maker / point
3. opera / hand / dish
4. cross / rain / tie
5. manners / round / tennis

Intelligence Threat Condition

ASSESSMENT TASK COMPLETE

You completed [2] out of 5 items correctly on the Remote Associates Test portion.

YOUR INTELLIGENCE RANK COMPARED TO OTHER PARTICIPANTS: [40TH] PERCENTILE



Research has found The Remote Associates Test to accurately and reliably predict aspects of intelligence, such as intellectual aptitude and creative problem solving.

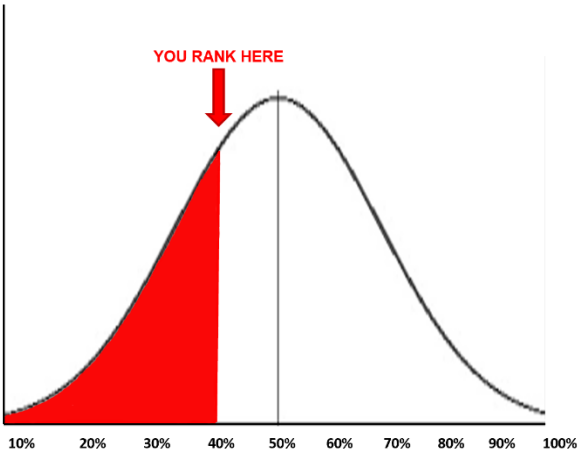
Lower percentile rank indicates that you are more likely to have poorer reasoning, cognitive synthesis, and creative problem-solving skills compared to other people.

Moral Threat Condition

ASSESSMENT TASK COMPLETE

You completed [2] out of 5 items correctly on the Emotion Recognition Task portion.

YOUR MORAL RANK COMPARED TO OTHER PARTICIPANTS: [40TH] PERCENTILE



Research has found The Emotion Recognition Task to accurately and reliably predict aspects of moral aptitude, such as honesty, trustworthiness, and kindness.

Lower percentile rank indicates that you are more likely to be dishonest, untrustworthy, and unkind compared to other people.

Threat Condition Manipulation Check

According to the feedback you just received, what percentile did your performance place you compared to other participants?

30^{th} percentile	40^{th} percentile	50^{th} percentile	60^{th} percentile	70^{th} percentile
1	2	3	4	5

Studies 4 & 5: Threat Manipulation (modified Trolley Problem; Foot, 1967)

Instructions:
On the following pages, you will be asked to imagine yourself as the main subject in a scenario. There are four parts to the scenario that will be presented to you across different screens. Please use all your senses and imagination skills to engage in the task—see the environment around you, smell the smells in the air, etc., including how you may feel emotionally or psychologically. Please be as detailed as possible, but you do not need to write for a long time.

Imagine that you are the driver of an empty trolley – just you, the trolley, and your everyday route. In the space below, describe what being the driver of a trolley would be like. What kinds of things would you see driving along the track? What does driving the trolley feel like--is it fast, slow, smooth, and/or powerful? Use all your senses and write about what you are experiencing as you drive the trolley along the tracks—feel free to include what you are thinking and feeling as well. Please write briefly but be as detailed as possible.

Now imagine that the brakes of your trolley have just failed. On the track ahead of you there is a small child who has slipped away from the park and is playing on the track. The child seems unaware that the trolley is coming and the banks around the track are so steep that the child will not be able to get off the track in time. You see that there is another track leading off to the right, and you can turn the trolley onto it to avoid killing the small child. Unfortunately, there are five workmen who work for your trolley company on the right-hand track. You may not personally know these workmen, but you have seen these individuals before—in the break room, at company holiday parties, etc. They too will not be able to get off the track in time due to the steep banks.

In the space below, please use all your senses to imagine this scenario and write about what you are experiencing as the trolley driver, including what you are thinking and feeling. Just describe the moment and not what your proposed outcome would be. For example, what do the people on the tracks look like? What is going through your mind? Describe any physical reactions you may be having. Please write briefly but be as detailed as possible.

As the trolley driver, you must make a quick decision about what to do—you can turn the trolley onto the track to the right, thus killing the five workmen and saving the small child, or you can refrain from turning the trolley, thus killing the small child and saving the five workmen. Please select your decision about what you will do.

1 Turn the trolley onto the track to the right, killing the five workmen

2 Refrain from turning the trolley, killing the small child

Now that you have decided what you will do, please use all of your senses to describe what is happening as a result of your decision, as well as what you are thinking and feeling.

For example, what does the trolley feel like as you drive it down the track you chose? What happens to the people on the track as you overcome them with the trolley? What are their reactions? What are you thinking or feeling as this happens? Describe any physical reactions you may be having. Please write briefly, but be as detailed as possible.

2) Mood and Emotion Manipulation Checks Used Across Studies

Brief Mood Introspection Scale (modified)
(BMIS; Mayer & Gaschke, 1988)

INSTRUCTIONS: Select the response on the scale below that indicates how well each adjective describes your present mood.

(definitely do not feel) 1		(do not feel) 2		(slightly feel) 3		(definitely feel) 4	
Lively	1 2 3 4			Drowsy	1 2 3 4		
Happy	1 2 3 4			Grouchy	1 2 3 4		
Sad	1 2 3 4			Peppy	1 2 3 4		
Tired	1 2 3 4			Nervous	1 2 3 4		
Caring	1 2 3 4			Calm	1 2 3 4		
Content	1 2 3 4			Loving	1 2 3 4		
Gloomy	1 2 3 4			Fed up	1 2 3 4		
Jittery	1 2 3 4			Active	1 2 3 4		

Note: these anchors are assigned numerical values of 1 to 4, respectively, for scoring two pairs of mood dimensions: pleasant-unpleasant (I) and arousal-calm (II), and also positive-tired (I') and negative-relaxed (II')

*Modified to include the following items: ashamed, guilty

Single-Item Emotion Measure

Please rate each item based on how you are feeling right now.

Ashamed, guilty, happy, anxious

Not at all 1	2	3	4	Very much 5

State Shame and Guilt Scale
(SSGS; Marschall et al., 1994)
*modified - Pride items removed

The following are some statements which may or may not describe how you are feeling *right now*. Please rate each statement using the 5-point scale below. Remember to rate each statement based on how you are feeling *right at this moment.*

Not feeling this way at all		Feeling this way somewhat		Feeling this way very strongly
1	2	3	4	5

1. I want to sink into the floor and disappear.
2. I feel remorse, regret.
3. I feel small.
4. I feel tension about something I have done.
5. I feel like I am a bad person.
6. I cannot stop thinking about something bad I have done.
7. I feel humiliated, disgraced.
8. I feel like apologizing, confessing.
9. I feel worthless, powerless.
10. I feel bad about something I have done.

Shame items: 1, 3, 5, 7, 9; Guilt items: 2, 4, 6, 8, 10

3) Compensatory Consumer Strategy Manipulations Used in Studies 3-5

Study 3: Product Rating Task

Ethical Product Comparisons

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Ziploc Single-Use Plastic Bags (Strongly prefer)	Ziploc (Moderately prefer)	Ziploc (Slightly prefer)	Stasher (Slightly prefer)	Stasher (Moderately prefer)	Stasher Reusable Silicone Bags (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Conventional Meat Burger (Strongly prefer)	Conventional Meat (Moderately prefer)	Conventional Meat (Slightly prefer)	Beyond Meat (Slightly prefer)	Beyond Meat (Moderately prefer)	Beyond Meat Plant-Based Burger (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Gas-Powered Toyota Corolla (Strongly prefer)	Corolla (Moderately prefer)	Corolla (Slightly prefer)	Prius (Slightly prefer)	Prius (Moderately prefer)	Hybrid-Powered Toyota Prius (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Conventional Canvas Shoes (Strongly prefer)	Conventional (Moderately prefer)	Conventional (Slightly prefer)	TOMS (Slightly prefer)	TOMS (Moderately prefer)	TOMS Eco-Fiber Canvas Shoes (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Formula 409 Conventional Multi-Surface Cleaner (Strongly prefer)	Conventional (Moderately prefer)	Conventional (Slightly prefer)	Plant-Based (Slightly prefer)	Plant-Based (Moderately prefer)	Method Plant-Based All-Purpose Surface Cleaner (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Single-Use Plastic Grocery Bag (Strongly prefer)	Plastic (Moderately prefer)	Plastic (Slightly prefer)	Canvas (Slightly prefer)	Canvas (Moderately prefer)	Reusable Canvas Grocery Bag (Strongly prefer)

Ethical Product Comparisons (cont.)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Kroger Marketplace Grocery Store (Strongly prefer)	Kroger (Moderately prefer)	Kroger (Slightly prefer)	Whole Foods (Slightly prefer)	Whole Foods (Moderately prefer)	Whole Foods Market Grocery Store (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Kirkland Plastic Utensils (Strongly prefer)	Plastic (Moderately prefer)	Plastic (Slightly prefer)	Compostable (Slightly prefer)	Compostable (Moderately prefer)	Treeatery Compostable Utensils (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Cameron's Specialty Coffee (Strongly prefer)	Cameron's (Moderately prefer)	Cameron's (Slightly prefer)	Equal Exchange (Slightly prefer)	Equal Exchange (Moderately prefer)	Equal Exchange Fairly-Traded Coffee (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Single-Use Styrofoam Cup (Strongly prefer)	Styrofoam (Moderately prefer)	Styrofoam (Slightly prefer)	Ceramic (Slightly prefer)	Ceramic (Moderately prefer)	Reusable Ceramic Mug (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Scott Single-Use Paper Towels (Strongly prefer)	Scott (Moderately prefer)	Scott (Slightly prefer)	ECOLifestyle (Slightly prefer)	ECOLifestyle (Moderately prefer)	ECOLifestyle Reusable Paper Towels (Strongly prefer)

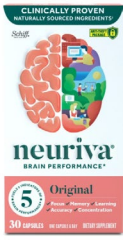
Intelligence Product Comparisons

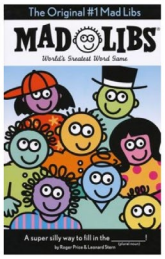
Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

People Magazine (Strongly prefer)	People (Moderately prefer)	People (Slightly prefer)	The Economist (Slightly prefer)	The Economist (Moderately prefer)	The Economist Magazine (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Magic 8 Ball (Strongly prefer)	Magic 8 Ball (Moderately prefer)	Magic 8 Ball (Slightly prefer)	Rubik's Cube (Slightly prefer)	Rubik's Cube (Moderately prefer)	Rubik's Cube (Strongly prefer)





Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Culturelle Probiotic (Strongly prefer)	Probiotic (Moderately prefer)	Probiotic (Slightly prefer)	Brain Performance (Slightly prefer)	Brain Performance (Moderately prefer)	Neuriva Brain Performance Supplements (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Mad Libs (Strongly prefer)	Mad Libs (Moderately prefer)	Mad Libs (Slightly prefer)	New York Times (Slightly prefer)	New York Times (Moderately prefer)	New York Times Crossword Puzzle (Strongly prefer)

amc

NATIONAL GEOGRAPHIC CHANNEL

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

AMC Channel (Strongly prefer)	AMC (Moderately prefer)	AMC (Slightly prefer)	National Geographic (Slightly prefer)	National Geographic (Moderately prefer)	National Geographic Channel (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Crayola Marker (Strongly prefer)	Marker (Moderately prefer)	Marker (Slightly prefer)	Fountain Pen (Slightly prefer)	Fountain Pen (Moderately prefer)	Fountain Pen (Strongly prefer)

Intelligence Product Comparisons (cont.)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Twitch Stream (Strongly prefer)	Twitch (Moderately prefer)	Twitch (Slightly prefer)	TED (Slightly prefer)	TED (Moderately prefer)	TED Talk (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Adult Coloring Book (Strongly prefer)	Coloring Book (Moderately prefer)	Coloring Book (Slightly prefer)	Brain Training (Slightly prefer)	Brain Training (Moderately prefer)	Lumosity Brain Training Games (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Storage Wars (Strongly prefer)	Storage Wars (Moderately prefer)	Storage Wars (Slightly prefer)	Jeopardy (Slightly prefer)	Jeopardy (Moderately prefer)	Jeopardy (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

E! Entertainment News (Strongly prefer)	E! (Moderately prefer)	E! (Slightly prefer)	NPR (Slightly prefer)	NPR (Moderately prefer)	NPR News Now (Strongly prefer)

Please indicate your degree of preference between these two options by selecting the corresponding point on the scale below.

Disney Mug (Strongly prefer)	Disney (Moderately prefer)	Disney (Slightly prefer)	Apple (Slightly prefer)	Apple (Moderately prefer)	Apple Mug (Strongly prefer)

Study 4: Compensatory Consumer Strategy Manipulation – Patagonia Essay Conditions

Patagonia – Ethical

Patagonia Clothing: History and Influence

March 10, 2022

Patagonia is an influential clothing brand that evolved purely out of a love for the outdoors—taking its name from a mysterious and diverse land that evoked majesty and a heavy respect for the environment.

History of the Brand: Activism Work & Sustainability Initiatives

Patagonia built a business model around the founding values of their company of sustainability and the people that protected the outdoors. As such, *environmental awareness and activism is a central part of their cultural and business model*.

Patagonia has spearheaded numerous *environmental and sustainability initiatives, including robust environmental and animal welfare responsibility policies*. 100% of their down is ethically sourced and environmentally certified to rigorous criteria. All of their cotton is grown organically with standards meant to encourage sustainable growing, and they recycle many materials back into the production process. They even have a line of clothing made from recycled fishing nets called NetPlus.

In the US, 100% of their energy needs were met with renewable energy. 94% of their line uses recycled materials (including plastic waste in the ocean). They also have a full program in their production process dedicated to providing foreign workers with fair trade and living wages. *Social and environmental responsibility is a core value of this company.*

More recently, the Chouinard family announced that the majority of Patagonia's profits would be donated to a newly established nonprofit organization called the Holdfast Collective, which will now be the recipient of all the company's profits and use the funds to combat climate change.

Patagonia cares deeply about their impact in the natural world—from their sustainability initiatives to their repair policies—and is what makes Patagonia *an ethical company*. This is a brand whose influence is deeply committed to sustaining and protecting the natural world, the truest place from which beautiful and connective experiences emerge.

In the spaces below, please list three takeaways from this article that gives you the impression

that Patagonia is an **ethical** company.

Ethical takeaway #1: _____

Ethical takeaway #2: _____

Ethical takeaway #3: _____

Patagonia – Exciting

Patagonia Clothing: History and Influence

March 10, 2022

Patagonia is a unique and cutting-edge clothing brand that evolved purely out of a love for adventure—taking its name from a mysterious and diverse land with a history of exploration and exciting experiences.

History of the Brand: Innovation from Necessity

Yvon Chouinard became one of the most important climbers and innovators in the development of the modern climbing world. He would create the Patagonia brand through a number of unique entrepreneurial endeavors and would set the stage for American climbing forevermore. Without the contributions of him and his brand, climbing could never exist in the same way.

In 1965, Chouinard and Tom Frost wanted to innovate the entire industry with lighter, more durable, more dependable, and more functional clothing/gear. Their approach defined the modern layering system in a way that *no other company has ever been able to do*, moving away from wool and cotton to embrace high-tech materials that were lightweight, warm, and durable. This trend and look came from Patagonia and *only* Patagonia.

Chouinard was not satisfied with just transforming clothing, however. Early on, he would finish developing the prototype for what is now the modern ice axe and crampons, an innovation which *completely revolutionized* the world of ice climbing. In doing so, he would *create exciting opportunities to explore* the winter mountains with routes previously un-climbable.

Chouinard's love of the mountain and connection to innovation is what makes Patagonia *an exciting company*. This is a brand that has shaped climbing in all its forms, influencing the gear, the possibilities for adventure and exploration, and the philosophy behind what it means to ascend a mountain.

In the spaces below, please list three takeaways from this article that gives you the impression that Patagonia is an **exciting/innovative** company.

Exciting/innovative takeaway #1: _____

Exciting/innovative takeaway #2: _____

Exciting/innovative takeaway #3: _____

Study 5: Compensatory Consumer Strategy Manipulation – Gift Card Conditions

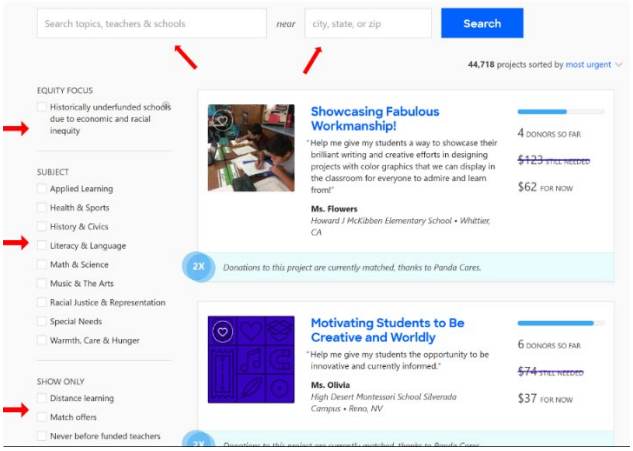
Gift Card Spending Instructions

Researchers are interested in learning more about individuals' spending habits. We will be giving you a $10 gift card that you MUST spend in the next 24 hours. The gift card you receive is randomly selected for a particular website. We will send you a follow-up survey 24 hours after this session to ask you about what you spent the money on and why you found it appealing. Take note about these questions and how much you spend on item(s) as it will make completing the follow up survey easier.

On the next page, you will learn what website you will receive a $10 gift card for, as well as be provided with instructions for how to use the website. After you complete the remainder of questions in today's survey, the research assistant will provide you with an envelope containing your gift card and a printout of the instructions. Please do not share your gift card location with other participants.

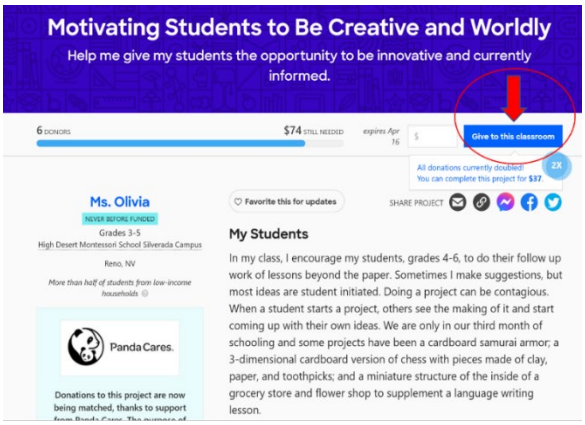
Donors Choose Gift Card Condition

Greetings! You have been assigned to receive a Donors Choose gift card to spend on others. Donors Choose is a nonprofit organization that helps public school teachers in need get funding for a wide range of classroom supplies for their students. Teachers from Pre-K through 12th grade post their funding requests to the website and you can view and choose which requests you would like to donate toward.



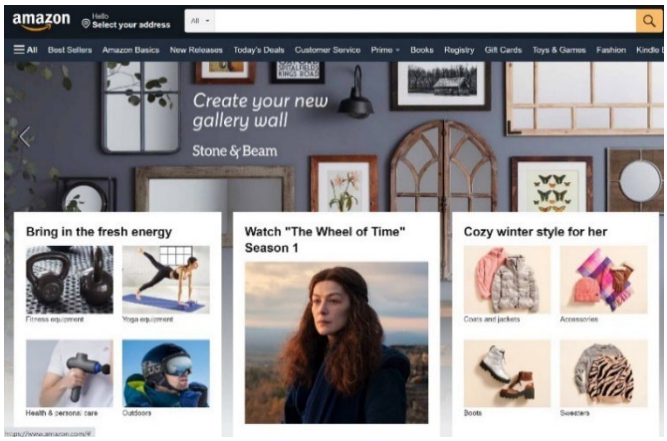
Similar in ways to conventional online shopping experiences, you can find a classroom request to support by using a variety of search filters (e.g., educational subject, project materials requested, amount needed, etc.) on the website. After putting in your search filters, you can select a funding request from the list to view more about the project, and to donate to the project if you choose. You may add or delete projects from your shopping cart during the process.

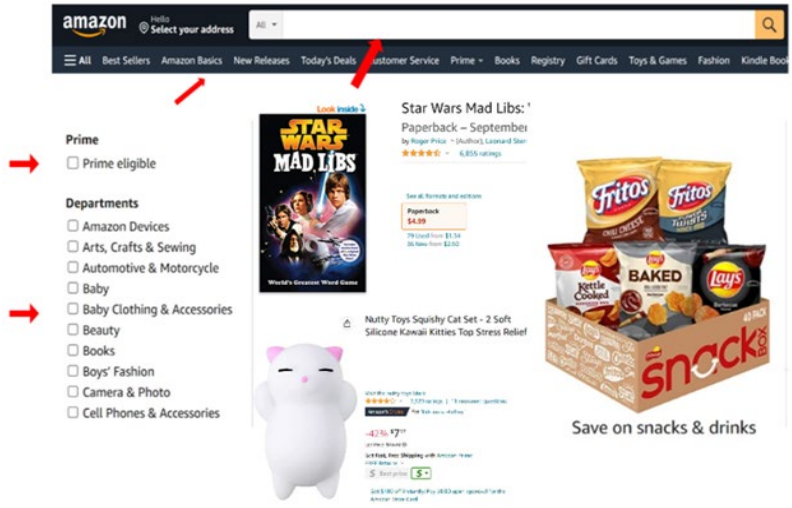
If you have found a project that you would like to donate to, select "Give to this classroom" on the right-hand side of the page. The website will ask you how much you would like to donate, as well as inform you that you will enter the gift card code during checkout. You will choose how to use your $10—you can donate it all to one project, or dontate different amounts to multiple projects. It is entirely up to you! We will follow up with you about **WHAT** project(s) you donated to and **WHY** you found them appealing.



Amazon Gift Card Condition

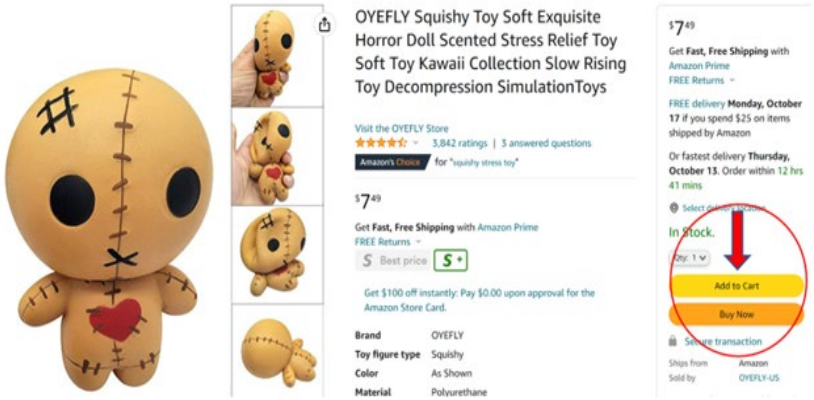
Greetings! You have been assigned to receive an Amazon gift card to **spend on something indulgent for yourself.** As you are probably familiar, Amazon is an online marketplace where you can purchase a variety of products. This is an opportunity to **splurge and treat yourself** to a little something!





As with most conventional online shopping experiences, you can find products you would like to purchase by using a variety of search filters (e.g., department, what's trending, price limits, etc.) on the website. After putting in your search filters, you can select a product from the list to view more about it. You may add or delete multiple products from your shopping cart during your shopping experience.

Once you have found an item that you would like to purchase, select "Add to Cart". You will enter the gift card code during checkout. You will choose how to use your $10—you can spend it all on one item, or purchase multiple items. It is entirely up to you! We will follow up with you about **WHAT** item(s) you purchased and **WHY** you found them appealing. Again, we want you to take this opportunity to **splurge on a small indulgent treat for YOURSELF!**



4) Dependent Measures Used Across Studies

Studies 1-2b: Consumer Brand Attitudes and Behavioral Intentions Rating Task

BRANDS:

ETHICAL	UNETHICAL	NEUTRAL
Patagonia	Fast Fashion (Shein/Forever 21)	Hanes
Whole Foods	Walmart	Walgreens
Method	Ziploc	Dial Soap

Instructions:
We are piloting some items for use in a future study on consumer behavior. We are interested in your opinions regarding a variety of consumer brands. You will be presented with several brands and asked to answer a few questions about each. This requires no research on your part - we are interested in the base knowledge you may or may not have about a brand, so just respond according to whatever naturally comes to mind. There are no right or wrong answers.

As a quick note, you will first be asked about your familiarity with a brand. We define "familiarity" with a brand broadly to mean whether or not you have heard about it, read about it, or understand what the brand stands for, regardless of whether or not you have used it.

BRAND ATTITUDES

1. How familiar are you with this brand?

Not familiar at all	Slightly familiar	Moderately familiar	Very familiar	Extremely familiar
1	2	3	4	5

2. Please rate this brand on the following dimensions:

	-3	-2	-1	Neutral 0	1	2	3	
Bad								Good
Dislike								Like
Unethical								Ethical
Immoral								Moral

3. Purchasing or using this brand would make me feel good about myself as a person.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-3	-2	-1	0	1	2	3

4. This brand tells me something about its consumer.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-3	-2	-1	0	1	2	3

5. This brand communicates certain symbols about the consumer who purchases, uses, or displays its products.

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
-3	-2	-1	0	1	2	3

6. This brand doesn't say much about its consumer. (reverse-scored)

Strongly Disagree	Disagree	Somewhat Disagree	Neither Agree nor Disagree	Somewhat Agree	Agree	Strongly Agree
3	2	1	0	-1	-2	-3

PURCHASE INTENTIONS

7. What is the likelihood that you would/will purchase products from this brand?

Extremely Unlikely	Unlikely	Slightly Unlikely	Neither Likely nor Unlikely	Slightly Likely	Likely	Extremely Likely
-3	-2	-1	0	1	2	3

WILLINGNESS TO PAY
Response options are adjusted relative to the baseline cost of the product

8. If regular [product/service] cost [$X.XX], how much more would you be willing to pay for this [product/service]?

I would not pay more than the regular cost	5% more	10% more	25% more	50% more	100% more
0	1	2	3	4	5

AMOUNT WILLING TO PAY TO SWITCH AWAY FROM A BRAND
Response options are adjusted relative to the baseline cost of the product

9. Imagine [Product X] costs [$X.XX]. How much more would you be willing to pay for a brand whose values align with yours?

I would not switch—This product/service's values align with my own	5% more	10% more	25% more	50% more	100% more
0	1	2	3	4	5

PURCHASE HISTORY
10. Have you purchased or used this brand?

Yes	No
1	0

Study 3: Self-Defensiveness – False Feedback

Self-Defensiveness: Assessment Task Derogation Opportunity

Self-Threat Conditions:

1. Thinking about the assessment task that you completed at the very beginning of the study that gave you a percentile rank compared to other participants, to what extent do you think the task was reliable?

Not at all reliable									Very reliable
1	2	3	4	5	6	7	8	9	10

2. To what extent do you think the assessment task measured your (moral) intellectual aptitude well?

Not at all									Very well
1	2	3	4	5	6	7	8	9	10

3. To what extent would people who know you well think your performance on the assessment task is a good reflection of your (moral) intellectual aptitude?

Not at all									A great deal
1	2	3	4	5	6	7	8	9	10

Control Condition:

1. Thinking about the assessment task that you completed at the very beginning of the study designed to assess moral and intellectual potential, to what extent do you think the task was reliable?

2. To what extent do you think the assessment task would measure intellectual and/or moral aptitude well?

3. To what extent would people who know a person well think that a person's performance on the assessment task would be a good reflection of their intellectual and/or moral aptitude?

Study 4 (Study 3): Self-Brand Connection

Self-Brand Connection Scale
(SBCS; Escalas, 2004)
***Only items 1 & 6 in Study 3**

1. Brand X [Patagonia] reflects who I am.

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

2. I can identify with Brand X [Patagonia].

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

3. I feel a personal connection to Brand X [Patagonia].

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

4. I (can) use Brand X [Patagonia] to communicate who I am to other people.

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

5. I think Brand X [Patagonia] (could) help(s) me become the type of person I want to be.

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

6. I consider Brand X [Patagonia] to be "me" (it reflects who I consider myself to be or the way that I want to present myself to others).

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

7. Brand X [Patagonia] suits me well.

-3	-2	-1	0	1	2	3
Not at all			Neutral			Extremely well

Studies 4 & 5: Self-Forgiveness; Self-Defensiveness – Trolley Problem Task

State Self-Forgiveness Scales (modified)
(SSFS; Wohl et al., 2008)
***Only items 4, 7, & 8 in Study 5**

Think back to the trolley task you completed earlier where you made a choice to kill five workmen or a small child. Please rate each of the following statements as you consider the choice you made in the task.

As I consider the choice I made, I…

1. …feel compassionate toward myself.
2. …feel rejecting of myself. (R)
3. …feel accepting of myself.
4. …feel dislike toward myself. (R)
5. …show myself acceptance.
6. …show myself compassion.
7. …put myself down. (R)
8. …believe I am acceptable.
9. …believe I am okay.
10. …believe I am decent.
11. …believe I am worthy of love.
12. …believe I am a bad person. (R)

All items measured on a 7-point scale (1 = not at all; 7= completely).
-Feelings & Actions: 1-7; Beliefs: 8-12; (R) = reverse scored

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Self-Defensiveness: Trolley Task Derogation Opportunity

Thinking about the trolley decision-making task, to what extent do you think the task was a reliable simulation of how you might manage a dilemma?

Not at all reliable									Very reliable
1	2	3	4	5	6	7	8	9	10

While the hypothetical dilemma was not one people would ever find themselves in, to what extent do you think people who know you well would say that your actions in the task are a good reflection of who you are as a person?

Not at all									A great deal
1	2	3	4	5	6	7	8	9	10

Study 5: Follow-Up Survey

24-hr Follow-Up Survey

1. Please select the gift card you received yesterday:
   -Amazon
   -Donors Choose

2. Please describe the Donors Choose project campaign (Amazon purchase) you spent your $10 gift card on and **WHY** you found it appealing. If you spent money on more than one project (item), please **describe each one** and **why** you found them appealing.

3. Did you spend more than the $10 gift card you were given? That is, did you add additional funds of your own beyond the $10? – Yes or No
   -If so, how much more? _____

*Additional questions for Donors Choose:
3b: Did the project(s) you donated toward double or triple your donation? – Yes or No
   -If so, please list the project type (e.g., art supplies, tech, field trip, etc.), the amount of the initial donation, the amount the donation was multiplied by, and the amount of the final donation for the project(s) below.
      Example:
      -Project type: headphones for focused learning
      -Initial donation: $2
      -Multiplier: 2x
      -Final donation: $4

3c: For each project listed: For this project, did you select the optional 15% donation support to Donors Choose or did you direct the whole donation toward the project?
   -No, I only donated to the project OR -Yes, I selected the 15% Donors Choose support

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Exploratory Question:
As you know, participants in this study received a $10 gift card from a randomly selected website to spend in the next 24 hours. Half the participants were given a gift card for Amazon to spend on indulgent treats for themselves. The other half were given a gift card for Donors Choose to spend money helping others. Donors Choose is a nonprofit organization that helps public school teachers in need get funding for a wide range of classroom supplies and other materials for their students. Teachers from Pre-K through 12th grade post their funding requests to the website and people can view and choose which requests they would like to donate toward.

You also know that at the end of data collection, one participant will be randomly selected to receive a $50 gift card. The winner will get to choose whether the $50 gift card is for Amazon or for Donors Choose. If you were to win the gift card lottery, which would you choose for your gift card?

-Amazon OR Donors Choose

5) Moral Identity, Self-Esteem, & Demographics Questionnaire Across Studies

Moral Identity Centrality
(Aquino & Reed, 2002)

Listed below are some characteristics that may describe a person.

Caring	**Compassionate**
Fair	**Friendly**
Generous	**Hardworking**
Helpful	**Honest**
Kind	

The person with these characteristics could be you or it could be someone else. For a moment, visualize in your mind the kind of person who has these characteristics. Imagine how that person would think, feel, and act. When you have a clear image of what this person would be like, answer the following questions.

1.	It would make me feel good to be a person who has these characteristics.	1	2	3	4	5
2.	Being someone who has these characteristics is an important part of who I am.	1	2	3	4	5
3.	I would be ashamed to be a person who has these characteristics. (R)	1	2	3	4	5
4.	Having these characteristics is not really important to me. (R)	1	2	3	4	5
5.	I strongly desire to have these characteristics.	1	2	3	4	5
6.	I often wear clothes that identify me as having these characteristics.	1	2	3	4	5
7.	The types of things I do in my spare time (e.g., hobbies) clearly identify me as having these characteristics.	1	2	3	4	5
8.	The kinds of books and magazines that I read identify me as having these characteristics.	1	2	3	4	5
9.	The fact that I have these characteristics is communicated to others by my membership in certain organizations.	1	2	3	4	5
10.	I am actively involved in activities that communicate to others that I have these characteristics.	1	2	3	4	5

Note: (R) = reverse scored. Scale 1 (*strongly disagree*) to 5 (*strongly agree*). Internalization: 1 – 5; Symbolization: 6 – 10.

Single-Item Self-Esteem Scale
(SISE; Robins et al., 2001)

I have high self-esteem.

Not very true of me	Slightly true of me	Moderately true of me	True of me	Very true of me
1	2	3	4	5

Demographics Questionnaire

1. What is your age? _____

2. What is your gender?

-Male; Female; Gender non-conforming

3. How would you classify yourself? (select all that apply)

-White/Caucasian; Black/African American/Caribbean; Hispanic/LatinX; Asian; Middle Eastern/Arab; Native Hawaiian/Other Pacific Islander; Native American/Alaska Native; Multiracial; Would rather not say

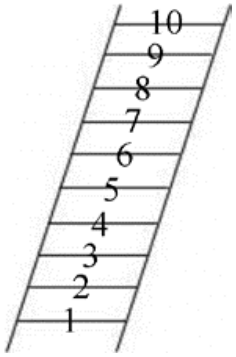
4. What is the highest level of education you have completed?

-Some high school or less; High school or equivalent (GED); Some college; Bachelor's degree; Graduate/Professional degree

5. What is your family's household income?

Studies 1-2b:
-$0 - $50,000; $50,001 - $75,000; $75,001 - $100,000; $100,001 - $150,000; $150,001 - $200,000; $200,001 - $250,000; $250,001 - $300,000; $300,001 - $350,000; $350,001 - $400,000; $400,001 - $450,000; $450,001 - $500,000; $500,001 or more; Would rather not say
Studies 3-5:
-$0 - $25,000; $25,001 - $50,000; $50,001 - $75,000; $75,001 - $100,000; $100,001 - $125,000; $125,001 - $150,000; $150,001 - $175,000; $175,001 - $200,000; $200,001 - $225,000; $225,001 - $250,000; $250,001 - $275,000; $275,001 - $300,000; $300,001 or more; Would rather not say

6. Referring to the 10-rung ladder on the right, please select the number on the scale below that indicates where you think that you & your family stand in terms of status (income, education & job statuses) compared to other people in the United States:
(1 = lowest, 10 = highest)



7. What is your political orientation?

Very Liberal	Liberal	Somewhat Liberal	Neutral	Somewhat Conservative	Conservative	Very Conservative
1	2	3	4	5	6	7

Appendix B

Pilot Tests for Stimuli Used Across Studies

1) Studies 1-2b: Ethical Consumer Brand Pilot for Brand Rating Task Stimuli

To ensure a broad array of consumer brands that could be characterized as ethical, unethical, or neutral, a two-phase pilot study was conducted to obtain a stimulus list of consumer brands that represented a socially shared understanding of particular brands as fitting into these categories. Seventy-seven Northwestern undergraduate students from the Psychology 110 participant pool generated a list of ethical and unethical brands. Next, 102 participants from Prolific (M_{age} = 27.25, SD_{age} = 6.21; 55.9% female) rated 32 of those generated brands (15 ethical, 12 unethical, 5 neutral) on several dimensions. Participants were first asked how familiar they were with the brand on a 5-point scale (1 = *not familiar at all*; 5 = *extremely familiar*)—"familiarity" was defined broadly to mean whether or not participants had heard about, read about, or understood what the brand stands for, regardless of whether or not they had used it. Participants that indicated at least some familiarity with the brand (more than not at all) then rated the brand on several 7-point (3 to -3) bipolar scales (*good-bad*, *like-dislike*, *ethical-unethical*, *moral-immoral*). They also indicated the brand's identity relevance (Sirgy & Johar, 1985) by rating the extent to which they agree that *This product tells me something about its user* and *This product communicates certain symbols about the person who uses it* on a 7-pt Likert scale (1 = *strongly disagree*, 4 = *neither agree nor disagree*, 7 = *strongly agree*).

Pilot Results

Controlling for individual's familiarity with brands, multilevel models with random intercepts were conducted on participants' perceptions of brand ethics (mean of *ethical-unethical*

and *moral-immoral* ratings) with brand category contrasts as predictors (C1: unethical = -.5, neutral = .5; C2: neutral = -.5, ethical = .5; C3: unethical = -.5, ethical = .5). Compared to unethical brands, brands categorized as ethical were viewed as significantly more ethical, b = 1.71, SE = .06, $t(1943.85) = 29.61$, $p < .001$, 95% CI [1.60, 1.83], as were neutral brands, b = .92, SE = .07, $t(1378.15) = 13.82$, $p < .001$, 95% CI [.79, 1.05]. Additionally, brands categorized as ethical were viewed as significantly more ethical than neutral brands, b = .71, SE = .06, $t(1331.39) = 10.99$, $p < .001$, 95% CI [.58, .83]. From the 32 brands tested, nine brands were selected (3 ethical, 3 unethical, 3 neutral) to use as stimuli for the main studies. The brands were chosen so that they were matched on three consumer contexts, including clothing (*Patagonia*, *Fast Fashion* [Forever 21/Shein], *Hanes*), brick-and-mortar retailers (*Whole Foods*, *Walmart*, *Walgreens*), and home-use products (*Method*, *Ziploc*, *Dial Soap*).

Follow-up multilevel models with random intercepts were conducted on perceptions of brand ethics, as well as identity-relevance ratings (controlling for brand familiarity) using the same brand category contrasts to compare the final selected brands. Again, both ethical brands, b = 1.90, SE = .12, $t(412.23) = 16.10$, $p < .001$, 95% CI [1.66, 2.13], and neutral brands, b = .96, SE = .09, $t(477.09) = 11.06$, $p < .001$, 95% CI [.79, 1.13] were viewed as more ethical than unethical brands. Moreover, ethical brands were perceived as more ethical than neutral brands, b = .87, SE = .08, $t(366.23) = 10.58$, $p < .001$, 95% CI [.71, 1.03]. In terms of the extent to which people viewed brands as communicating information about the consumer, both ethical, b = 1.71, SE = .08, $t(368.42) = 20.27$, $p < .001$, 95% CI [1.55, 1.88], and unethical brands, b = -.49, SE = 09, $t(479.21) = -5.72$, $p < .001$, 95% CI [-.66, -.32], were rated as more identity-relevant than

neutral brands, with ethical brands having stronger identity relevance than unethical brands, b = 1.23, SE = .10, t(414.14) = 12.81, p < .001, 95% CI [1.04, 1.42].

Confirmation of Brand Category Pilot Results in Studies 1-2b

In Study 1, multilevel models controlling for brand familiarity assessed perceptions of brand ethics and identity relevance of consumer brands/products using the brand contrasts (C1: unethical = -.5, neutral = .5; C2: neutral = -.5, ethical = .5; C3: unethical = -.5, ethical = .5). Results confirmed that ethical brands were perceived as more ethical than neutral brands, b = .61, SE = .11, t(877.42) = 5.82, p < .001, 95% CI [.41, .82], and neutral brands were perceived as more ethical than unethical brands, b = .88, SE = .10, t(870.19) = 9.21, p < .001, 95% CI [.69, 1.07]. In terms of the extent to which people viewed brands as communicating information about the consumer, both ethical, b = 1.96, SE = .09, t(877.15) = 21.16, p < .001, 95% CI [1.78, 2.14], and unethical brands, b = -.82, SE = .10, t(872.50) = -8.01, p < .001, 95% CI [-1.02, -.62], were rated as more identity-relevant than neutral brands, with ethical brands having stronger identity relevance than unethical brands, b = 1.17, SE = .10, t(537.32) = 11.60, p < .001, 95% CI [.97, 1.37].

In Study 2a, ethical brands were perceived as more ethical than neutral brands, b = 1.05, SE = .12, t(800.90) = 8.76, p < .001, 95% CI [.81, 1.28], and neutral brands were perceived as more ethical than unethical brands, b = 1.31, SE = .12, t(793.54) = 11.38, p < .001, 95% CI [1.09, 1.54]. In terms of the extent to which people viewed brands as communicating information about the consumer, both ethical, b = 2.31, SE = .09, t(791.17) = 25.12, p < .001, 95% CI [2.13, 2.49], and unethical brands, b = -.80, SE = .12, t(792.48) = -6.69, p < .001, 95% CI [-1.03, -.56], were rated as more identity-relevant than neutral brands, with ethical brands having stronger identity

relevance than unethical brands, $b = 1.42$, $SE = .11$, $t(787.66) = 13.07$, $p < .001$, 95% CI [1.20, 1.63].

Finally, In Study 2b, ethical brands were perceived as more ethical than neutral brands, $b = .86$, $SE = .05$, $t(1282.65) = 17.88$, $p < .001$, 95% CI [.76, .95], and neutral brands were perceived as more ethical than unethical brands, $b = 1.11$, $SE = .05$, $t(1466.37) = 21.88$, $p < .001$, 95% CI [1.01, 1.21]. In terms of the extent to which people viewed brands as communicating information about the consumer, both ethical, $b = 2.11$, $SE = .05$, $t(1294.93) = 45.06$, $p < .001$, 95% CI [2.02, 2.21], and unethical brands, $b = -.87$, $SE = .05$, $t(1459.86) = -15.79$, $p < .001$, 95% CI [-.97, -.76], were rated as more identity-relevant than neutral brands, with ethical brands having stronger identity relevance than unethical brands, $b = 1.36$, $SE = .06$, $t(1426.00) = 23.81$, $p < .001$, 95% CI [1.24, 1.47].

2) Study 2b: Identity Threat Manipulation Pilot

I recruited 120 participants on Prolific—12 were removed for not completing the manipulation task, resulting in a final sample of 108 ($M_{age} = 25.35$, $SD_{age} = 7.11$; 78.7% female)—and randomly assigned them to one of four threat conditions that represented two manipulation approaches previously used in the moral threat literature (Conway & Peetz, 2012; Jordan et al., 2011): a self-story or behavior performance. The self-story approach used a similar structure as Jordan et al. (2011) and asked participants to write a story about a recent time when they used others to get something they wanted (moral threat) or to write a story about a recent time when they saw someone going through something that made them sad (negative, non-moral threat).

The behavior performance approach (see Conway & Peetz, 2012) informed participants that they would be presented with a list of actions that people might engage in and that the researchers would like them to choose an action from the list that they could imagine performing the most vividly, then write a paragraph about how they specifically would perform the behavior. Participants in the moral threat condition were presented with the following list of actions: *Act uncaring toward a person who is sad, act indifferent toward a person in pain, take greedily from a person in need, act mean toward another person*. Participants in the negative, non-moral condition were presented with the following list of actions: *Act forgetful when thinking about what you did last week, act impractical considering a solution to a problem, act impulsive when shopping, act indecisive about choosing a restaurant or activity*. Importantly, the behaviors here were designed to be more general, negative self-threating options that move further away from traits that might clearly threaten competence.

Following the threat manipulation task, all participants completed the modified BMIS and the shame subscale of the State Shame and Guilt Scale (SSGS; Marschall, et al., 1994). The SSGS is a 10-item indirect measure that captures more of the phenomenological feelings of self-conscious moral emotions, with five items that assess shame (e.g., *I feel like I am a bad person*, *I feel humiliated, disgraced*) and five that assess guilt (e.g., *I feel tension about something I have done*, *I feel like apologizing, confessing*) on a scale from 1 (*not feeling this way at all*) to 5 (*feeling this way very strongly*). Responses for each subscale are summed to form individual composite scores, each ranging from 5 to 25; only the shame subscale was used for the pilot.

A one-way ANOVA with planned contrasts looked at the comparison between the two conditions of the behavior performance approach, and between the two conditions of the self-

story approach, on shame (single-item; indirect [SSGS]) and relative mood. There was a significant difference between the behavior performance conditions on both single-item, $t(103) = 2.35$, $p = .021$, $d = .55$, 95% CI[.002, 1.10], and indirect, $t(104) = 2.26$, $p = .026$, $d = .52$, 95% CI[-.03, 1.06] measures of shame, with participants in the moral threat condition reporting feeling more ashamed ($M = 2.19$, $SD = 1.10$; $M = 11.46$, $SD = 6.13$, respectively) than those in the negative, non-moral condition ($M = 1.67$, $SD = 0.78$; $M = 8.81$, $SD = 3.90$, respectively). Importantly, the moral threat condition ($M = -1.15$, $SD = 9.71$) did not significantly differ from the negative, non-moral threat ($M = 1.81$, $SD = 6.75$) on relative mood, $t(104) = -1.31$, $p = .194$. This pattern of results supports the behavior performance approach in differentiating moral threat from similarly negative, but non-moral threat.

In contrast to the behavior performance approach, there was no significant difference between conditions in the self-story approach on single-item, $t(103) = 1.43$, $p = .157$, nor indirect, $t(104) = 0.87$, $p = .389$, measures of shame.

3) Study 3: Threat Manipulation and Consumer Brand/Product Pilots

I recruited 42 participants from the Northwestern University Psychology 110 participant pool[53] to conduct a pilot study testing a modified version of the false feedback paradigm utilized by Knowles and colleagues (2010). In addition, to be able to look at direct vs. indirect consumer compensatory strategies, I asked participants to identify consumer brands that people generally associate with or that symbolize being ethical, and brands that people generally associate with or that symbolize intelligence, respectively.

[53] Demographic data was not provided for these participants

Threat Manipulation (False Feedback) Pilot

Participants were randomly assigned to a moral identity threat or intelligence threat condition. Those assigned to the *moral identity threat condition* completed the Emotion Recognition Task (ERT)—a challenging task where they labeled the primary and secondary emotions, and the intensity of the emotions displayed in facial expressions across 10 trials. Participants assigned to the *intelligence threat condition* completed a difficult version of the Remote Associates Task (RAT; Mednick, 1962) where they were presented with 10 trials consisting of word problems where they were asked to identify a word that connects the words presented in each trial. In both conditions, each trial was timed to automatically advance after 12 seconds for a total of two minutes to complete the task.

In the ERT, participants were told *the ERT is a test of moral and ethical potential. It was developed by Paul Ekman in 1976 and has since been considered as a valid measure of morality*. Participants then viewed 10 randomized black-and-white images of an individual with different emotional expressions on their face (five images for the same white male and white female) and were asked to identify the primary emotion expressed (*anger*, *fear*, *happiness*, *surprise*, or *sadness*) and the intensity of the emotion on a 5-pt Likert scale (1 = *not intense at all*, 5 = *extremely intense*), as well as a more subtle secondary emotion and its intensity.

In the RAT, participants were told *the RAT is a test of intellectual potential. It was developed by Martha Mednick in 1962 and has since been considered as a valid measure of intellectual aptitude (or intelligence) and creative problem solving*. Participants then viewed 10 randomized word problems where each trial presented a group of three words (e.g., opera/hand/dish) and they were asked to provide a fourth word that connects them (e.g., soap) in the space provided.

False Feedback. Following task completion, the computer ostensibly calculated the participant's score, then provided false feedback that their performance on the task placed them in the 40th percentile compared to other participants (regardless of their actual performance). In the *moral identity threat condition*, participants were informed that research has found the ERT to accurately and reliably predict honesty, trustworthiness, and kindness, and that lower percentile rank indicates that the participant is more likely to be dishonest, untrustworthy, and unkind compared to other people. In the *intelligence threat condition*, participants were told that research has found the RAT to accurately and reliably predict intelligence, and that lower percentile rank indicates that the participant is more likely to have lower intellectual aptitude and poor creative problem-solving skills compared to other people. Following the false feedback, all participants rated the extent to which the feedback would threaten or make future participants question their intelligence and their morality on 5-point Likert scales (1 = *not at all*; 5 = *extremely*).

Results of the pilot test showed that participants did not differ in the extent to which they found the false feedback believable, $t(40) = -0.44$, $p = .662$. In terms of the extent to which they reported that the false feedback would threaten future participants' intelligence and morality, participants in the intelligence threat condition reported that the feedback was more likely to threaten future participants' intelligence ($M = 3.25$, $SD = 1.16$) than those in the moral threat condition ($M = 2.62$, $SD = 0.87$), $t(39) = 1.98$, $p = .055$, $d = .63$. Participants in the moral threat condition ($M = 2.76$, $SD = 0.89$) more generally reported that the false feedback would threaten future participants' morality than those in the intelligence threat condition ($M = 2.33$, $SD = 1.07$), $t(40) = -1.42$, $p = .165$, $d = .44$.

Ethical & Intelligence Consumer Brand/Product Pilot

Following the false feedback task, I asked the Psych 110 participants to identify three to five consumer brands that are important to them or that they highly value, then rate them on the extent to which they are relevant to or symbolize being ethical and intelligence (respectively) on 7-pt Likert scales (1 = *not at all*, 7 = *extremely*). Next, participants were presented with a random sample of 15 consumer brands (from a list of 30) that potentially symbolize morality (13 brands) or intelligence (17 brands). They were first asked about their familiarity with the brand (i.e., heard or read about it, regardless of personal usage), and so long as they had some familiarity (more than *not at all*), participants then rated the brand on the extent to which it is relevant to or symbolizes being ethical and intelligence (respectively), as well as the extent to which the brand is identity relevant by rating each of the following scale items (Sirgy & Johar, 1985) using a 7-pt Likert scale (1 = *strongly disagree*, 4 = *neither agree nor disagree*, 7 = *strongly agree*): *this product tells me something about its user*, *this product communicates certain symbols about the person who uses it*, and *this product doesn't say much about its user* (reverse-scored).

Multilevel models with random intercepts were conducted on morality, intelligence, and identity-relevance ratings with brand category as the predictor (-.5 = intelligence; .5 = moral), controlling for individuals' brand familiarity. Brands categorized as intelligence-relevant significantly predicted the extent to which participants viewed the brand as symbolizing intelligence, $b = -1.51$, $SE = .16$, $t(341.86) = -9.70$, $p < .001$, and brands categorized as morality-relevant significantly predicted the extent to which participants viewed the brand as symbolizing morality, $b = .50$, $SE = .14$, $t(343.98) = 3.66$, $p < .001$. Intelligence and ethical brands did not differ in ratings of identity-relevance, $b = -.06$, $SE = .10$, $t(346.57) = -0.61$, $p = .544$.

From this list of consumer brands, combined with the overlapping and/or most frequent participant-generated brands, 22 consumer brand/products (referred to as products herein) were derived as experimental stimuli (11 ethical; 11 intelligence)—each to be matched with a "control" consumer product for comparison. For the ethical products, comparison products were more neutral or conventional choices (e.g., Kroger Marketplace vs. Whole Foods Market; conventional meat burger vs. Beyond Meat burger; plastic vs. compostable utensils). For the intelligence products, comparison products were more neutral or fun choices (e.g., New York Times crossword vs. Mad Libs; Jeopardy vs. Storage Wars; Rubik's cube vs. Magic 8-Ball). Product pairs were placed on either end of a 6-pt. Likert scale to assess relative preference strength for one product over the other; all product comparison images were visually similar (e.g., in size, and content [e.g., angle of image, etc.] when possible; see Appendix A).

An online sample of 43 Prolific participants (M_{age} = 39.58, SD_{age} = 13.50; female: 67.5%; white: 75%) rated their preferences for all 22 product pairs. Afterward, they were presented with just the experimental products from the ethical pairs, then the intelligence pairs, and in both instances, rated the extent to which a preference for those products would imply that a person is *ethical*, *environmentally focused*, *intelligent*, and *fun* on 7-pt. Likert scales (1 = *not at all*; 7 = *a great deal*). Paired samples t-tests indicated significant differences in ethical, $t(42) = 5.44$, $p < .001$, $d = .83$, 95% CI [.48, 1.17], environmentally responsible, $t(42) = 11.23$, $p < .001$, $d = 1.71$, 95% CI [1.24, 2.18], and intelligence ratings, $t(42) = -6.59$, $p < .001$, $d = -1.01$, 95% CI[-1.37, -.63] between the two product categories. People rated that preferences for the ethical products would imply a person is ethical ($M = 5.60$, $SD = 1.28$) and environmentally responsible ($M = 6.70$, $SD = 0.60$) to a greater extent than intelligence products ($M = 4.40$, $SD = 1.31$; $M = 3.84$,

SD = 1.54, respectively), and intelligence products would imply a person is intelligent (*M* = 6.26, *SD* = 1.03) to a greater extent than ethical products (*M* = 5.16, *SD* = 1.09). There was no difference in how fun either ethical or intelligence products would imply a person is, $t(42) = -1.53$, $p = .133$.

Appendix C

Consumer Brand Attitudes (Studies 1-2b)

Study 1: Consumer Brand Attitudes

A consumer brand attitudes index was created by averaging two of the brand bipolar ratings (*good-bad* and *like-dislike*) with how purchasing the brand would make one feel (α = .88). A principal component analysis with direct oblimin rotation indicated a unidimensional structure that accounted for 80.24% of the variance. A two-level multilevel model with random intercepts was then conducted on brand attitudes index using IBM SPSS Statistics (Version 29). Level 1 predictors (i.e., brand familiarity, perceptions of brand ethics) were mean centered within participants and Level 2 predictors (e.g., moral identity) were grand mean centered prior to use in the models. Moral threat conditions were re-coded (moral affirmation = -.5; moral threat = .5) and entered as a Level 2 predictor. Interactions involving threat condition were probed using simple slopes analyses with dummy-coded variables to spotlight each condition (moral threat = 1, 0; moral affirmation = 0, 1); continuous variables were probed at +1SD and -1SD of their respective within-centered (i.e., perceptions of brand ethics) or grand (i.e., moral identity) mean. For all models, I entered the moral threat contrast, perceptions of brand ethics, and their interaction as predictors while controlling for within-person brand familiarity.

I found a main effect of brand ethics, $b = .69$, $SE = .02$, $t(864.64) = 35.20$, $p < .001$, 95% CI [.65, .73], as well as a significant brand ethics x moral threat condition interaction, $b = .09$, $SE = .04$, $t(864.58) = 2.17$, $p = .030$, 95% CI [.01, .16]. To probe the interaction, I conducted simple slopes analyses looking at the effect of perceptions of brand ethics using dummy-coded threat condition variables. Perceptions of brand ethics positively impacted brand attitudes following a

moral identity threat, $b = .73$, $SE = .03$, $t(864.80) = 25.34$, $p < .001$, 95% CI [.68, .79], and this relationship was descriptively stronger than after affirming moral identity, $b = .65$, $SE = .03$, $t(864.38) = 24.45$, $p < .001$, 95% CI [.60, .70]; however, there were no significant differences in consumer brand attitudes between moral threat conditions when brand ethics perceptions were high, $b = .13$, $SE = .15$, $t(162.13) = 0.91$, $p = .363$, or low, $b = -.06$, $SE = .16$, $t(153.90) = -0.36$, $p = .718$. Thus, people hold more positive attitudes towards brands they view as ethical, and this is somewhat, though not significantly magnified after suffering a threat to one's moral self-concept. As displayed in Tables C1 and C2, these effects hold when controlling for mood and for self-esteem.

Table C1

Study 1: Moral Threat by Brand Ethics Interaction on Consumer Brand Attitudes Controlling for Mood

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.53	.07	66.91	138.63	[4.39, 4.66]	< .001
Familiarity	.14	.03	5.22	914.34	[.08, .19]	< .001
Mood	.02	.01	2.05	132.62	[.00, .04]	.042
Threat Condition	.09	.14	0.66	132.29	[-.18, .36]	.657
Brand Ethics	.69	.02	35.20	865.08	[.65, .73]	< .001
Threat x Ethics	.06	.04	2.17	865.02	[.01, .16]	.030

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Mood = relative mood (grand mean centered). Threat condition (Threat) = threat contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Table C2

Study 1: Moral Threat by Brand Ethics Interaction on Consumer Brand Attitudes Controlling for Self-Esteem

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.52	.07	66.41	137.95	[4.39, 4.66]	< .001
Familiarity	.14	.03	5.28	914.70	[.09, .19]	< .001
Self-Esteem	.07	.05	1.41	132.27	[-.03, .17]	.160
Threat Condition	.02	.13	0.16	131.69	[-.24, .29]	.870
Brand Ethics	.69	.02	35.20	864.58	[.65, .73]	< .001
Threat x Ethics	.08	.04	2.17	864.51	[.01, .16]	.031

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Threat condition (Threat) = threat contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 1: Moral Identity Moderation – Consumer Brand Attitudes

Analyzing consumer brand attitudes, the previous main effect of perceptions of brand ethics was observed, $b = .69$, $SE = .02$, $t(859.57) = 34.05$, $p < .001$, 95% CI [.65, .73], as well as the interaction between moral threat and brand ethics, $b = .08$, $SE = .04$, $t(859.52) = 1.93$, $p = .055$, 95% CI [-.00, .16]. In addition to these effects, a brand ethics x moral identity interaction was found, $b = .10$, $SE = .04$, $t(859.66) = 2.73$, $p = .007$, 95% CI [.03, .18]. Simple slopes analyses indicated that brand ethics perceptions predicted positive brand attitudes and this effect was stronger for those high on moral identity, $b = .75$, $SE = .03$, $t(860.01) = 27.51$, $p < .001$, 95% CI [.70, .80], than low, $b = .62$, $SE = .03$, $t(859.37) = 18.40$, $p < .001$, 95% CI [.56, .69]. When

brands were perceived as highly ethical, those who place stronger self-importance on possessing moral traits reported more positive attitudes toward them, b = .33, SE = .14, t(162.16) = 2.33, p = .021, 95% CI [.05, .62]; however, when brands were perceived as unethical, there was no relationship between brand attitudes and moral identity, b = -.09, SE = .16, t(152.99) = -0.55, p = .583. This indicates that when people form attitudes about brands, their perception of a brand's ethics is an important consideration; however, these views hold more sway for people who value being a person of moral character, particularly when they perceive a brand as highly ethical. These effects hold when controlling for symbolic moral identity (see Table C3).

Table C3

Study 1: Moral Identity by Perceptions of Brand Ethics Interaction on Consumer Brand Attitudes Controlling for Symbolic Moral Identity

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.51	.07	65.49	135.34	[4.38, 4.65]	< .001
Familiarity	.14	.02	5.51	908.54	[.09, .19]	< .001
Symbolic	.17	.08	2.22	129.11	[.02, .32]	.028
Threat Condition	.01	.14	0.08	129.89	[-.26, .28]	.935
Brand Ethics	.69	.02	34.05	859.10	[.65, .73]	< .001
Moral Identity	.03	.14	0.24	130.04	[-.24, .30]	.810
Threat x Ethics	.08	.04	1.93	859.06	[-.00, .16]	.054
Moral Identity x Threat	-.05	.26	-0.21	130.02	[-.57, .46]	.835
Moral Identity x Ethics	.10	.04	2.73	859.20	[.03, .18]	.006
Threat x Ethics x Moral ID	.00	.08	0.04	859.17	[-.15, .15]	.971

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Symbolic = moral identity symbolization subscale (grand mean centered). Threat condition (Threat) = threat

contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 2a: Consumer Brand Attitudes

As in Study 1, ratings for brand likability bipolar ratings and how purchasing a brand would make one feel as a person were averaged to create an index of consumer brand attitudes (α = .85). A principal component analysis with direct oblimin rotation indicated a unidimensional structure that accounted for 76.73% of the variance. From the analysis, I found a main effect of brand ethics, $b = .63$, $SE = .02$, $t(775.88) = 32.36$, $p < .001$, 95% CI [.59, .67], such that participants had more positive attitudes towards brands they viewed as ethical; however, no other effects were significant (ps > .20).

Study 2b: Consumer Brand Attitudes

As in previous studies, ratings for brand likability bipolar ratings and how purchasing a brand would make one feel as a person were averaged to create an index of consumer brand attitudes (α = .84). A principal component analysis with direct oblimin rotation indicated a unidimensional structure that accounted for 76.10% of the variance. The first analysis compared consumer brand attitude ratings for the experimental groups against the positive control group. Results of the model indicated that there was a main effect of brand ethics, $b = .63$, $SE = .01$, $t(2184.94) = 51.67$, $p < .001$, 95% CI [.61, .66], as well as a significant threat contrast x brand ethics interaction, $b = .06$, $SE = .03$, $t(2184.80) = 2.13$, $p = .033$, 95% CI [.00, .11]. Although brand ethics was a significant predictor of brand attitudes for those in the experimental conditions, $b = .65$, $SE = .01$, $t(2185.10) = 45.17$, $p < .001$, 95% CI [.62, .67], to a somewhat greater extent than controls, $b = .59$, $SE = .02$, $t(2184.62) = 25.07$, $p < .001$, 95% CI [.54, .63],

the conditions did not differ when brand ethics were high, b = -.01, SE = .10, t(399.85) = -0.14, p = .888, or low, b = -.03, SE = .09, t(414.04) = -0.32, p = .750. Thus, the more ethical people view brands, the more positive their attitudes toward them.

The next analysis looked at the key comparison of consumer brand attitudes between those in the negative self-threat and moral self-threat conditions. A main effect of brand ethics was observed, but importantly, there was a threat x brand ethics interaction; see Table C4.

Table C4

Study 2b: Results of Simple Slopes Analysis of Negative Self- vs. Moral Self-Threat by Brand Ethics Interaction on Consumer Brand Attitudes

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.44	.05	87.88	173.68	[4.34, 4.54]	< .001
Familiarity	.22	.02	9.51	1163.22	[.18, .27]	< .001
Self-Threat Condition	-.20	.10	-1.96	164.80	[-.39, .00]	.052
Brand Ethics	.64	.02	37.50	1089.10	[.61, .68]	< .001
Self-Threat x Ethics	.09	.03	2.63	1088.48	[.02, .16]	.009
Simple Slopes Analysis						
Moral Self-Threat: Ethics	.69	.03	27.52	1642.23	[.64, .74]	< .001
Neg Self-Threat: Ethics	.60	.02	25.34	1088.65	[.55, .64]	< .001
High Ethics: Threat	-.12	.13	-0.95	197.97	[-.37, .13]	.345
Low Ethics: Threat	-.26	.12	-2.28	207.00	[-.49, -.04]	.024

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-Threat Condition (Self-Threat) = threat contrast (negative self-threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Simple slopes analyses were probed using dummy-

coded threat condition variables (0, 1; 1, 0), and ± 1SD of the within-person centered mean of brand ethics. Unstandardized estimates are presented.

As presented in the table, perception of brand ethics was a significant predictor of consumer brand attitudes in both self-threat conditions, but significantly more so for those in the moral self-threat condition, wherein they held more negative attitudes toward brands they viewed as unethical compared to those in the negative self-threat condition. The base interaction holds when controlling for self-esteem (see Table C5).

Table C5

Study 2b: Negative Self- vs. Moral Self-Threat by Brand Ethics Interaction on Consumer Brand Attitudes Controlling for Self-Esteem

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.44	.05	87.43	173.20	[4.34, 4.54]	< .001
Familiarity	.22	.02	9.28	1156.38	[.17, .26]	< .001
Self-Esteem	.05	.04	1.09	165.26	[-.04, .13]	.280
Self-Threat Condition	-.19	.10	-1.91	164.00	[-.39, .01]	.058
Brand Ethics	.64	.02	37.55	1082.33	[.61, .68]	< .001
Self-Threat x Ethics	.08	.03	2.52	1081.76	[.02, .15]	.012

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Self-Threat Condition (Self-Threat) = threat contrast (negative self-threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

For the final analysis comparing consumer brand attitudes of those in the moral self-threat vs. moral other-threat condition, a main effect of brand ethics was observed, $b = .67$, $SE =$

.02, $t(1087.61) = 37.87$, $p < .001$, 95% CI [.64, .71]; however, no other effects were significant ($ps > .30$).

While these findings provide mixed support for hypotheses, the key comparison that moral self-threat would more strongly impact consumer brand attitudes based on perceptions of brand ethics compared to a negative self-threat was supported—though, in contrast to previous findings, this brand ethics sensitivity was particularly salient when brands were viewed as unethical (H2). The hypothesis that those in the moral self-threat condition would also differ from those in the moral other-threat condition was not supported.

Supplemental Analyses Across Studies

Study 1: Mood & Self-Esteem Covariate Models

Purchase Intentions: Moral Threat x Brand Ethics Interaction

Table C6

Study 1: Moral Threat by Brand Ethics Interaction on Purchase Intentions Controlling for Mood

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.63	.07	67.47	143.16	[4.49, 4.76]	< .001
Familiarity	.78	.04	17.83	965.68	[.69, .87]	< .001
Mood	.00	.01	0.19	130.34	[-.02, .02]	.847
Threat Condition	.03	.14	0.22	130.34	[-.24, .30]	.825
Brand Ethics	.44	.03	12.82	864.80	[.37, .51]	< .001
Threat x Ethics	.24	.07	3.45	864.73	[.10, .37]	< .001

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Mood = relative mood (grand mean centered). Threat condition (Threat) = threat contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Table C7

Study 1: Moral Threat by Brand Ethics Interaction on Purchase Intentions Controlling for Self-Esteem

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.63	.07	67.58	143.04	[4.49, 4.76]	< .001
Familiarity	.78	.04	17.87	967.52	[.70, .87]	< .001
Self-Esteem	.03	.05	0.68	131.61	[-.07, .14]	.497
Threat Condition	.02	.13	0.16	130.44	[-.24, .28]	.873

Brand Ethics	.44	.03	12.81	865.05	[.37, .51]	< .001
Threat x Ethics	.24	.07	3.45	864.96	[.10, .37]	< .001

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Threat condition (Threat) = threat contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 1: Symbolic Moral Identity Covariate Model

Purchase Intentions: Moral Identity x Brand Ethics Interaction

Table C8

Study 1: Moral Identity by Perceptions of Brand Ethics Interaction on Purchase Intentions Controlling for Symbolic Moral Identity

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.64	.07	68.66	138.26	[4.51, 4.78]	< .001
Familiarity	.80	.04	18.26	962.57	[.71, .88]	< .001
Symbolic	.15	.07	2.05	126.04	[.00, .29]	.043
Threat Condition	.02	.13	0.18	126.99	[-.24, .28]	.858
Brand Ethics	.42	.04	12.08	858.64	[.35, .49]	< .001
Moral Identity	.01	.13	0.11	127.36	[-.24, .27]	.910
Threat x Ethics	.21	.07	3.05	858.38	[.08, .35]	.002
Moral Identity x Threat	-.51	.25	-2.05	127.37	[-1.01, -.02]	.042
Moral Identity x Ethics	.20	.07	3.03	858.38	[.07, .33]	.003
Threat x Ethics x Moral ID	.01	.13	0.09	858.34	[-.25, .27]	.932

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Symbolic = moral identity symbolization subscale (grand mean centered). Threat condition (Threat) = threat

contrast (moral self-affirmation = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 2a: Self-Esteem Covariate Model

Purchase Intentions: Self-Threat x Brand Ethics Interaction

Table C9

Study 2a: Self-Threat by Brand Ethics Interaction on Purchase Intentions Controlling for Self-Esteem

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.66	.06	78.81	128.72	[4.55, 4.78]	< .001
Familiarity	.71	.04	16.25	875.52	[.62, .80]	< .001
Self-Esteem	.05	.05	1.02	117.19	[-.05, .14]	.312
Self-Threat Condition	.17	.11	1.53	115.20	[-.05, .40]	.130
Brand Ethics	.42	.03	13.30	777.21	[.36, .48]	< .001
Self-Threat x Ethics	.11	.06	1.82	777.27	[-.01, .24]	.069

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Self-threat condition (Self-threat) = threat contrast (negative self-threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 2b: Self-Esteem Covariate Model

Purchase Intentions: Negative Self- vs. Moral Self-Threat x Brand Ethics Interaction

Table C10

Study 2b: Negative Self- vs. Moral Self-Threat by Brand Ethics Interaction on Purchase Intentions Controlling for Self-Esteem

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	4.69	.06	79.20	175.04	[4.58, 4.81]	< .001
Familiarity	.77	.04	20.54	1198.71	[.70, .85]	< .001
Self-Esteem	.06	.05	1.17	162.52	[-.04, .15]	.244
Self-Threat Condition	-.27	.12	-2.34	160.95	[-.50, -.04]	.021
Brand Ethics	.44	.03	15.63	1082.14	[.38, .49]	< .001
Self-Threat x Ethics	.15	.06	2.69	1081.19	[.04, .26]	.007

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Self-threat condition (Self-threat) = threat contrast (negative self-threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 2b: Self-Esteem Covariate Model

Pay to Switch Away: Control v. Experimental Threat Condition x Brand Ethics Interaction

Table C11

Study 2b: Control vs. Experimental Threat Conditions by Brand Ethics Interaction on Amount Willing to Pay to Switch Away from a Brand

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	1.57	.03	46.82	356.51	[1.50, 1.64]	< .001
Familiarity	.11	.02	5.36	2385.26	[.07, .16]	< .001
Self-Esteem	.07	.03	2.32	332.65	[.01, .12]	.021
Threat Contrast	-.20	.08	-2.66	326.28	[-.35, -.05]	.008
Brand Ethics	.31	.02	20.05	2181.71	[.28, .34]	< .001
Threat x Ethics	-.07	.03	-1.89	2181.54	[-.13, .00]	.060

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Threat Contrast (Threat) = (control condition = -.5, experimental conditions = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 2b: Self-Esteem Covariate Model

Pay to Switch Away: Moral Self- v. Moral-Other Threat x Brand Ethics Interaction

Table C12

Study 2b: Moral Self- v. Moral-Other Threat by Brand Ethics Interaction on Amount Willing to Pay to Switch Away from a Brand

Effect	*b*	*SE*	*t*	*df*	95% CI	*p*
Intercept	2.02	.07	29.40	180.32	[1.88, 2.15]	< .001
Familiarity	-.04	.03	-1.09	1164.94	[-.11, .03]	.275
Self-Esteem	.00	.06	0.08	166.35	[-.11, .12]	.935
Moral Threat Contrast	-.21	.13	-1.55	166.79	[-.48, .06]	.123
Brand Ethics	-.42	.03	-16.33	1086.93	[-.47, -.37]	< .001
Threat x Ethics	.15	.05	2.88	1086.60	[.05, .25]	.004

Note. Familiarity = familiarity with consumer brand (within-person mean centered). Self-esteem (grand mean centered). Moral Threat Contrast (Threat) = (moral-other threat = -.5, moral self-threat = .5). Brand ethics (Ethics) = perception of brand ethics. Unstandardized estimates are presented.

Study 3: Moral Identity Moderation (Supplemental) – Conditional Effects on Self-Defensiveness

Table C13

Study 3: Results of Simple Slopes Analysis with Conditional Effects of Moral Identity, Self-Threat, and Self-Repair Strategy Interaction on Self-Defensiveness

Effect	*b*	*SE*	*t*	*p*	95% CI
Intelligence Threat					
Low Moral ID: Ethical v. Intelligence	.62	.33	1.86	.063	[-.03, 1.27]
High Moral ID: Ethical v. Intelligence	.14	.32	0.43	.666	[-.49, .77]
Moral Threat					
Low Moral ID: Ethical v. Intelligence	-1.13	.36	-3.16	.002	[-1.83, -.43]
High Moral ID: Ethical v. Intelligence	-.09	.32	-0.27	.788	[-.71, .54]
Intelligence Products					
Low Moral ID: Moral v. Intelligence	1.11	.34	3.32	.001	[.46, 1.77]
High Moral ID: Moral v. Intelligence	.73	.32	2.32	.020	[.11, 1.35]
Ethical Products					
Low Moral ID: Moral v. Intelligence	-.63	.35	-1.79	.074	[-1.33, .06]
High Moral ID: Moral v. Intelligence	.51	.32	1.56	.118	[-.13, 1.14]

Note. CI = confidence interval. Moral ID = moral identity (Low = -1SD, High = maximum). Ethical v. Intelligence = product contrast (intelligence products = -.5, ethical products = .5). Moral v. Intelligence = self-threat contrast (intelligence threat = -.5, moral threat = .5). Unstandardized estimates are presented.

Study 3: Exploratory Moderation – Product Preference Strength and Self-Brand Connection on Self-Defensiveness

Although there were no differences in product preference strength or self-brand connection (SBC) as a function of self-threat and product conditions in previous analyses, it is possible that the extent to which people more strongly preferred and/or reported stronger SBC with intelligence products as an indirect repair strategy after a moral self-threat may also explain differences in how defensive they were against the source of self-threat. Relatedly, it is possible that because individuals who experienced a threat to their intelligence had a stronger preference for experimental products more broadly, this might explain why both direct and indirect self-

repair strategies were similarly effective. To explore these hypotheses, two moderation analyses were conducted using PROCESS (model 3; 5000 bootstrap samples) to investigate if self-defensiveness varied as a function of product preference strength or SBC with products.

First, a 2(self-threat: moral, intelligence) x 2(product: ethical, intelligence) x product preference strength analysis found the previous main effect of self-threat condition, $b = .51$, $SE = .18$, $t(625) = 2.90$, $p = .004$, 95% CI [.16, .85] and self-threat x product condition interaction term, $b = -.67$, $SE = .35$, $t(625) = -1.93$, $p = .054$, 95% CI [-1.36, .01] on self-defensiveness; however, no additional effects emerged (ps > .40), nor was the overall model significant, $F(7, 625) = 1.85$, $p = .076$, $R^2 = .02$.

The overall 2(self-threat: moral, intelligence) x 2(product: ethical, intelligence) x SBC model was significant, $F(7, 625) = 4.90$, $p < .001$, $R^2 = .05$, including the main effect of self-threat condition, $b = .48$, $SE = .17$, $t(625) = 2.82$, $p = .005$, 95% CI [.15, .82] and marginal self-threat x product condition interaction, $b = -.65$, $SE = .34$, $t(625) = -1.90$, $p = .058$, 95% CI [-1.33, .02]. In addition, a main effect of SBC was observed, $b = -.28$, $SE = .05$, $t(625) = -4.13$, $p < .001$, 95% CI [-.41, -.14], such that stronger SBC with experimental products reduced self-defensiveness; no other effects were significant (ps > .06). Thus, it was not the case that product preference strength or SBC moderated differences in self-defensiveness between self-threat conditions.

Study 4: Self-Esteem Covariate Model

Self-Defensiveness: Indirect Effect of Essay Condition Through Self-Brand Connection

Table C14

Study 4: Indirect Effect of Essay Condition on Self-Defensiveness Through Self-Brand Connection with Patagonia Controlling for Self-Esteem

	Self-Brand Connection (M)				Self-Defensiveness			
Effect	*b*	*SE*	*t*	95% CI	*b*	*SE*	*t*	95% CI
Constant	4.35***	.11	38.28	[4.13, 4.58]	6.37***	.52	12.35	[5.35, 7.38]
Self-Esteem	.57*	.23	2.50	[.12, 1.02]	-.53	.33	-1.62	[-1.17, .12]
Essay	-.02	.22	-0.09	[-.46, .42]	-.36	.31	-1.15	[-.98, .26]
SBC (M)	--	--	--	--	-.34**	.11	-3.02	[-.56, -.12]

Note. CI = confidence interval. Essay = Patagonia essay condition contrast (exciting = -.5, ethical = .5). SBC = self-brand connection with Patagonia. M = mediator. Unstandardized estimates are presented.

*$p < .05$. **$p < .01$. ***$p < .001$.

Study 4: Symbolic Moral Identity Covariate Model

Self-Defensiveness: Moral Identity Mediated Moderation Model

Table C15

Study 4: Model Coefficients for Moderated Mediation Analysis with Moral Identity Controlling for Symbolic Moral Identity

	Self-Brand Connection (M)				Self-Defensiveness			
Effect	*b*	*SE*	*t*	95% CI	*b*	*SE*	*t*	95% CI
Constant	1.12***	.32	3.56	[.50, 1.74]	6.47***	.45	14.32	[5.58, 7.35]
Symbolic	.87***	.10	8.49	[.67 1.07]	-.21	.16	-1.31	[-.53, .11]
Essay	.89***	.18	4.92	[.53, 1.25]	.53*	.26	2.00	[.01, 1.05]
Moral ID	-.07	.15	-0.48	[-.35, .22]	-.63**	.20	-3.11	[-1.03, -.23]
SBC (M)	--	--	--	--	-.27**	.09	-3.12	[-.45, -.10]

Essay x Moral ID	.72**	.27	2.65	[.19, 1.26]	.56	.39	1.46	[-.20, 1.32]

Note. CI = confidence interval. Symbolic = symbolic moral identity. Essay = Patagonia essay condition contrast (exciting = -.5, ethical = .5). Moral ID = moral identity. SBC = self-brand connection with Patagonia. M = mediator. Unstandardized estimates are presented.

*$p < .05$. **$p < .01$. ***$p < .001$.

Study 5: Qualitative Data for Survey Response and Gift Card Purchases

Prior to investigating differences in enduring self-repair between the direct (i.e., Donors Choose) and indirect (i.e., Amazon) repair strategies, several descriptive analyses were conducted to compare characteristics of the follow-up responses and purchase processes of individuals in the two gift card conditions. Participants in both conditions were similar in the amount of time taken to complete the survey, in the amount of money spent, and in whether the purchase reflected something utilitarian/functional versus something more fun/creative. Those in the Donor's Choose condition did appear to purchase items that were more identity-relevant and/or meaningful. First, the amount of time taken to complete the follow-up survey was coded as 0-12 hours and 12+-24 hours, with a majority of the sample completing the survey within 12 hours of receiving the link (89.9%). A chi-square analysis revealed that there was no relationship between gift card condition and time taken to complete the follow-up survey, $\chi^2 (1) = 0.31$, $p = .609$.

Next, I assessed whether participants spent more than the $10 provided in the study. The majority of the sample only spent the $10 provided (67.9%); however, this consisted mostly of individuals in the Donors Choose condition as 98.8% of these participants did not spend more than their $10 gift card compared to 63.3% of the Amazon condition who spent more than $10,

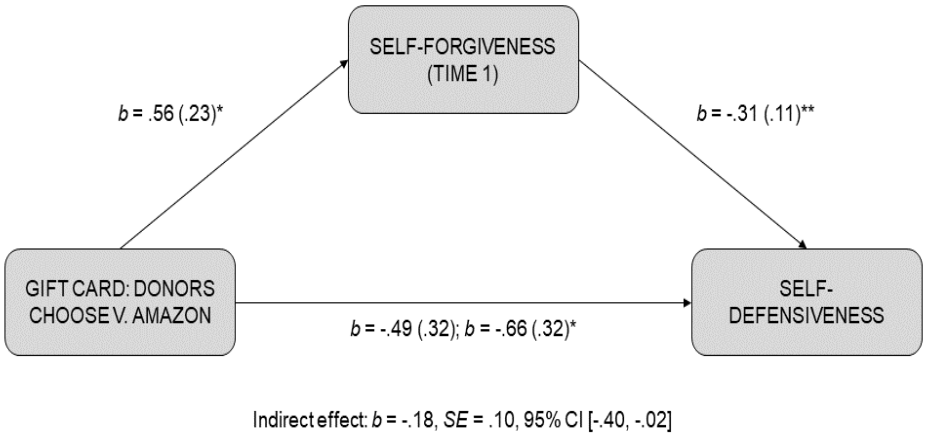
χ^2 (1) = 70.22, p < .001. To be sure, there were opportunities for Donors Choose individuals to donate to projects where their donation would be doubled or tripled, somewhat akin to maximizing their spending; however, only a quarter of Donors Choose participants (25%) donated to a project with a multiplier (of which 85% of donations were only doubled). When categorized as "maximizing" spending (via additional self-indulgent spending or maximizing the impact of a donation), those in the Amazon condition made greater strides to maximize their spending than those in the Donors Choose condition, χ^2 (1) = 23.65, p < .001.

Finally, a research assistant blind to hypotheses coded the open-ended descriptions of the purchases and what participants reported they found appealing about them according to whether the material item or project was utilitarian (i.e., to fulfill a basic/functional need) or not (e.g., fun, creative, experiential) whether it was identity relevant/a personal connection was noted, and whether it was meaningful or not (the latter two categories not mutually exclusive). There was no difference between conditions on whether the purchase(s) were utilitarian or not, χ^2 (1) = 0.03, p = 1.00; however, the majority of purchases in the Amazon condition were not identity-relevant (81.0%), χ^2 (1) = 24.18, p < .001, nor meaningful (96.2%), χ^2 (1) = 54.70, p < .001, compared to projects donated to in the Donors Choose condition.

Study 5: Exploratory – Indirect Effect of Gift Card Condition on Self-Defensiveness Through Time 1 Self-Forgiveness Controlling for the First Self-Defensiveness Item

Figure C1

Study 5: Indirect Effect of Gift Card Condition on Self-Defensiveness 2 After Moral Threat Through the Enduring Effect of Self-Forgiveness at Time 1 Controlling for Self-Defensiveness 1



Note. PROCESS mediation model (5000 bootstrap samples) testing the indirect effect of gift card condition on responses to the second self-defensiveness item through self-forgiveness at Time 1 while controlling for responses on the first self-defensiveness item. Gift card contrast: Amazon = -.5, Donors Choose = .5. Unstandardized regression coefficients are presented; standard errors are in parentheses.

*$p < .05$. **$p < .01$.

Study 5: Symbolic Moral Identity Covariate Model

Self-Defensiveness: Moral Identity Mediated Moderation Model

Table C16

Study 5: Model Coefficients for Moderated Mediation Analysis with Moral Identity on Self-Defensiveness Controlling for Symbolic Moral Identity

	Time 1 Self-Forgiveness (M)				Self-Defensiveness			
Effect	*b*	*SE*	*t*	95% CI	*b*	*SE*	*t*	95% CI
Constant	6.05***	.58	10.46	[4.90, 7.19]	6.60***	1.09	6.06	[4.45, 8.76]
Symbolic	-.52**	.18	-2.98	[-.87, -.18]	-.06	.26	-0.25	[-.58, .45]
GC	.46*	.23	2.04	[.01, .90]	-.54	.33	-1.63	[-1.19, .11]
Moral ID	.17	.23	0.73	[-.28, .61]	-.34	.33	-1.03	[-.98, .31]
SF-T1 (M)	--	--	--	--	-.35**	.12	-2.99	[-.58, -.12]
GC x Moral ID	.93*	.44	2.12	[.06, 1.79]	-.14	.64	-0.22	[-1.40, 1.12]
Conditional Direct Effects								
Low Moral ID: GC	-.02	.32	-.06	[-.64, .60]	--	--	--	--
High Moral ID: GC	.90**	.31	2.91	[.29, 1.51]	--	--	--	--

Note. CI = confidence interval. Symbolic = symbolic moral identity. GC = gift card contrast (Amazon = -.5, Donors Choose = .5). Moral ID = moral identity (Low = -1SD, High = maximum). SF-T1 = self-forgiveness at Time 1. M = mediator. Unstandardized estimates are presented. Conditional effects estimates based on simple slopes analysis at -1SD and the maximum of the mean of moral identity (+1SD is above the maximum observed in the data).

*$p < .05$. **$p < .01$. ***$p < .001$.