

Consumer Confessions

by

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ABSTRACT

When consumers fail in their environmental, dieting, or budgeting goals, they may engage in a consumer confession about their goal-inconsistent behavior. This dissertation seeks to understand how confessions about consumer goal transgressions affect subsequent consumer motivation and behaviors. Results from a series of five experiments reveal that after reflecting about a past transgression, Catholics who confess (vs. do not confess) about the focal transgression are more motivated to engage in subsequent goal-consistent consumer behaviors. However, results reveal no such effects for Non-Catholics; Non-Catholics are equally motivated to engage in goal-consistent consumer behaviors regardless of whether or not they confessed. Catholics and Non-Catholics differ on the extent to which they believe that acts of penance are required to make amends and achieve forgiveness after confession. For Catholics, confessing motivates restorative, penance-like behaviors even in the consumer domain. Thus, when Catholics achieve forgiveness through the act of confession itself (vs. a traditional confession requiring penance), they reduce their need to engage in restorative consumer behaviors. Importantly, results find that confession (vs. reflecting only) does not provide a general self-regulatory boost to all participants, but rather that confession is motivating only for Catholics due to their beliefs about penance. Together, results suggest that for consumers with strong penance beliefs, confession can be an effective strategy for getting back on track with their consumption goals.

DEDICATION

To my family and friends:

I must confess. During my doctoral program, I became a bit of a stressed, frazzled wife, daughter, sister, and friend. I dedicate this dissertation to my family (especially Bradley, Nancy, Michael, Stephen, Non, Debbie, and Brian) and to my friends for supporting me throughout this process. I promise to make amends through plenty of visits and phone calls during the years to come. Until then, please let this dedication serve as the beginning of my process of reconciliation. Thank you for your unconditional love, support, and forgiveness.

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INTRODUCTION

Consumers make difficult decisions each day, where they must choose between healthy versus unhealthy foods or eco-friendly versus conventional products. When consumers make less than virtuous choices, they may be motivated to make a consumer confession about their transgressions. Confessions about consumption transgressions have been commonplace since the founding of Alcoholics Anonymous in 1935 and Weight Watchers in 1963. While these and other confession-based consumer groups are still popular today, consumers are also heading online to make their confessions on websites like Facebook (e.g., Diet Confessions), Twitter (e.g., #greenconfession), Tumblr (e.g., Confessions of a Bad Vegan), and a number of blogs dedicated to confessions (e.g., Earth Confessions). Online confessions give consumers a forum in which to share their sinful experiences (Belk 2013). But do these consumer confessions motivate consumers to get back on track with their consumption goals? This dissertation examines the effects of consumer confessions on one's subsequent motivation to engage in restorative, goal-consistent consumer behaviors.

Consumers make confessions about transgressions in goal-relevant domains, like the environmental and health domains. In fact, in a brief pilot study (N =75 Amazon Mechanical Turk workers), 72% of participants who reflected about a past green transgression opted into making a confession about their goal-inconsistent behavior rather than writing about a neutral, unrelated topic. Participants confessed about a variety of past green transgressions, such as not recycling, not conserving energy and water resources, and not choosing organic and local foods. Grist.org (an environmental blog) sponsored an Earth Confessions website, where consumers could go online and make

confessions about their harmful behaviors towards the environment (e.g., “I don’t have a compost pile because it grosses me out”); therefore, consumers are already engaging in consumer confessions in these domains. Additionally, the green market also offers consumers opportunities to make up for environmentally harmful behaviors, in the form of carbon credits (i.e., trees planted to offset one’s carbon footprint) and other environmentally-friendly alternatives to conventional goods.

While consumer confessions are popular in the marketplace, little to no previous research has addressed the effectiveness of confessions as a consumer self-regulation strategy. When individuals are threatened in a goal-relevant consumer domain, such as the health domain, they become motivated to engage in goal-consistent thoughts and behaviors to restore their sense of a healthy self (Higgins 1987; Carver and Scheier 1998). For example, a healthy consumer who eats a calorie-rich breakfast of eggs, bacon, pancakes, and sausage is then motivated to restrict his/her calories for the rest of the day in an effort to restore his/her health self-identity. This dissertation seeks to uncover the extent to which consumer confessions in the environmental and health domains aid in the process of self-regulation for Catholic and Non-Catholic consumers.

Overall, there is little empirical consistency in the spiritual confessions literature, and thus, research on consumer confessions remains open for new theory development. Previous research on confessions has been largely conceptual and historical in nature, and most often situated in the religion, theology, and psychology literature. I conducted a literature review of words related to confession, reconciliation, penance, absolution, and repentance and found fewer than ten articles empirically examining confession. These studies have found that spiritual confession (vs. no confession) helps individuals absolve

sins and reconcile themselves with the community or God (McKay, Herold, and Whitehouse 2012), achieve feelings of forgiveness (Wise 1996), and feel a release from stress (Butler 1990). Some research shows that confessing (vs. not confessing) reduces guilt (Otterbacher and Munz 1973; McKay et al. 2012), while other research shows that individuals who confessed to God (vs. wrote a letter) about a transgression reported increased guilt after a two-week delay (Murray-Swank 2003). Additionally, after confessing about a hypothetical act of dishonesty, intrinsically (vs. extrinsically) religious participants reported higher levels of guilt and lower likelihood of committing a similar transgression in the future (Meek, Albright, and McMinn 1995).

In the present research, I reconcile inconsistencies in the literature on confessions and explore the extent to which confessing about a past consumer transgression affects one's subsequent motivation to make amends through restorative, goal-consistent consumer behavior. Specifically, I consider the self-regulatory effectiveness of consumer confessions for Catholics and Non-Catholics, which are two groups that differ on the extent to which they believe restorative behaviors are required to achieve forgiveness after confession. I define *consumer confession* as the remorseful acknowledgment of one's consumer wrongdoings and the public or private disclosure of these wrongdoings, with the goal of restoring the self. To my knowledge, this is the first research to experimentally examine the process and outcomes of consumer confession. Consumer confession differs from spiritual confession (e.g., Murray-Swank, McConnell, and Pargament 2007) in many ways. First, consumers make confessions about goal-inconsistent consumer transgressions rather than the religious sins that are the topic of religious confessions. Additionally, unlike spiritual confession, in consumer confession

the recipient of the confession is often not a spiritual figure but is rather the consumer's friends, family, and (online) community. Finally, consumers seek forgiveness from themselves and their social groups after confession while individuals seek forgiveness from spiritual beings and their religious communities after a spiritual confession.

In my paradigm, consumer confession also differs from a pure moral self-threat (Sachdeva, Iliev, and Medin 2009; Jordan, Mullen, and Murnighan 2011) because all individuals are first threatened by reflecting on a past consumer transgression, while only half are assigned to confess about the transgression rather than move onto another task. Additionally, whereas a self-threat always motivates subsequent self-restoring thoughts and behaviors, consumer confession may either increase, decrease, or have no impact on the need for consumers to engage in restorative thoughts and consumer behaviors to achieve forgiveness. On the one hand, confessions about past consumer transgressions may motivate the desire to make amends in order to achieve forgiveness. Previous historical research has suggested that confession may motivate repentant activities in order to help individuals make amends for their sins (or transgressions) such that they may be forgiven (Belgum 1992; Hymer 1995). In this case, confession should increase one's desire to engage in morally-cleansing, restorative consumer behaviors. On the other hand, a confession itself may reduce guilt, absolve sins (McKay et al. 2012), grant forgiveness (Wise 1996), and reduce stress (Butler 1990). In this case, confessing should reduce one's need for moral cleansing and amends-making. Consistent with this notion, recent research has found that feeling closure about a past transgression can reduce the need for moral cleansing and can, in fact, license individuals to act less than virtuously (Robitaille and Mazar 2012).

Confession also differs from disclosure and self-regulatory threat, because it activates and make accessible various religious beliefs about the confession process. I propose and find that after reflecting about a green transgression, confessing (vs. not confessing) about the transgression motivates restorative consumer behaviors for Catholics, but the effect does not hold for Non-Catholics. Catholics believe penance is required to achieve forgiveness after confession. Penance is defined as good deeds and behaviors performed to make amends and seek forgiveness after the confession of one's sins. In this research, I explore the notion of penance via consumption, or the preference for products and services that help consumers make up for their previous transgressions and get back on track with their consumption goals (e.g., purchasing and consuming organic foods after the confession of an environmental transgression;). As such, this consumer penance is conceptually similar to symbolic self-completion through the acquisition of products (Gollwitzer, Wicklund, and Hilton 1982; Wicklund and Gollwitzer 1982; Jordan et al. 2011). Therefore, Catholics (i.e., individuals with strong penance beliefs), confession should motivate restorative behaviors in an effort to seek forgiveness and make amends for the past transgression.

Results of five experiments show that after reflecting on consumer transgression, confessing (vs. not confessing) about the focal transgression motivates restorative consumer behaviors for Catholics. This effect does not hold for Non-Catholics, who are equally motivated to engage in restorative consumer behaviors whether or not they confess. Results find that Catholics feel less forgiven and increase their penance-like consumer behaviors after confessing (vs. not confessing). Additionally, when Catholics

receive forgiveness through confession itself (vs. forgiveness through confession and penance), they reduce their motivation to engage in restorative consumer behavior.

In the balance of the article, I first provide background about the religious and psychological functions of confession. Then I develop a series of hypotheses that predict that after reflecting on a green transgression, confessing (vs. not confessing) motivates restorative consumer behaviors for Catholics due to strong penance beliefs. Next, I report the results of five experiments that test these hypotheses and alternative explanations. Finally, I identify the key contributions of this research and propose directions for future research.

FOUNDATIONS OF CONFESSION

Spiritual confession is defined as a “public or private verbal behavior in which individuals (1) acknowledge that they have violated a standard that is imbued with spiritual significance and (2) seek forgiveness for their violation” (Murray-Swank et al. 2007, p. 276). Confession is part of a process in which an individual seeks forgiveness for his or her negative behaviors (Whittington and Scher 2010), and this process takes on different forms and functions within many of the world’s religions (Murray-Swank et al. 2007). For example, the act of confession occurs privately to God (e.g., Protestantism, Anglicanism, Mormonism, Islamism), privately to a priest or spiritual leader (e.g., Catholicism, Eastern Orthodoxy, Anglicanism, Lutheranism, Buddhism, Mormonism), communally during religious gatherings (e.g., Lutheranism, Judaism), directly to the victim (e.g., Mormonism, Judaism, Islamism), or as an entirely internal process (e.g.,

Buddhism) (Belgum 1992; Hymer 1995; McMinn 1996; Murray-Swank et al. 2007). Confessions focus on purification and absolution motives, as in Catholicism, or on spiritual growth, as in Eastern Orthodoxy. Forgiveness and absolution is granted through confession alone (e.g., Protestantism), through a priest (e.g., Lutheranism, Anglicanism, Eastern Orthodoxy), through forgiveness from the victim (e.g., Mormonism, Islamism, Judaism), or through confessional penance and absolution from God through a priest (e.g., Catholicism). Confession often requires the resolve and intention to avoid similar transgressions in the future (e.g., Catholicism, Buddhism). Judeo-Christian inspired confession practices also inform the 12-step program to recovery in Alcoholics Anonymous, in which participants make anonymous confessions to a group of supportive others and/or a sponsor with the goal of ending drug and alcohol addiction (Sellner 1990).

However, despite its prevalence across major world religions and large consumer support groups, the topic of confession has earned little coverage in the handbooks of religion research (e.g., Schumaker 1992; Pargament 1997; Case and McMinn 2003; Hall and McMinn 2003; Paloutzian and Park 2005). Most mentions of confessions and related topics in the extant literature focus on describing the process and outcomes of the Catholic Sacrament of Reconciliation. Catholic reconciliation requires many steps to achieve forgiveness: 1) a remorseful confession of one's sins (i.e., to God through a priest), 2) acts of penance to repent for one's sins, and 3) intentions to amend one's life and avoid similar sinful behaviors in the future. These steps are evident in the Act of Contrition, which Catholics read aloud to the priest during the confession process: "Oh my God, I am heartily sorry for having offended Thee, and I detest all my sins because I

dread the loss of Heaven and the pains of Hell. But mostly because I offend Thee, my God, who are good and deserving of all my love. I firmly resolve, with the help of Thy grace, to confess my sins, to do penance, and to amend my life.” (Note: exact words may vary slightly by congregation). Here, Catholics confess sins, do penance, and state intentions to avoid the transgression in the future. Manuel (1991) noted the similar structure of Catholic confession and confessions in self-help groups like Alcoholics Anonymous, which include remorseful confession of consumption transgressions, works of penance such as charity work, and attitudinal and behavioral change.

While empirical research on confession is sparse, researchers have previously explored related concepts, such as divulging secrets and apologizing. For example, telling secrets and admitting bad behaviors may help individuals get things off their chests (Kelly et al. 2001), but it is not clear whether secrets help individuals achieve forgiveness or motivate restorative behaviors. For example, the website Postsecret.com posts anonymous confessions sent in by users via postcards (e.g., “When I meet my lover at our hotel, I pay cash so my husband won’t know... but I really want the Hilton Points!”). In this example, the user admits an adulterous secret but shows no remorse. As such, this secret is different from a confession. In fact, for confession to have cleansing, self-forgiveness effects, the individual must feel and convey this remorse within the confession (Fisher and Exline 2006). Therefore, remorse is one condition that differentiates confession from other forms of admission.

Confession is also similar to, but distinct from, the large body of work on apology and interpersonal forgiveness (e.g., Exline, DeShea, and Holeman 2007), because confession is largely an intrapersonal reconciliation process of restoring one’s sense of

self and spiritual well-being. With that said, individuals may make an apology to another during the process of amends-making after confession; however, apologizing to another person is often not the act of spiritual confession itself. In confessions, the focal transgressions do not always harm others. Rather, the focal transgressions in confessions typically go against that which the individual holds sacred or holy (Murray-Swank et al. 2007). In consumer confessions, transgressions go against the self-goals and social norms practiced by the consumer. To this end, consumer confessions will contain remorseful acknowledgments about consumer behaviors that are counter to goals to be healthy, environmentally-friendly, financially-stable, etc.

In the present work, I explore the process and outcomes of confession in the consumer domain. I define consumer confessions as the remorseful acknowledgment of one's consumer wrongdoings and the public or private disclosure of these wrongdoings, with the goal of restoring the self. A consumer confession may take on many different forms: publicly to a social network, privately to friends and family or through meditation, or publicly (and perhaps anonymously) in a support group setting. Throughout all modalities of confession, remorse, an emotional expression of negative behavioral evaluations, is a necessary condition (Fisher and Exline 2006). It is this remorse and desire for restoration that distinguishes confession from merely disclosing secrets. As such, it is possible that confession will motivate consumers to repair tarnished identities through consumption in order to get back on track with their consumption goals.

CONSUMER CONFESSION AND SELF-REGULATION

The psychological study of confession is important because it has been historically tied to the emergence of self-hood and self-regulation. Confession is an individualized process in which an individual engages in self-reflection, seeks forgiveness for his or her personal sins (Richardson and Stewart 2009), and engages in inward-focused improvements in individual discipline (Bossy 1975; Richardson and Stewart 2009). As such, consumer confessions may inform the process of self-regulation.

Self-regulation is the process of monitoring one's thoughts and behaviors to achieve one's goals (Carver and Scheier 1981). When an individual's thoughts and behaviors fall out of line with his/her goals, individuals become motivated to bring those thoughts and behaviors back in line with his/her goals. For example, when there is a discrepancy between one's current green self-identity (e.g., environmentally-harmful self) and one's ideal or ought self-identity (e.g., environmentally-friendly self), consumers are motivated to engage in behaviors that bring themselves closer to their ideal, eco-friendly self (Higgins 1987). Consistent with this notion, researchers have found that threats to one's moral identity motivate "morally cleansing" pro-social behaviors to help restore one's moral self-concept (Sachdeva et al. 2009; Jordan et al. 2011; Conway and Peetz 2012), and this pattern is more pronounced when recalling recent versus past transgressions (Conway and Peetz 2012).

Researchers have also found that feeling guilty about a previous (hypothetical) transgression can motivate restorative, conciliatory intentions (Meek et al. 1995). One outlet for restorative behaviors is compensatory consumption, or "any differential preference for, purchase of, or actual usage of products or services resulting from one's

desire to repair the threatened identity” (Mandel et al. 2015, p. 3). After an environmental transgression (and thus a threat to one’s green identity), purchasing green products may help individuals symbolically self-complete with products that bolster and support the threatened identity (Jordan et al. 2011). Individuals use consumption and the acquisition of relevant products and symbols to repair important self-concepts after threats (Gollwitzer et al. 1982; Wicklund and Gollwitzer 1982). For example, after a consumer confession, any differential preference for green products and behaviors can be likened to acts of consumer penance, such as buying carbon credits to offset one’s carbon footprint.

FRAMEWORK: CONSUMER CONFESSIONS AND PENANCE BELIEFS

The traditional self-regulation paradigm compares participants in a self-threatened state (e.g., dishonest self) to those in a neutral state (e.g., typical daily self), and then measures differences in self-concept and motivation to restore one’s self-identity between groups (e.g., Jordan et al. 2011). In the present paradigm, I put all participants in a self-threatened state because they first reflect about a past consumer transgression. Then, I compare participants who confess about the transgression to those who do not confess (randomly-assigned) on the extent to which they feel forgiven, are willing to pay for goal-consistent items, and engage in goal-consistent behaviors.

After reflecting about a past consumer transgression, confessing about the focal goal-inconsistent behavior could make consumers feel even more threatened (e.g., Murray-Swank 2003) and thus more likely to engage in behaviors that help restore the self. In fact, confession may emphasize negative self-evaluations by making individuals

recount, verbalize, and take ownership for a goal-inconsistent behavior, thus likely magnifying self-regulatory outcomes. Remorsefully admitting our transgressions can threaten our core motivation to view ourselves as a good, just person (Sicolý and Ross 1977; Dunning 2007). Researchers have previously suggested that confessional experiences are filled with guilt, shame, and anxiety for some individuals (Shafranske 2000). However, guilt is not always a negative outcome of confession; in fact, guilt can be a powerful motivator of conciliatory behaviors. Hall and Fincham (2005) report that conciliatory behaviors, such as seeking forgiveness or engaging in penance, most likely help individuals achieve self-forgiveness after a transgression. Here, it is not the act of confessing itself, but rather it is the act of engaging in conciliatory behaviors after confession, that helps individuals achieve forgiveness and restore the self.

Alternatively, confessing may help individuals feel relieved and forgiven for their transgressions (Butler 1990; Wise 1996), which would likely attenuate the need for individuals to engage in behaviors to restore the self. In an analysis of 200 Finnish letters about confession, Kettunen (2002) found that the amount of relief felt after confessing did affect emotional outcomes. Additionally, experiencing self-forgiveness, abandoning resentment towards the self, and reconciling with the self (Tangney, Boone, and Dearing 2005), should reduce one's motivation to engage in self-repairing (e.g., green, healthy) compensatory consumption after confessing.

Taken together, it is not obvious whether confessing (vs. not confessing) will increase, decrease or hold constant one's motivation to engage in self-restorative consumer behaviors. Whether confession increases, decreases or holds constant an individual's motivation to engage in self-repairing behaviors may be informed by his/her

religious background. Religions provide members with a set of guiding principles, norms, and rituals (Cohen 2009). For many religions, the act of confession itself leads to grace and forgiveness; while for Catholicism, confession requires subsequent acts of penance in order to achieve forgiveness (Belgum 1992; Hymer 1995; Shafranske 2000). In the Catholic tradition, adherents must engage in acts of penance (e.g., good deeds, charity, prayers) to repair the self and soul from the former transgression (*Catechism of the Catholic Church* 2000), before they are able to achieve forgiveness and absolution. Thus, after recalling a past consumer transgression, I expect that confession will motivate Catholics to engage in restorative, goal-consistent behaviors.

H1: After reflecting about a past transgression, Catholics who confess (vs. do not confess) will increase motivation for restorative, goal-consistent behaviors, but this effect will not hold for Non-Catholics.

Consumer penance, such as engaging in eco-friendly behaviors after confessing about a green transgression, likely results from a motivation to seek forgiveness and achieve absolution for one's consumer sins. From an early age, religious rituals and teachings inform the process of achieving forgiveness after sins. In a qualitative study of Catholics who had recently had their first experience with the ritual of confession, Beste (2011) found that many of the participants emphasized the need to perform penance or to be granted absolution by the priest during the confession itself in order to achieve forgiveness. Consistent with this notion, researchers have noted that Catholics must

engage in penance and vow not to repeat the transgression in order to achieve forgiveness from God through a priest (Batson and Shwalb 2006).

In consumer confessions, confessors are not typically seeking forgiveness from God or from a priest. They are, however, likely to seek self-forgiveness for straying from their ideal self. Hall and Fincham (2005) proposed that conciliatory behaviors, such as penance, may be necessary to achieve self-forgiveness. Additionally, Riek (2010) suggested that seeking forgiveness is important in helping individuals restore a positive view of the self. Because Catholics believe that conciliatory, penance-like behaviors are required to achieve forgiveness after confession, the motivation to achieve forgiveness from the self or from close others should drive the effect of confession on subsequent penance-like behaviors.

H2a: After reflecting about a past transgression, Catholics who confess (vs. do not confess) will experience greater motivation to achieve forgiveness, but this effect will not hold for Non-Catholics.

H2b: For Catholics, the motivation to seek forgiveness will mediate the effect of confessing (vs. not confessing) on the motivation for restorative, goal-consistent behaviors, but this effect will not hold for Non-Catholics.

Next, I examine the role of confessional forgiveness in reducing the need for compensatory, conciliatory consumer behaviors. Confessional forgiveness occurs when individuals achieve forgiveness during or immediately after the act of confessing itself,

rather than after confessing and engaging in restorative penance. However, philosophers have noted that receiving early signs of forgiveness may reduce subsequent motivation for repentance (see Exline et al. 2003). Therefore, achieving forgiveness through the act of confession itself (rather than through confession and penance) should reduce the need for Catholics to engage in restorative consumer behaviors after confession.

H3: For Catholics, achieving forgiveness through confession itself (vs. through confession and penance) will reduce the motivation to engage in restorative, goal-consistent consumer behaviors, but this effect will not hold for Non-Catholics.

Throughout the experiments, I also test a variety of potential alternative explanations for the confession x Catholicism effects, including mood (i.e., guilt and shame). It is possible that Catholics (vs. Non-Catholics) are more prone to guilt, and as such, would be more motivated to engage in repair action tendencies (e.g., green behaviors) after confessing. Although researchers have found that guilt and shame appear similarly across religions (Tangney and Dearing 2002), other researchers have found that intrinsically religious (vs. extrinsically religious) individuals were more prone to guilt than extrinsically religious individuals (Meek et al. 1995). In the experiments, I find no differences in guilt, shame, positive affect, or negative affect among Catholics who confess versus those who do not. Additionally, I find no differences in these emotions between religious groups. Together, I will rule out affect as a viable alternative explanation to the proposed seeking forgiveness mechanism.

I also rule out general religious values, intrinsic and extrinsic religiosity, and green attitudes as alternative explanations of the differential effects of confessions on consumer outcomes. It is possible that Catholics could just be more religious than a population of other religious and non-religious consumers, and it might be this general religiosity or religious values that would explain any differences in consumer outcomes after confession. Additionally, it is possible that Catholics could just have higher or lower green attitudes than individuals from other religions or no religious affiliations (e.g., Horenstein 2012), which may explain differences in motivation after confession. However, I find that general religious values, religiosity, and green attitudes do not interact with confession (vs. no confession) to affect subsequent restorative consumer motivation. Therefore, it is not general religiosity or green attitudes that drive differences in consumer outcomes after confession, but rather the mechanism is more specific to the religiously informed process of confession. I propose and find that Catholics and individuals with strong penance beliefs are more likely to engage in restorative behaviors after confession, but that the effect does not hold for Non-Catholics and individuals with weak penance beliefs.

I test these hypotheses and potential alternative explanations in a series of five studies. In studies 1 and 2, I examine the effect of confessing (vs. not confessing) about a green transgression on motivation to engage in restorative eco-friendly behaviors for Catholics and Non-Catholics (H1). In study 3, I examine the mediating effects of seeking forgiveness on the effect of confessing (vs. not confessing) about a green transgression on one's desire to engage in green behaviors at various levels of Catholic penance beliefs (H1, H2a, H2b). In study 4, I test the boundary condition of confessional forgiveness for

Catholics and individuals with strong penance beliefs (H3). Finally, in study 5, I replicate the effects of previous studies to test H1 in the health domain.

STUDY 1: CONSUMER CONFESSION AND CATHOLICISM

In the first study, I explore the effects of consumer confession on Catholics and Non-Catholics. Consistent with H1, I expect confession (vs. no confession) to increase green motivation and preference for green products, but only for Catholics. I do not expect this effect to hold for Non-Catholics.

Method

I conducted a 2 (confession task: confession vs. neutral writing task) x 2 (religion: Catholic vs. Non-Catholic) experiment with the first factor randomly assigned and the second factor measured. Participants were 110 undergraduates receiving extra credit for their participation in a lab session (36.36% female, $M_{\text{age}} = 21.56$ years, $SD_{\text{age}} = 2.6$ years). In a pre-survey at the beginning of the semester for this and other studies, participants completed a measure of green attitudes and indicated their religious affiliation. To measure green attitudes, participants completed a 6-item measure (Haws, Winterich, and Naylor 2014), including items like “It is important to me that the products I use do not harm the environment” and “I would describe myself as environmentally responsible” ($\alpha = .94$). Participants rated each item on a 1 = “Not at all true of me” to 5 = “Totally true of me” scale. I measured green attitudes to identify differences in green attitudes between religious groups. At the end of the pre-survey, participants reported their age, gender, and

religious affiliation. In this sample, 43.64% reported Catholicism as their religious affiliation. The rest of the sample reported being raised in another religion or being non-religious. In this sample, Catholics ($M = 2.56$) reported directionally lower green attitudes than Non-Catholics ($M = 2.88$, $F(1, 108) = 2.60$, $p = .11$). Therefore, I expect baseline green motivation and green willingness-to-pay premiums also to be directionally lower for Catholics than Non-Catholics in this sample.

In the lab, all participants reflected on a recent green transgression for at least one minute. Participants read the following instructions for the reflection task: “We would now like you to take some time to reflect on things that you have done that are bad for the environment. Think back over the last month about a few things that you have done that were bad for the environment... some examples might be leaving the lights on, not recycling, or wasting water. Think about some specific occurrences. While you are thinking about the things you have done, think about how you are feeling. Please think about this for at least one minute before proceeding to the next question. You may close your eyes if it helps you focus and reflect. Really think about your behaviors and how they have made you feel. The continue button will appear after one minute has passed.” I implemented this reflection task to make the green transgression salient for all participants since previous research has found that identity salience itself can drive identity-consistent behaviors (Reed II 2004).

After participants reflected about a green transgression, I randomly assigned participants to a public confession task or to a neutral writing task (see appendix A for full instructions). Participants in the confession condition wrote a confession about their green transgression and read their confession aloud to a confederate (a lab assistant) in a

private room in the lab. Participants read the following instructions for the public confession task: “We would now like you to make a public confession about the environmentally harmful behaviors that you thought about in the previous task. On the paper provided to you, please write down your green confession. You will be reading this confession aloud publicly to a lab assistant in one of the smaller rooms in this lab. While your confession will be kept anonymous, at the conclusion of this study, your confession will also be posted by the research team online at EarthConfessions.com (an online forum for green confessions). Please click next once you have finished writing down your confession. The continue button will appear after 1 minute.”

Participants who were randomly assigned to the no confession condition wrote about a day in the life of a bee as a neutral writing task (Robitaille and Mazar 2012). Consistent with Robitaille and Mazar’s (2012) work on moral licensing in the environmental domain, I implemented this neutral writing task to ensure participants were still thinking about nature (e.g., a bee), but not necessarily their negative effect on nature. Participants in the no confession condition read the following instructions: “Next, please take 1-2 minutes write a short essay to describe, in detail, what you imagine a bee’s typical day looks like. Please write the short essay on the paper provided to you by the lab assistant. The continue button will appear after 1 minute.” (Robitaille and Mazar 2012).

After the reflection and writing tasks, all participants completed the 20-item Positive and Negative Affect Schedule (PANAS: Watson, Clark, and Tellegen 1988) to indicate how they were feeling at the present moment (measured on a 1 = “Very slightly or not at all” to 5 = “Extremely” scale). The positive affect subscale included items like

“interested” and “excited” (PANAS_{pos}, 10-items, $\alpha = .92$). The negative affect subscale included items like “guilty” and “distressed” (PANAS_{neg}, 10-items, $\alpha = .90$). I included this item to measure and control for the potential effect of confession on general positive and negative affect. I specifically implemented this scale to check individual PANAS emotions (“guilty” and “ashamed”) that are associated with past transgressions (Tangney and Dearing 2002).

Next, all participants indicated their willingness-to-pay (WTP) for green and conventional versions of a diverse set of products including t-shirts, cleaning products, strawberries, vehicles, shampoos, and bulbs on sliding scales (see appendix B for product images, descriptions, and scale end-points). To compare across diverse product categories that were measured on different scales, I calculated the percentage premium individuals were willing to pay for each green vs. conventional product (i.e., (green product WTP – conventional product WTP) / conventional WTP). Previously, researchers have used percent price premium measures to compare consumers’ willingness-to-pay between conventional coffee and fair-trade coffee (De Pelsmacker, Driesen, and Rayp 2006) and national and private label brands (e.g., Steenkamp, Van Heerde, and Geyskens 2010). Researchers have also averaged willingness-to-pay premiums compared to actual retail prices across multiple products (e.g., Rucker, Hu, and Galinsky 2014). An index of all six green percentage premiums (6 items, $\alpha = .73$) exhibited good reliability.

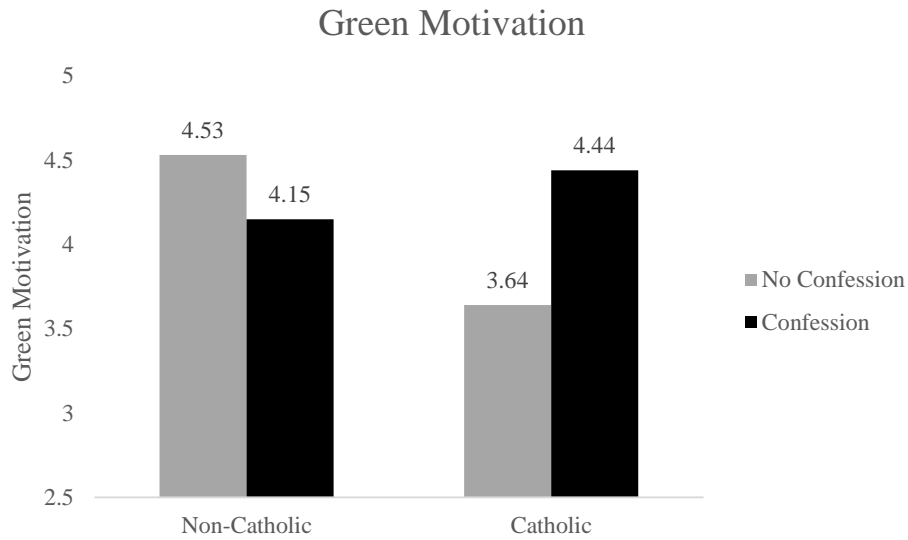
Finally, participants indicated their motivation to engage in green behaviors with two items: “I want to engage in green behaviors” and “I feel as though I need to act more pro-environmentally” (two-items, $r = .69$, $p < .0001$). Participants rated each item on a 1 = “Strongly Disagree” to 7 = “Strongly Agree” scale.

Results

To test H1, I conducted a 2 (confession vs. no confession) x 2 (Catholic vs. Non-Catholic) ANOVA on green motivation, green willingness-to-pay premium, and affect. I report results without using green attitudes as a covariate for consistency across studies, but results are robust when controlling for green attitudes.

Green motivation. Results of a 2 x 2 ANOVA did not reveal main effects of confession or Catholic on green motivation ($ps > .20$). However, consistent with H1, results revealed a significant confession x Catholic interaction on green motivation ($F(1, 106) = 4.50, p = .04$, see figure 1). Catholics reported marginally higher green motivation after confessing ($M_{\text{conf,Cath}} = 4.44$) than after merely reflecting ($M_{\text{noconf,Cath}} = 3.64, F(1, 106) = 5.59, p = .06$). Non-Catholics reported being equally motivated after confession (vs. no confession) ($M_{\text{conf,non-Cath}} = 4.15$ vs. $M_{\text{noconf,non-Cath}} = 4.53, F(1, 106) = 1.09, p = .30$). Furthermore, in the no confession condition, Catholics reported lower green motivation ($M_{\text{noconf,Cath}} = 3.64$) than Non-Catholics ($M_{\text{noconf,non-Cath}} = 4.53, F(1, 106) = 4.88, p = .03$), which was likely attributed to directionally lower green attitudes in the Catholic sample.

Figure 1. Confession Increases Green Motivation for Catholics

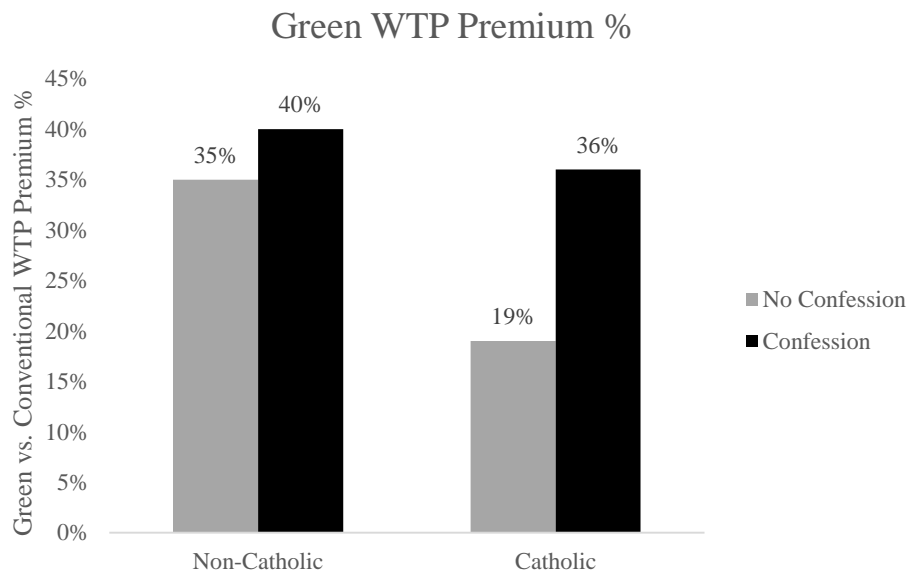


Green premiums. Results of a 2 x 2 ANOVA revealed a significant main effect of confession on the average percentage premium that individuals were willing to pay for the green items versus the conventional items ($F(1, 106) = 5.80, p = .02$). On average, participants in the confession condition were willing to pay a 38% premium for the green products while participants who did not confess were willing to pay a 27% green premium. Results also revealed a negative main effect of Catholic on the average percent green premium ($F(1, 106) = 5.62, p = .02$), with Catholics, on average, willing to pay a 27% premium and Non-Catholics willing to pay a 37% green premium. These results are likely due to the directionally lower green attitudes for Catholics in this sample.

Next, to test H1 using green premiums, I explored the confession x Catholic interaction within the 2 x 2 ANOVAs. Results revealed a directional interaction effect on the average green percentage premium ($F(1, 106) = 2.09, p = .15$). Although this is not a statistically significant interaction, results are in the same direction as green motivation

(see figure 2). Catholics were willing to pay a higher average green premium after confessing vs. merely reflecting ($M_{\text{conf,Cath}} = 36\%$ vs. $M_{\text{noconf,Cath}} = 19\%$, $F(1, 106) = 7.06$, $p = .009$), while Non-Catholics were equally willing to pay ($M_{\text{conf,non-Cath}} = 40\%$ vs. $M_{\text{noconf,non-Cath}} = 35\%$, $F(1, 106) = .33$, $p = .57$).

Figure 2. Confession Increases Green Premiums for Catholics



Affect. Results of a 2 x 2 ANOVA did not reveal any significant effects of confession, Catholicism, nor their interaction on PANAS_{pos} or PANAS_{neg}. Because guilt and shame have been linked empirically and conceptually to confessions (e.g., Meek et al. 1995; Shafranske 2000; Murray-Swank 2003), I also ran a 2 x 2 ANOVA on the individual “guilty” and “ashamed” items from the PANAS scale. Results did not reveal any significant effects of confession, Catholicism, nor their interaction on guilt or shame. Based on these results, I can rule out general positive affect, negative affect, guilt, and

shame as a potential explanation for the confession x Catholic interaction on green motivation.

Discussion

Results from study 1 support the prediction that after reflecting about an environmental transgression, confessing (vs. not confessing) about the transgression to a peer confederate would increase penance-like green motivation, but only for Catholics (H1). These results suggest that confession does not serve as a general self-regulatory boost for all consumers, rather consumer confession is only restorative for individuals who likely hold beliefs about penance as a necessary condition of the reconciliation process. Unlike Catholics, Non-Catholics were equally motivated to engage in restorative behaviors whether or not they confessed. Thus, consumer confession may be a good strategy for consumers to use after transgressions in order to get back on track, regardless of religious background. Additionally, results of study 1 begin to rule out general negative and positive affect, guilt, and shame as mechanisms for the effects.

STUDY 2: CONFESSION AND FEELING FORGIVEN

In study 2, I seek to replicate the findings of study 1, and also to begin to explore whether confession (vs. reflection) makes individuals feel forgiven for their transgressions (H2a). Unlike the public confession manipulation used in study 1, here I implement a more private confession manipulation (written online to a close friend or family member) to mimic confessions written via email or posted on social media sites

like Facebook. Overall, I expect to find that after reflecting about a green confession, confessing (vs. not confessing) will make Catholics feel less forgiven (because for Catholics, forgiveness is only achieved after both confession and penance) and will increase their green motivation and green product preferences.

Method

I conducted a 2 (writing task: confession vs. neutral writing task) x 2 (Religion: Catholic vs. Non-Catholic) study with the first factor randomly assigned and the second factor measured. Participants were 231 undergraduate business students who participated in a lab session for extra credit (45.45% female, $M_{age} = 22.32$, $SD_{age} = 4.27$ years). Participants completed a pre-survey at the beginning of the semester during which they completed measures (including green attitudes, religious values, and demographics) for this and other studies. To measure green attitudes, participants completed the same 6-item green attitudes measure (Haws et al. 2014) as used in study 1 ($\alpha = .94$). In the pre-survey, participants also indicated their religious affiliation (40.69% raised Catholic). In this sample, green attitudes are not affected by confession condition, Catholicism, nor their interaction ($ps > .20$), so I do not include green attitudes as a covariate in the analyses.

During the pre-survey, participants also completed a three-item measure of religious values, adapted from Saroglou (2011). Items included “I am attached to religion for the values and ethics it endorses,” “Religion helps me try to live in a moral way,” and “When I’ve got a moral dilemma, religion helps me make a decision” ($\alpha = .96$) and were measured on a 1 = “Totally disagree” to 7 = “Totally agree” scale. I measured religious values in this study to explore the potential alternative explanation of general religiosity as driving the confession x Catholic effects.

In the lab, all participants completed the same reflection task from study 1 (see appendix A for manipulations). Next, I randomly assigned participants to the confession condition or no confession condition. In the confession condition, participants read the following instructions: “We would now like you to make a confession to a close friend or family member about the environmentally harmful behavior you reflected upon earlier. Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. You can write as if you were telling a close friend or family member about what you did and how you felt about it. Please click the next arrow to continue the survey once you have finished writing.” Compared to the public confession in study 1, I modified the confession task in this study to mirror the confessions consumers make online to close friends or family members. In the no confession condition, participants completed the same neutral writing task as in study 1 (i.e., writing about a day in the life of a bee). In this study, I also measured the time participants spent during the reflection and writing tasks to check for the alternative explanation of rumination. I explore the potential alternative explanation that Catholics could be spending more time and effort on the confession task than on the neutral writing task, and thus are more motivated to engage in restorative behaviors.

After the reflection and writing tasks, all participants took the 15-item State Shame and Guilt Scale (Marschall, Sanftner, and Tangney 1994), which includes three subscales. In study 1, I found no effects of confession, Catholicism, nor their interaction on the one-item measures of guilt and shame that are located in PANAS. In study 2, I measured state shame and guilt to rule out these discrete emotions as a potential

alternative explanation for the effects using a validated, multi-item measure. The guilt subscale includes five items to capture the extent to which individuals feel tension about something they have done ($\alpha = .89$). The shame subscale includes five items to capture the extent to which individuals feel like a bad person ($\alpha = .83$). The pride subscale includes five items to indicate the extent to which individuals feel pleased about something they have done ($\alpha = .86$). I averaged items together for each subscale to create indices of guilt, shame, and pride.

Next, participants reported their motivation to make up for their transgression using pro-environmental behaviors (4-items, $\alpha = .91$). To capture green motivation, participants answered “To what extent do you feel the need to make amends for your environmentally harmful behavior?,” “To what extent do you want to make up for what you did?,” “To what extent do you feel motivated to be more environmentally friendly?,” and “To what extent do you want to remedy what you have done?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale).

Then participants reported the extent to which they felt forgiven for their green transgressions (4-items, $\alpha = .83$). To capture feelings of forgiveness, participants answered “To what extent do you feel forgiven for your harmful behaviors?,” “To what extent do you feel like you have been excused for your environmentally harmful behaviors?,” “To what extent do you feel like a weight has lifted off your chest?,” and “To what extent do you feel like you have wiped the slate clean?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale).

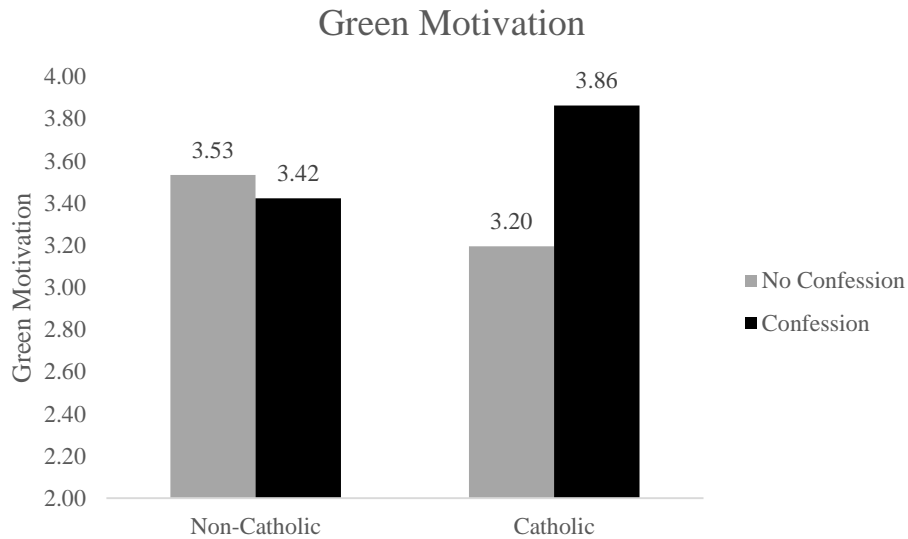
Then, participants were given an unrelated study in the lab as a filler task, which took between 10-15 minutes. Then, in a seemingly separate study, participants went into

a private study room and evaluated two one-liter water bottles: a) a more environmentally-friendly Dasani plant bottle (made from 30% plant materials, 100% recyclable), and b) a less environmentally-friendly Evian bottle (imported water from the Alps, thick plastic bottle). See appendix B for product image samples. Participants rated their willingness-to-pay for each item on a sliding scale (between \$0 and \$5 USD) and rated each product on its environmental friendliness (1 = “Not at all” to 5 = “Very much so” scale). In a manipulation check, participants correctly identified the Dasani bottle as more environmentally friendly ($M_{\text{Dasani}} = 3.78$) than the Evian bottle ($M_{\text{Evian}} = 3.26$; $t(230) = 6.54, p < .0001$).

Results

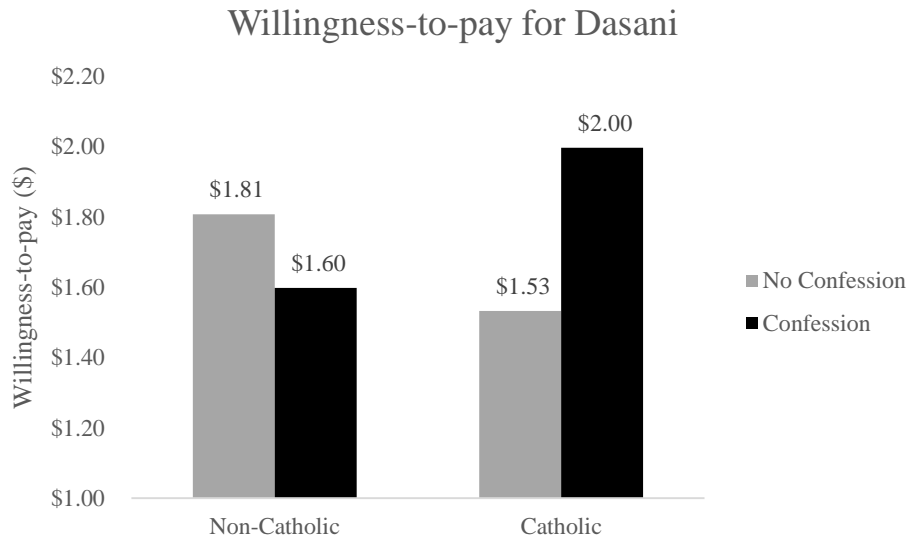
Green motivation. Results of a 2 x 2 ANOVA revealed a directional positive effect of confessing (vs. not confessing) on green penance motivation ($M_{\text{conf}} = 3.64$ vs. $M_{\text{noconf}} = 3.36$; $F(1, 227) = 1.93, p = .17$). Results revealed no effect of Catholic on green penance motivation ($p > .20$), which is likely due to the similarity in green attitudes across religious groups in this sample. Importantly, results revealed a significant confession x Catholic interaction on green penance motivation ($F(1, 227) = 3.78, p = .05$, see figure 3). Replicating study 1, Catholics who confessed reported higher green penance motivation ($M_{\text{conf,Cath}} = 3.86$) than Catholics who did not confess ($M_{\text{noconf,Cath}} = 3.20$; $F(1, 227) = 4.68, p = .03$). Furthermore, Non-Catholics were equally motivated to engage in green behaviors regardless of whether or not they confessed ($p > .20$). Taken together, results support H1; confession (vs. no confession) motivates Catholics to seek out restorative, compensatory green behaviors to make up for their past transgressions.

Figure 3. Confession Increases Green Motivation for Catholics



Green willingness-to-pay. Results of a 2 x 2 ANOVA revealed no main effects of confession condition nor Catholicism on willingness-to-pay for the Dasani and Evian water bottles ($p > .20$). However, as predicted, results revealed a significant confession x Catholic interaction on willingness-to-pay for the eco-friendly Dasani bottle ($F(1, 227) = 11.11, p = .001$, see figure 4), but not for the less eco-friendly Evian bottle ($p = .37$). Planned contrasts revealed that Catholics were willing to pay more for Dasani after confessing ($M_{\text{conf,Cath}} = \$2.00$) than after reflecting only ($M_{\text{noconf,Cath}} = \$1.53; F(1, 227) = 8.89, p = .003$), supporting H1. Furthermore, in this sample, Non-Catholics were willing to pay directionally more for Dasani after reflecting only ($M_{\text{noconf,non-Cath}} = \1.81) than after confessing ($M_{\text{conf,non-Cath}} = \$1.60; F(1, 227) = 2.64, p = .11$).

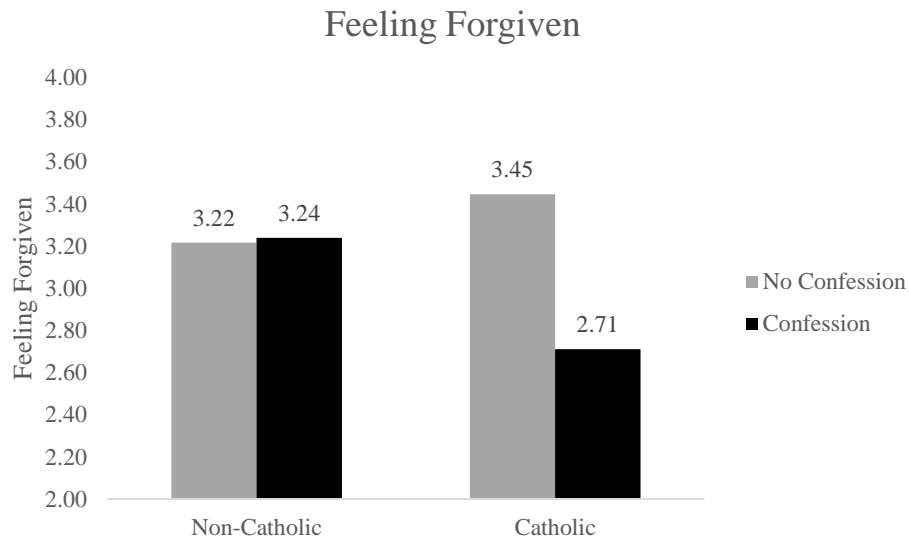
Figure 4. Confession Increases Willingness-to-pay for Eco-Friendly Water for Catholics



Feeling forgiven. Results of a 2 x 2 ANOVA did not reveal main effects of confession nor Catholic on feeling forgiven for one's transgression. However, results revealed a significant confession condition x Catholic interaction on feeling forgiven ($F(1, 227) = 4.00, p = .05$, see figure 5). Planned contrasts revealed that Catholics who confessed felt less forgiven ($M_{\text{conf,Cath}} = 2.71$) than Catholics who did not confess ($M_{\text{no-conf,Cath}} = 3.45; F(1, 227) = 6.33, p = .01$), providing some initial evidence that Catholics may feel the need to seek forgiveness through good deeds after confession (H2a). Non-Catholics felt equally forgiven whether or not they confessed ($p > .20$). While these findings do not directly test H2a, they provide some initial support for the notion that Catholics increase green motivation after confessing (vs. not confessing) as means to seek forgiveness. Additionally, these findings suggest that Non-Catholics feel equally

forgiven after confessing or reflecting, and thus should not need any additional self-regulatory boost after confessing.

Figure 5. Confession Reduces Feelings of Forgiveness for Catholics



Potential alternative explanation: guilt and shame. In this study, I also explored the alternative explanation of guilt and shame as potentially driving the effects of confessing (vs. not confessing) on subsequent goal-consistent motivation for Catholics. Results of a 2 (confession vs. no confession) x 2 (Catholic vs. Non-Catholic) ANOVA found no significant effects of confession, Catholicism, nor their interaction on the multi-item measures of guilt, shame, or pride. Therefore, results provide additional support that mood (i.e., guilt and shame) does not explain the confession x Catholic effects on green motivation.

Potential alternative explanation: rumination. Next, to rule out rumination as a potential alternative explanation, I conducted a 2 (confession vs. no confession) x 2 (Catholic vs. Non-Catholic) ANOVA on time spent reflecting and time spent writing. Results revealed no significant effects of confession condition, Catholicism, nor their interaction on time spent on the reflection task or on time spent during the writing tasks. Therefore, the differences in green motivation and willingness-to-pay between Catholics and Non-Catholics who confessed and did not confess are not being driven by the amount of time spent on the reflection and writing tasks.

Potential alternative explanation: religious values. In my framework, I propose penance beliefs as the mechanism that is driving differences between religious groups after confession. However, general religious values is another alternative explanation that may explain the differences between Catholics and Non-Catholics after confessing. To address this alternative explanation, I conducted a 2 (confession vs. no confession) x religious values (mean-centered) regression on green motivation, feeling forgiven, and willingness-to-pay. Results revealed no significant effects of confession, religious values, nor their interaction on these dependent measures. Therefore, I rule out general religious values as an alternative explanation. Specifically, I propose that it is differences in penance beliefs between Catholics and Non-Catholics that are driving differences in effects. I test penance beliefs and seeking forgiveness as the mechanisms for the effects in subsequent studies.

Discussion

In this study, results conceptually replicate study 1 and support H1. Results across studies 1 and 2 are robust to different confession manipulations (public vs. private) and to a 10-15 minute delay between writing task and product evaluations (study 2, but not study 1). Supporting H1, results from this study find that Catholics who confessed reported higher green motivation and willingness-to-pay for the environmentally friendly water bottle than Catholics who did not confess while results were flat for Non-Catholics. After confession, Catholics approach eco-friendly, penance-like behaviors, but do not necessarily avoid less eco-friendly options. Additionally, Catholics reported feeling less forgiven for their transgressions after confessing than not confessing. Taken together, these findings suggest some initial support for H2a, that confession (vs. no confession) activates the need to seek forgiveness, but only for Catholics. Additionally, I rule out guilt, shame, rumination, and general religious values as alternative explanations.

STUDY 3: CATHOLIC PENANCE BELIEFS AND SEEKING FORGIVENESS

In the first two studies, I found that public and private confessions (vs. no confession) motivate Catholics to engage in restorative, compensatory green behaviors, supporting H1. Additionally, in study 2, I found that Catholics felt less forgiven for their transgressions after confessing (vs. not confessing). Here, I build on the previous design in three ways and test the proposed mechanism of seeking forgiveness after confession. First, I add a third condition in which participants reflect on their green transgressions for two minutes, to control the amount of time participants are considering their

transgressions between confession condition and this new reflection only condition. Second, I measure Catholic penance beliefs (an individual difference measure that indicates the extent to which an individual is familiar with performing Catholic penance rituals after confession) to test the proposed religious difference mechanism using a continuous measure rather than a religious affiliation grouping variable. Third, I directly test the motivation to seek forgiveness after confession. Thus, in the present study, I will test whether confessing (vs. not confessing and vs. reflecting only) activates motivation to seek forgiveness (H2a) and increases green motivation (H1) for individuals with strong penance beliefs. Additionally, I examine whether the motivation to achieve forgiveness drives the effect of confession condition on green motivation for individuals with strong penance beliefs (H2b).

Method

I conducted a 3 (task: confession vs. neutral writing task vs. reflect for two minutes) x Catholic penance beliefs (continuous) study with the first factor randomly assigned and the second factor measured. Participants were 349 undergraduate business students who participated in a lab session for extra credit. To ensure all participants were taking the confessions study for the first time, I removed 18 participants from the sample who had previously taken a confessions study in the lab (final $N = 331$, $M_{\text{age}} = 22.08$ years, $SD_{\text{age}} = 6.37$ years, 49.24% female). Participants completed a pre-survey for this and other studies at the beginning of the semester. During the pre-survey, participants completed the same 6-item measure of green attitudes (Haws et al. 2014) from previous

studies ($\alpha = .94$). Green attitudes do not differ by condition or Catholic penance beliefs ($ps > .20$) and thus will not be included in the analysis.

In the lab, all participants completed the same reflection task about a past green transgression as in studies 1 and 2 (see appendix A for manipulations). Next, I randomly assigned participants to a confession task, neutral writing task, or a second reflection task. Participants in the confession condition were instructed to write an online confession to a close friend or family member, as in study 2. Participants in the no confession condition were instructed to write a story to a close friend or family member about a day in the life of a bee, as in study 2. Participants in the long reflection condition reflected on their past green transgression for at least two minutes. After the initial 60 second reflection task, the survey advanced and participants in this condition read: “Remember, really focus on and relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and how it made you feel. Please reflect on this environmentally harmful behavior for another minute. Once you have done so, please click the forward arrows to continue with the survey.” I included this long reflection task to control the amount of time participants considered their green transgression. Now, participants in the long reflection condition considered their green transgression for approximately the same amount of time as participants in the confession condition.

After the reflection and writing tasks, participants reported the extent to which they were motivated to engage in green behaviors and the extent to which they felt individuals should seek forgiveness through good deeds after confession. Similar to study 1, participants indicated their green motivation on two items ($r = .81, p < .0001$), “To what extent do you feel motivated to act more environmentally friendly this week?” and

“To what extent do you want to make up for your environmentally harmful behaviors?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale). Next, participants indicated the extent to which they thought people should seek forgiveness after confession through good deeds (two items, $r = .62, p < .0001$). Items included “To what extent do you believe doing good deeds helps people achieve forgiveness after confession?” and “To what extent do you feel like people should engage in good deeds after confessing?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale). Together, these items measure the activation of penance constructs after confession.

After the manipulations and dependent measures, I asked participants “To what extent do you feel like you confessed about your environmentally harmful behavior?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale). Results of the manipulation check were successful. Participants in the confession condition felt as though they had confessed more so than participants in the no confession condition ($B = -1.03, t(325) = -4.52, p < .0001$) and reflection only condition ($B = -.89, t(325) = -3.96, p < .0001$).

Finally, at the end of the experiment, participants were asked to indicate their general beliefs about Catholic penance on three items ($\alpha = .79$). Items included “To what extent are you familiar with Catholic confession?,” “To what extent are you familiar with the practice of engaging in penance after confession?,” and “To what extent do you believe penance is required after confession in order to achieve forgiveness?” (measured on a 1 = “Not at all” to 7 = “Very much so” scale). Rather than measuring religious affiliation (i.e., Catholic vs. Not-Catholic), this three-item measure captures the extent to which individuals are familiar with and believe the practice of penance is necessary after confession. While this is a Catholic-centric measure, it allows me to test the proposed

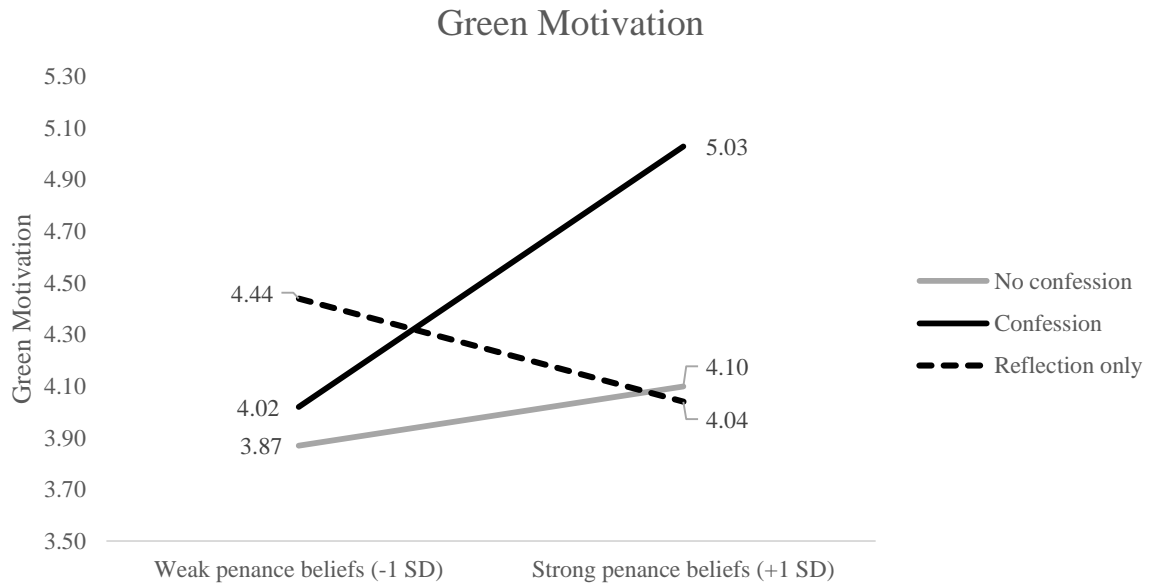
mechanism of penance beliefs directly rather than using Catholicism as a proxy for the underlying effect. In subsequent studies, I implement a more general measure of penance beliefs to test the effects.

Results

To test the hypotheses, I conducted a 3 (task) x Catholic penance beliefs (continuous, mean-centered) regression analysis on the dependent variables. Because confession is the focal condition for comparison in this analysis, I used confession as the base condition in the analysis. Therefore, the regression equation includes: no confession (dummy coded), reflection only (dummy coded), penance beliefs (mean-centered), and the interactions of no confession x penance beliefs and reflection only x penance beliefs.

Green motivation. Results of the 3 x continuous regression analysis found a main effect of condition on green motivation, participants in the confession condition reported higher green motivation ($B = 4.53$) than participants in the no confession condition ($B = -.54$, $t(325) = -2.51$, $p = .01$) and directionally higher green motivation than participants in the reflection only condition ($B = -.29$, $t(325) = -1.34$, $p = .18$). Results also found a positive main effect of Catholic penance beliefs on green motivation ($B = .29$, $t(325) = 2.97$, $p = .003$). Supporting H1 and conceptually replicating studies 1 and 2, results also found a significant reflection (vs. confession) x penance beliefs interaction ($B = -.41$, $t(325) = -3.13$, $p = .002$) and a marginal no confession (vs. confession) x penance beliefs interaction ($B = -.22$, $t(325) = -1.77$, $p = .08$) on green motivation (see figure 6).

Figure 6. Confession Increases Green Motivation at Strong Catholic Penance Beliefs

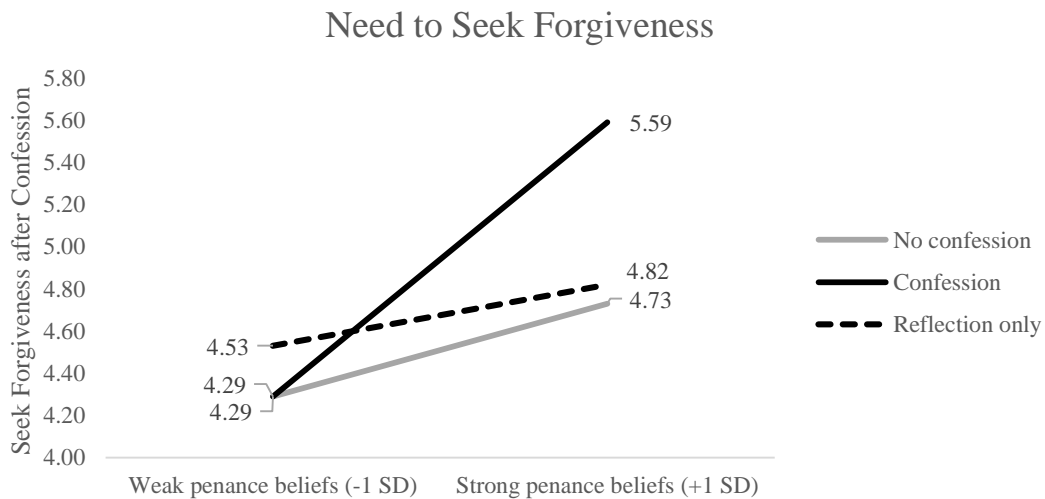


To further explore these interactions, I conducted a spotlight analysis at +/- 1 SD from the mean of Catholic penance beliefs. The spotlight analysis at + 1 SD from the mean of Catholic penance beliefs (i.e., strong penance beliefs) revealed a significant difference in green motivation between the confession condition ($B = 5.03$) and the no confession condition ($B = -.933$, $t(325) = -2.95$, $p = .003$) and reflection condition ($B = -.99$, $t(325) = -3.19$, $p = .002$). The spotlight analysis at - 1 SD from the mean of Catholic penance beliefs (i.e., weak penance beliefs) revealed no difference in green motivation between the confession condition ($B = 4.02$) and no confession condition ($B = -.16$, $t(325) = -.52$, $p = .60$), and a directional difference between the reflection only condition ($B = .42$, $t(325) = 1.35$, $p = .18$). Together, these results suggest that consumers with strong Catholic penance beliefs are most motivated to engage in green behaviors after confessing (vs. no confession or reflecting only), but no such effect exists at weak

penance beliefs. Results conceptually replicate previous studies (Catholics vs. Not-Catholics), and rule out alternative explanations having to do with time spent considering the transgression.

Need to seek forgiveness. Results revealed a main effect of condition on the need to seek forgiveness after confession, such that participants in the confession condition reported a greater need to seek forgiveness after confession ($B = 4.94$) than participants in the no confession condition ($B = -.44$, $t(325) = -2.3$, $p = .02$), and directionally greater need than participants in the long reflection condition ($B = -.27$, $t(325) = -1.45$, $p = .15$). Results also found a positive main effect of Catholic penance beliefs on needs to seek forgiveness ($B = .38$, $t(325) = 4.41$, $p < .0001$). As predicted, results revealed a significant reflection x penance beliefs interaction ($B = -.29$, $t(325) = -2.59$, $p = .01$) and a significant no confession x penance beliefs interaction ($B = -.25$, $t(325) = -2.25$, $p = .03$) on the need to seek forgiveness after confession (see figure 7).

Figure 7. Confession Increases the Need to Seek Forgiveness at Strong Penance Beliefs

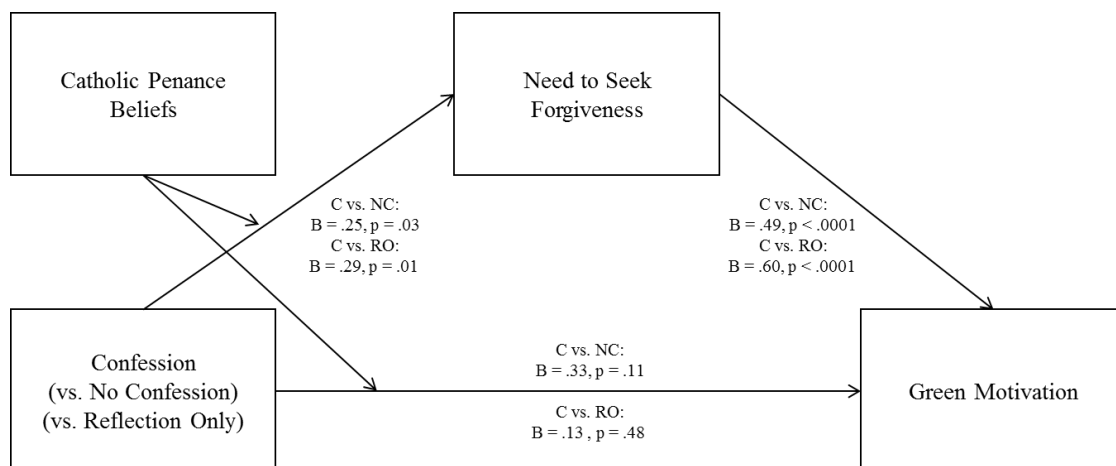


To further explore these interactions, I conducted a spotlight analysis at +/- 1 SD from the mean of Catholic penance beliefs. The spotlight analysis at + 1 SD from the mean of Catholic penance beliefs (i.e., strong penance beliefs) revealed that participants in the confession condition report higher need to seek forgiveness ($B = 5.59$) than participants in the no confession ($B = -.87, t(325) = -3.15, p = .002$) and long reflection conditions ($B = -.78, t(325) = -2.87, p = .004$). The spotlight analysis at - 1 SD from the mean of Catholic penance beliefs (i.e., weak penance beliefs) revealed no difference in the need to seek forgiveness between the confession condition ($B = 4.29$), no confession condition ($B = -.004, t(325) = -.01, p = .99$), and reflection only condition ($B = .24, t(325) = .88, p = .38$). Together, these results reveal that consumers with strong Catholic penance beliefs report the greatest need to seek forgiveness after confessing (vs. not confessing or reflecting only), supporting H2b.

Mediation. Next I conducted two conditional mediation analyses—(1) confession vs. no confession and (2) confession vs. reflection only—to test H2b, which proposes the need to seek forgiveness after confession mediates the effect of confession on green motivation for individuals with strong penance beliefs. I used Model 8 in the PROCESS for SAS macro developed by Andrew Hayes (2013) with confession condition as the independent variable, green motivation as the dependent, Catholic penance beliefs (mean-centered) as the moderator, and the need to seek forgiveness (mean-centered) as the mediator (95% CI and 10,000 bootstrapped samples with replacement; see figure 8 for results). In the confession vs. no confession conditions model ($N = 213$), the need to seek forgiveness significantly mediated the effect of the no confession condition (vs. confession condition) on green motivation for participants with strong penance beliefs

(+1 SD, $B = .42$, $SE = .13$, 95% CI: .19, .72) and average penance beliefs ($B = .20$, $SE = .09$, 95% CI: .03, .41), and but not for participants with weak penance beliefs (-1 SD, $B = -.008$, $SE = .15$, 95% CI: -.34, .26 includes zero). In the confession vs. reflection only model ($N = 221$), the need to seek forgiveness significantly mediated the effect of the confession condition (vs. long reflection condition) on green motivation for participants with strong penance beliefs (+1 SD, $B = .46$, $SE = .15$, 95% CI: .19, .78), but not for those with average penance beliefs ($B = .17$, $SE = .12$, 95% CI: -.06, .40 includes zero) or weak penance beliefs (-1 SD, $B = -.13$, $SE = .19$, 95% CI: -.50, .22 includes zero). Together, these results find support for H2b, that confession increases the need to seek forgiveness through good deeds, which then boosts motivation to engage in green behaviors, but only for individuals with strong penance beliefs. The mediation effect does not hold for individuals with weak penance beliefs.

Figure 8. The Need to Seek Forgiveness Mediates the Effect of Confession on Green Motivation at Strong Penance Beliefs



Discussion

The results of study 3 support H1, H2a, and H2b. First, confession (vs. no confession and vs. long reflection) increases green motivation for individuals with strong Catholic penance beliefs (H1). Next, confession (vs. no confession and vs. long reflection) increases the need to seek forgiveness for individuals with strong penance beliefs (H2a). Finally, for individuals with strong penance beliefs, an activation of the need to seek forgiveness through good deeds mediates the effect of confession on green motivation (H2b). Together, these effects support the notion that the desire to seek forgiveness and engage in restorative behaviors after confession is not universal, but rather this process is only activated for Catholics (Studies 1 and 2) and individuals with strong penance beliefs (Study 3). Additionally, by adding the two minute reflection condition, I am able to rule out time spent ruminating about one's green transgression as a potential alternative explanation.

STUDY 4: BOUNDARY CONDITION OF CONFESSIONAL FORGIVENESS

In study 4, I explore the boundary condition of confessional forgiveness by manipulating the function of confession in one condition such that the act of confession itself leads to forgiveness. If Catholics (studies 1 and 2) and individuals with strong penance beliefs (study 3) are engaging in post-confession green behaviors as a form of penance to achieve forgiveness, these individuals should be less likely to do so if they expect that confession alone leads to relief and forgiveness (H3). In other words, if Catholics and individuals with strong penance beliefs are informed that they are forgiven

after confession itself, I expect the effect of confession on subsequent green motivation to be attenuated. In this study, I implement a new design with two conditions: after participants reflect about a past green transgression, I randomly assign participant to make either a confession to a close friend or family member (studies 2 and 3) or to make confession that should help individuals feel relieved and forgiven. Additionally, I developed a new dependent measure (number of green intentions) to allow for an open-ended response to indicate one's motivation to engage in restorative, green behaviors after confession.

Method

To test H3, I conducted a 2 (confession task: confession vs. confession + forgiveness) x penance beliefs (continuous) experiment with the first factor randomly assigned and the second factor measured. Additionally, participants indicated their religious affiliation, so I am able to run the second factor as Catholic vs. Non-Catholic as well. Participants were 152 undergraduates who completed this study in a lab session in exchange for extra credit (I removed twenty-two students from the sample who had previously taken a confessions study in the lab; Final $N = 130$, $M_{\text{age}} = 21.22$ years, $SD_{\text{age}} = 2.65$ years, 52.31% female). Participants completed a pre-survey at the beginning of the semester and indicated their green attitudes ($\alpha = .93$) and religious affiliation, using previously described measures. In this sample, 40.77% of participants were raised Catholic while the remaining participants reported an alternative (or no) religious affiliation. Consistent with studies 2 and 3, green attitudes are not predicted by penance beliefs nor by Catholic raised ($ps > .20$). Therefore, I am not concerned that green

attitudes might be driving different outcomes for individuals with strong penance beliefs (i.e., Catholics) and as such, I do not include green attitudes in the following analysis.

In the lab, all participants reflected upon past environmentally harmful behaviors for at least 60 seconds as in previous studies. Then, I randomly assigned participants to either make a confession to a close friend or family member (studies 2 and 3) or to make a confession to their family member in which they should feel forgiven (to test H3). All participants read the same set of instructions for the confession task, but participants in the confession + forgiveness condition read two additional sentences in their instructions (italicized here to differentiate the manipulations, but not italicized in the study): “Now in this portion of this study, we would like you write a confession to a close friend or family member about the environmentally harmful behavior you reflected upon. *When individuals feel regret about something they did, confessions are often used to help get things off their chests. Confessions allow individuals to safely divulge something they regret doing, thinking, or consuming in an effort to seek forgiveness and feel better.* Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. You can write a close friend or family member about what you did and how you felt about it. Please click the next arrows once you have finished writing.”

After the confession task, all participants were asked to write down a list of green behaviors they intended to engage in during the upcoming week. Instructions read: “We would now like to learn about the normal green behaviors of student participants. Please make a list of the green, environmentally friendly behaviors you intend to do this week. Note: this page will automatically advance after 90 seconds.” The main dependent

variable is the number of unique green intentions listed by each participant, which is an open-ended indicator of their motivation to engage in green behaviors ($M = 3.21$, $SD = 1.76$, range 0 to 8 green intentions). For example, a participant who wrote “walk to and from school” only listed one green intention, while another participant who wrote “take the bus to work, recycle, compost, purchase food from the farmers’ market, and ride my bike to school” listed five green intentions.

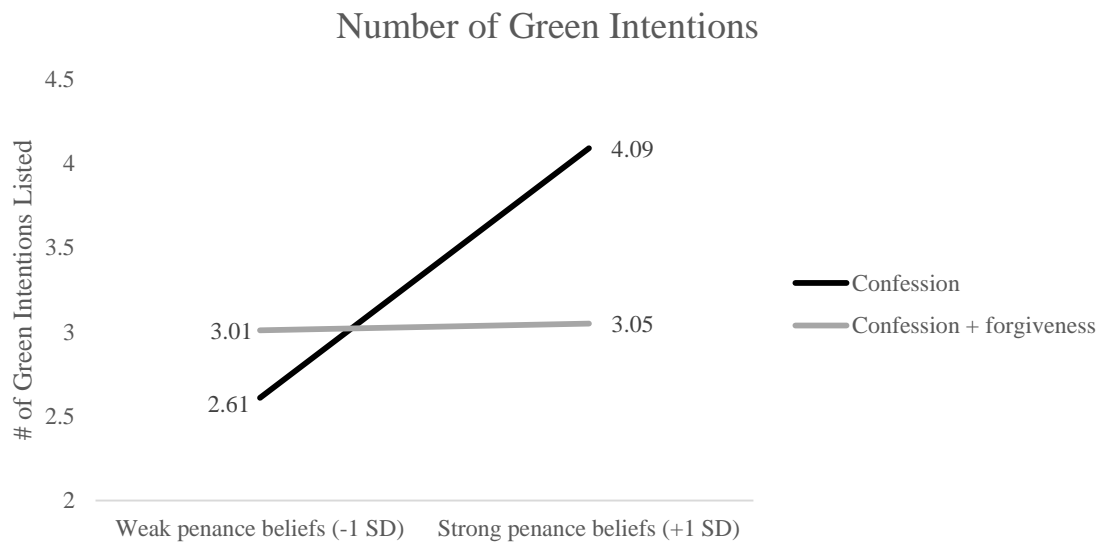
Penance beliefs. Finally, after answering some brief demographic questions, participants indicated their basic beliefs about confession. I captured penance beliefs using two items, “After confessing, I make up for my wrongdoings by doing something good” and “Confessing makes me want to behave morally” (measured on a 1 = “Strongly Disagree” to 7 = “Strongly Agree” scale, $r = .56$, $p < .0001$). This measure is less religion-specific (compared to the Catholic penance beliefs measure used in study 3), and thus more generalizable across consumers from a variety of religious and non-religious backgrounds. However, as expected, penance beliefs are higher for Catholics ($M_{\text{Cath}} = 5.14$) than for Non-Catholics ($M_{\text{non-Cath}} = 4.66$; $F(1, 128) = 5.45$, $p = .02$) in this sample. Penance beliefs are not affected by the confession condition ($p > .20$).

Results

Green intentions. To test H3, I regressed key dependent variables on confessional forgiveness (dummy coded), penance beliefs (mean-centered), and their interaction. Results revealed no main effect of confessional forgiveness (vs. confession) on green intentions ($p > .20$), but a positive main effect of penance beliefs on green intentions ($B = .63$, $t(126) = 2.88$, $p = .004$). Results also found a significant confession type x penance

beliefs interaction ($B = -.61$, $t(126) = -2.26$, $p = .03$, see figure 9) on the number of green intentions listed.

Figure 9. Confessional Forgiveness Reduces Green Intentions for Individuals with Strong Penance Beliefs



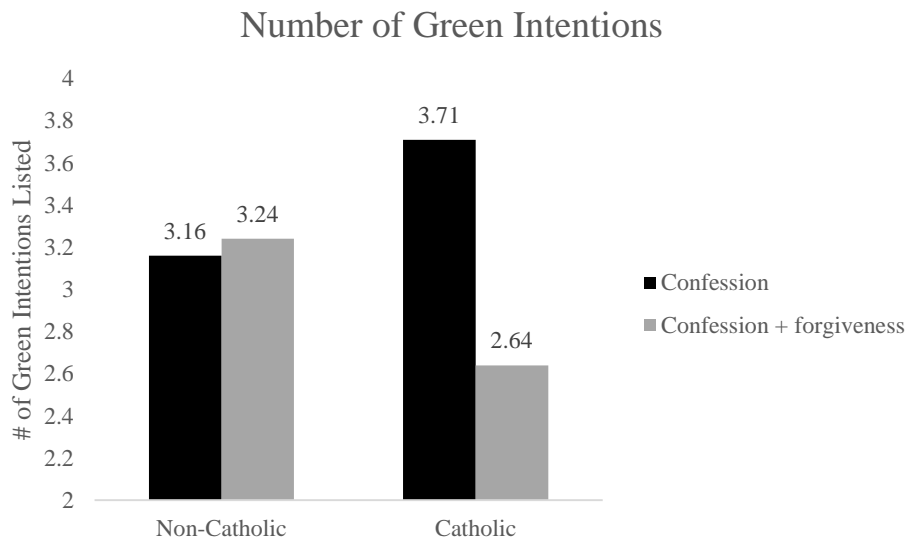
To explore this interaction, I conducted a spotlight analysis of effects at +/- 1 SD from the mean of penance beliefs. Results revealed no difference in the number of green intentions between the confession and confessional forgiveness conditions at weak penance beliefs ($p > .20$). However, as proposed in H3, at strong penance beliefs, confessional forgiveness significantly reduced green intentions ($B = -1.04$, $t(126) = -2.41$, $p = .002$) compared to the traditional confession condition ($B = 4.09$), which translates into one fewer green intention for the upcoming week when confession itself leads to forgiveness. Results of a simple slopes analysis revealed a significant, positive effect of

penance beliefs on green intentions in the confession condition ($B = .63$, $t(126) = 2.88$, $p = .005$), but no effect in the forgiveness condition ($B = .02$, $t(126) = .11$, $p = .91$).

Therefore, for individuals with strong penance beliefs, confessional forgiveness (vs. a traditional confession) significantly reduces the need to engage in restorative behaviors. Together, these results support H3, which proposes that for individuals with strong penance beliefs, receiving forgiveness via confession itself (vs. traditional confession) will reduce the need to engage in restorative consumer behaviors in an effort to seek forgiveness. Stated differently, when forgiveness is achieved through confession itself, subsequent green motivation is attenuated for individuals with strong penance beliefs.

To further test H3, I conducted a 2 (confession task: confession vs. confession + forgiveness) x 2 (religion: Catholic vs. Non-Catholic) ANOVA on green intentions. Results did not reveal main effects of confession task nor Catholic on green intentions. However, results revealed a marginal confession type x religious affiliation interaction on number of green intentions listed by each participant ($F(1,126) = 3.36$, $p = .07$; see figure 10). Conceptually replicating the findings with penance beliefs as a moderator, Catholics in the traditional confession condition listed more green intentions ($M_{\text{conf,Cath}} = 3.71$) than Catholics in the confession + forgiveness condition ($M_{\text{forg,Cath}} = 2.64$, $F(1, 126) = 5.00$, $p = .03$). Therefore, achieving forgiveness via confession itself reduced the need for Catholics to engage in green behaviors as a form of penance after confession, showing additional support for H3. Non-Catholics, regardless of confession task, listed a similar number of green intentions ($F(1, 26) = .04$, $p = .85$), which supports the notion that Non-Catholics may already believe they have achieved forgiveness via confession itself.

Figure 10. Confessional Forgiveness Reduces Green Intentions for Catholics



Discussion

In previous studies, Catholics and participants with strong penance beliefs increased green, conciliatory behaviors after confessing about their green transgressions. In study 4, I further tested this mechanism and identified a boundary condition to the previous effects: receiving forgiveness through confession itself. Catholic participants and participants with strong penance beliefs who made a traditional confession (i.e., must perform penance to achieve forgiveness) listed more green intentions for the upcoming week than those who were told that confession itself leads to forgiveness. This finding suggests that Catholics and individuals with strong penance beliefs view confession, even a consumer confession, as requiring penance in order to achieve forgiveness. Additionally, for Non-Catholics and participants with weak penance beliefs, both

confession tasks produced similar results, suggesting that these participants likely already view confession as helping them achieve forgiveness for their transgressions.

STUDY 5: HEALTH CONFESSIONS

Results from previous studies in the green domain showed that after reflecting about a past environmental transgression, a confession (vs. no confession) about the focal transgression motivates restorative green, penance-like behaviors in an effort to seek forgiveness, but only for Catholics and participants with strong penance beliefs. In this final study, I show initial evidence that these effects hold in another self-relevant domain, the health domain. In study 5, I test H1 in the health domain and expect that for individuals with strong penance beliefs, confessing (vs. not confessing) about a past dieting transgression will increase motivation to engage in compensatory, healthy behaviors.

Method

I conducted a 2 (task: health confession vs. neutral writing task) x penance beliefs (continuous) study with the first factor randomly assigned and the second factor measured. Participants were 156 undergraduate students who participated in a lab session for extra credit. To ensure all participants were seeing a confessions study for the first time, I removed 44 participants from the sample who had previously participated in a confessions study in the lab (final $N = 112$, $M_{\text{age}} = 22.16$ years, $SD_{\text{age}} = 3.74$ years, 46.43% female). In a pre-survey taken at the beginning of the semester, participants

completed the 20-item Religious Orientation scale (Allport and Ross 1967), the most widely-used measure of religiosity with over 3,000 citations. The extrinsic subscale has 11 items, including “A primary reason for my interest in religion is that my church is a congenial social activity” and “One reason for my being a church member is that such membership helps to establish a person in the community” to measure the extent to which individuals use religion as an instrument to achieve their own goals (e.g., to achieve security or status; $\alpha = .87$). The intrinsic subscale has nine items, including “I try hard to carry my religion over into all my other dealings in life” and “My religious beliefs are really what lie behind my whole approach to life” to measure the extent to which individuals internalize and fully follow the religion’s creed ($\alpha = .95$). I added this validated measure of religious orientation, both intrinsic and extrinsic, to rule out general religiosity (vs. penance beliefs) as the driver of consumer motivations after confession.

In the lab, all participants first reflected about a past dieting transgression for at least one minute. Participants read the following instructions: “We would now like you to take some time to reflect on things that you have done that are bad for your health. Think back over the last month about a few things that you have done that were bad for your health... some examples might be eating high-fat or high-sugar foods, not exercising, not sticking to your diet, or overeating. Think about some specific occurrences. While you are thinking about the things you have done, think about how those behaviors made you feel. Please think about your unhealthy behaviors for at least one minute before proceeding to the next question. You may close your eyes if it helps you focus and reflect. Really think about your behaviors and how they have made you feel. The continue button will appear after one minute has passed.”

Next, I randomly assigned participants to the confession or no confession condition (see appendix A for manipulations). Participants in the confession condition made a private confession about their dieting transgressions after they received the following instructions: “We would now like you to make a private confession about the unhealthy behaviors that you thought about in the previous task. In the space provided below, please write down your health confession. Your confession is completely private and will only be seen by the researcher. The researcher has no way of connecting your private confession to your identity in any way, so your confession is completely private. Please click next once you have finished writing down your health confession. The continue button will appear after 1 minute.” Participants in the no confession condition wrote a short essay about the day in the life of a tree (adapted from Robitaille and Mazar 2012). I changed the subject of the neutral writing task from “a bee” to “a tree” to allow individuals think about the outdoors. Additionally, writing about the tree and being outdoors is more related to the health domain than writing about a bee.

After the reflection and writing tasks, participants indicated their motivation to engage in restorative, healthy behaviors (three items, $\alpha = .87$). Items included “The reflection and confession tasks made me want to engage in healthy behaviors,” “The reflection and confession tasks made me feel as though I needed to act more healthy,” and “The reflection and confession tasks made me want to make up for my past unhealthy behaviors” (measured on a 1 = “Strongly Disagree” to 7 = “Strongly Agree” scale).

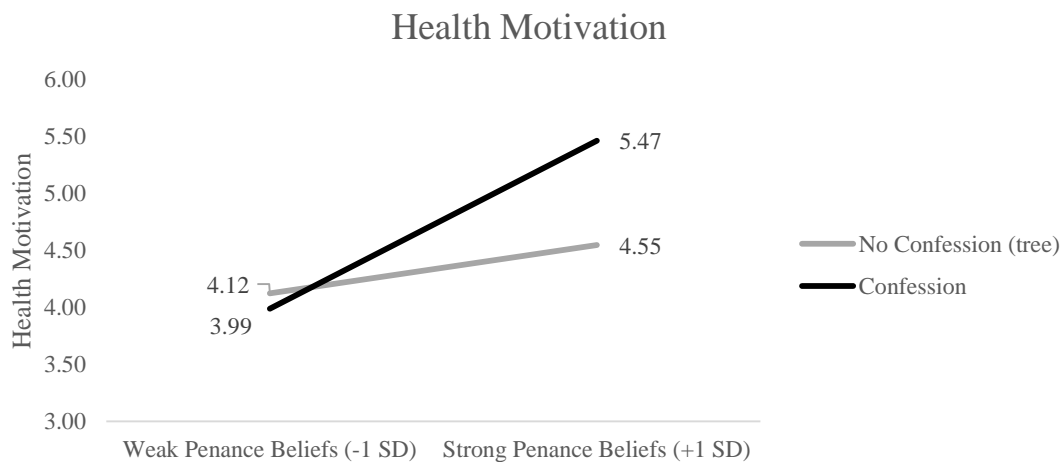
Finally, participants indicated their level of agreement about their basic beliefs about confession. I measured penance beliefs using two items, “I believe that people

should make up for their wrongdoings by doing something good” and “I believe confessions must be followed by acts of repentance (i.e., making up for what you have done),” on a 1 = “Strongly Disagree” to 7 = “Strongly Agree” scale ($r = .61, p < .0001$). Penance beliefs were not affected by the confession manipulation ($p < .20$).

Results

Health motivation. To explore H1 in the health domain, I regressed health motivation on confession (dummy coded), penance beliefs (mean-centered), and their interaction. Results revealed a marginal effect of confession (vs. no confession) on motivation to engage in healthy behaviors ($B = .39, t(108) = 1.74, p = .08$). Results also found a directional positive effect of penance beliefs on motivation to engage in healthy behaviors ($B = .17, t(108) = 1.36, p = .18$). Importantly, results revealed a significant confession condition x penance beliefs interaction on health motivation ($B = .42, t(108) = 2.33, p = .02$, see figure 11).

Figure 11. Confession Increases Health Motivation at Strong Penance Beliefs



Results of a spotlight analysis at + 1 SD from the mean of penance beliefs found a significant effect of confessing ($B = .91$, $t(108) = 2.88$, $p = .005$) on health motivation compared to the no confession condition ($B = 4.55$), providing support for H1 in the health domain. Results of a spotlight analysis at – 1 SD from the mean of penance beliefs found no significant difference in health motivation between the confession ($B = -.14$, $t(108) = -.42$, $p = .67$) and no confession conditions ($B = 4.12$). Together, these results support H1, replicate study 3, and conceptually replicate studies 1 and 2 in the health domain.

Potential alternative explanation: religious orientation. To explore religious orientation as a potential explanation for the confession x penance beliefs effects on motivation, I regressed health motivation on confession, extrinsic religious orientation (mean-centered), and their interaction. Results revealed a significant main effect of extrinsic religious motivation on health motivation ($B = .71$, $t(108) = 2.55$, $p = .01$) and a directional main effect of confession (vs. no confession) on health motivation ($B = .31$, $t(108) = 1.34$, $p = .18$). Importantly, results did not show a confession x extrinsic religious orientation interaction on health motivation. Additionally, I regressed health motivation on confession, intrinsic religious orientation (mean-centered), and their interaction. One respondent missed a question in the intrinsic religious orientation subscale and was removed from this analysis, leaving a sample size of 107. Results revealed no effects of confession, intrinsic religious orientation, nor their interaction on health motivation. Together, these results suggest that it is not merely general intrinsic or extrinsic religious orientation that is driving the differences in motivation after confession.

Discussion

In this final study, I enhance the generalizability of this research across consumer domains by exploring the effect of consumer confession into the health domain. I find evidence that consumer confessions also motivate restorative behaviors in the health domain, but only for individuals with strong penance beliefs, supporting H1. Again, confessing does not cause a self-regulatory boost in all participants, but only does so for those who hold strong beliefs about penance. Additionally, I rule out both intrinsic and extrinsic religious orientation as driving the effect of confession on health motivation. Together, these studies suggest that for individuals with strong penance beliefs, confessing can be an effective strategy for getting back on track with their consumption goals.

GENERAL DISCUSSION

In this research, I explore the effect of confessing about a consumer transgression on one's motivation to achieve forgiveness and to perform restorative, conciliatory consumer behaviors. I introduce a paradigm of consumer confessions to the literature and present the first empirical findings on the effects of consumer confession on subsequent consumer motivations and behaviors. Additionally, in exploring the effects of confession for Catholics and Non-Catholics (i.e., individuals stronger vs. weaker penance beliefs), these findings add to the growing body of literature on the effects of religion on consumer behavior (e.g., Cutright 2012; Minton and Kahle 2014). Overall, I identify

confession strategies that consumers from different religious backgrounds can use to successfully self-regulate after consumer transgressions.

Across studies, results show that after reflecting about a green or health transgression, confessing (vs. not confessing) about the transgression increases motivation to engage in restorative consumer behaviors (H1) and to seek forgiveness through good deeds (H2a), but only for Catholics and individuals with strong penance beliefs. The effects do not hold for Non-Catholics. Additionally, one's need to seek forgiveness after confession mediates the effect of confessing (vs. not confessing) on subsequent conciliatory behaviors for individuals with strong penance beliefs (H2b). Additionally, Catholics and participants with strong penance beliefs who were told that confession itself leads to forgiveness, reduced their intentions to engage in green behaviors compared to the same group of individuals who engaged in a typical confession (H3). Taken together, these results suggest that confessions do not just magnify self-regulatory outcomes for all participants. Specifically, consumers bring religious beliefs about confession, penance, and forgiveness into consumer confessions; beliefs that are instrumental in determining the level of conciliatory green behaviors required to achieve forgiveness after confession.

Throughout the studies, I address and rule out many possible alternative explanations to the effects, including mood and emotions. One remaining alternative explanation is that Catholics (vs. Non-Catholics) are simply more prone to guilt and restorative action tendencies (Cohen et al. 2011), and as such, should be more motivated to engage in repair action tendencies (e.g., green behaviors) after confessing. In fact, if the results hold in more (vs. less) guilt-prone individuals, then the results would not be

contradictory but would rather have an even broader generalizability. It could be said that guilt-prone individuals, regardless of religious background, would be more likely to engage in penance-like activities as a means of self-regulation. I tested this alternative explanation in an unreported study using the Guilt and Shame Proneness scale from Cohen and colleagues (2011). Results revealed no confession condition x guilt-proneness interaction on motivation to seek forgiveness or to engage in restorative behaviors. Internal reliability for both guilt-proneness subscales was low ($\alpha < .50$), and thus I would like to conduct additional studies using alternative measures of guilt-proneness to eliminate this alternative explanation. However, across studies, results revealed no confession condition x penance beliefs (or Catholic) interaction on guilt, shame, PANAS_{pos}, or PANAS_{neg}, which provides additional evidence that guilt regulation is not the underlying process.

Another alternative explanation for the confession x Catholic effects could be the differences in green attitudes between Catholics vs. Non-Catholics. In posthoc analyses of studies 1 through 3, results showed no evidence of a confession (vs. no confession) by green attitudes interaction on green motivation or seeking forgiveness motives. While there was a general positive main effect of green attitudes on green motivation and green product preference, there was no effect on seeking forgiveness ($p > .20$). Therefore, for green consumers, consumer confession does not activate their motivation to seek forgiveness through restorative consumption over and above reflecting on the same transgression. These findings provide some additional support for the religious-based mechanisms that I proposed and tested.

Future Research Directions

As this research is the first foray into experimentally testing the effects of consumer confessions on subsequent consumer motivations, many potential avenues exist for future research. First, researchers might seek to understand nuances of consumer confessions in various consumer domains. While I conducted these experiments in the green and health domains, I expect these results to hold in other identity-related domains such as exercising (e.g., the cult of Crossfit; Beller 2013) and financial savviness (e.g., Confessions of a Type-A Budgeting Addict; Alford 2013).

The effectiveness of confessions as a self-regulatory strategy may also differ based on the recipient of the confession. For example, additional research on consumer confessions could explore how the recipient of the confession (e.g., privately, publicly, to God/the divine/spiritual leaders, to a close friend) affects the content and outcomes of consumer confession. It is possible that each recipient will offer different types of confessional feedback (e.g., empathy, forgiveness, social support, shame-inducing feedback). For example, public confession may allow individuals to seek social support with others who have committed similar transgressions. Close friends or family members may be able to offer confessants unconditional love and emotional support. Confessing to God, the divine, or spiritual leaders may be able to provide confessants with absolution and spiritual guidance. And confessing privately may allow individuals the opportunity to engage in self-forgiveness processes. In fact, previous research has found that the qualities of the confidant matter in choosing to tell a secret, with the two most essential features being “understands me” and “will keep my secret” (Kelly et al. 2001). Additionally, religious systems differ in their requirements for granting and achieving

forgiveness after transgressions (Rye et al. 2000; e.g., Cohen et al. 2006). To this end, future research could address the effectiveness of consumer confessions in motivating subsequent goal-consistent behavior for a variety of confessant types and confessor religious backgrounds.

In addition, future research could address the antecedents to opting into a consumer confession. As previously mentioned, in a pre-test on Amazon's Mechanical Turk (N = 75 MTurk workers), 72% of participants opted into a green consumer confession. Participants with strong (vs. weak) religious values were more likely to opt-in to confession. However, Catholics and Non-Catholics were equally likely to opt into a confession. Previous research has found that intrinsically (vs. extrinsically) religious individuals are more likely to confess their sins and seek God's forgiveness for their sins (Meek et al. 1995). I propose that individuals experiencing higher levels of regret about their past transgression will be the most likely to opt into a confession. I expect that these individuals will be the most motivated to reduce their feelings of regret (Zeelenberg and Pieters 2007). In fact, in reading 200 letters about why Finnish individuals opt into spiritual confessions, Kettunen (2002) reported the most common reasons for opting in were to reduce guilt and to rebuild a spiritual connection with God. Confession may be considered an outlet to reduce regret, especially since consumers have the general intuition that confessing (vs. not confessing) about a past consumer transgression should make you feel better (N = 84 MTurk workers). This proposed research seeks better to understand the many factors affecting the impetus for and the results of consumer confessions.

Practical Implications

The findings from this research suggest some clear implications for marketers. To help consumers achieve their self-regulatory goals after confession, marketers can position healthy, eco-friendly, and budget-friendly products as guilt-reducing options that help individuals make up for their past transgressions and get back on track with their consumption goals. While marketers may not be able to identify which consumers are Catholic or believe in penance, they could still target consumers who make online confessions in their related domain. For example, after a consumer makes a diet confession online, the makers of thinkThin high protein bars could reply with a coupon for their product, and perhaps feature their “20g protein. 0g sugar. 0 guilt.” ad in the correspondence. Providing consumers with viable products to assist in self-regulation after confession may prove fruitful for both consumers and marketers alike.

This research also poses some potential implications for the consumer forgiveness of firms after confessions of service failures, unethical business practices, or manufacturing issues that lead to product recalls (e.g., Maxham and Netemeyer 2002; Aaker, Fournier, and Brasel 2004). Businesses may confess about their shortcoming to define the problem, take ownership, show remorse, and suggest reparations before the media uncovers the issues themselves. Often, businesses that confess mention penance-like reparations (e.g., money back, changed business practices, donations to charity) during these confessions. Research has found that the content and strength of an apology and offers of restitution determine one’s propensity to forgive a transgression (Witvliet et al. 2011; e.g., Cerulo and Ruane 2014). Additionally, it is possible that individuals with strong penance beliefs would be more likely to expect penance-like reparations from

firms who confess, due to their religious ideologies and requirements for achieving forgiveness. Previous research has found that individuals with high (vs. low) levels of religiosity and those in a religious (vs. neutral) mindset were more likely to forgive firms after service failures (Hyodo and Bolton 2015), regardless of whether or not the firm confessed. Therefore, firms might need to consider the religious beliefs of their stakeholders in developing their plans for confessing about and making penance-like restitutions for business transgressions.

Final Comments

This dissertation introduces confessions as a new area of consumer research with implications for consumer self-regulation, product marketing, and corporate forgiveness. The research sheds new light on the effectiveness of consumer confessions in helping consumers self-regulate and get back on track with their consumption goals. Evidence finds that confession is most likely to motivate restorative consumer behaviors for individuals who have strong penance beliefs. However, for individuals with weak penance beliefs, confession is no more or less motivating than merely reflecting on one's transgression. Therefore, confessing about one's consumer transgressions can't hurt, but it can help some consumers make up for their past transgressions through restorative, self-repairing consumption. Additional research on the topics of consumer and corporate confessions is ripe for exploration.

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APPENDIX A
CONFESSION AND CONTROL GROUP TASKS

Study 1

Reflection task: “We would now like you to take some time to reflect on things that you have done that are bad for the environment. Think back over the last month about a few things that you have done that were bad for the environment... some examples might be leaving the lights on, not recycling, or wasting water. Think about some specific occurrences. While you are thinking about the things you have done, think about how you are feeling. Please think about this for at least one minute before proceeding to the next question. You may close your eyes if it helps you focus and reflect. Really think about your behaviors and how they have made you feel. The continue button will appear after one minute has passed.”

Public confession task: “We would now like you to make a public confession about the environmentally harmful behaviors that you thought about in the previous task. On the paper provided to you, please write down your green confession. You will be reading this confession aloud publicly to a lab assistant in one of the smaller rooms in this lab. While your confession will be kept anonymous, at the conclusion of this study, your confession will also be posted by the research team online at EarthConfessions.com (an online forum for green confessions). Please click next once you have finished writing down your confession. The continue button will appear after 1 minute.”

Neutral writing task: “Next, please take 1-2 minutes write a short essay to describe, in detail, what you imagine a bee's typical day looks like. Please write the short essay on the paper provided to you by the lab assistant. The continue button will appear after 1 minute.”

Study 2

Reflection task: “First, we would like you to think back about recent behaviors you engaged in that were harmful for the environment, perhaps such as choosing to drive instead of walk to some place nearby, throwing out things you know you should have recycled, or wasting resources like water or electricity. Take a few moments to recall a recent incident when you were harmful to the environment. Once you have an incident in mind, really focus on it and try to relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and importantly, think about how you felt during and afterward. Please reflect on your environmentally harmful behavior and once you have done so for at least a minute, please click the next arrow to continue.”

Confession task: “We would now like you to make a confession to a close friend or family member about the environmentally harmful behavior you reflected upon earlier. Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. You can write as if you were telling a close friend or family member about what you did and how

you felt about it. Please click the next arrow to continue the survey once you have finished writing.”

Neutral writing task: “We could now like you to write a story to a close friend or family member about a day in the life of a bee. Please take a minute to write, in detail, about a day in the life of a bee. Please write this short story about the day in the life of a bee to a close friend or family member. Please click the next arrow to continue the survey once you have finished writing.”

Study 3

Reflection task: “First, we would like you to think back about a recent thing you did that was harmful for the environment - maybe something like choosing to drive instead of walk to some place nearby, throwing out things you know you should have recycled, or wasting resources like water or electricity. Take a few moments to recall an incident within the last two weeks where you were harmful to the environment and later regretted it. Once you have an incident in mind, really focus on and relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and importantly, think about how you felt during and afterward. Please reflect on this environmentally harmful behavior and once you have done so for at least a minute, please click the next arrows to continue.”

Confession task: “Your writing task will be a confession to a close friend or family member about the environmentally harmful behavior you reflected upon. Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. In your confession, write to a close friend or family member about what you did and how you felt about it. Please click the next arrows once you have finished writing.”

Neutral writing task: “We could now like you to write a story to a close friend or family member about a day in the life of a bee. Please take a minute to write, in detail, about a day in the life of a bee. Please write this short story about the day in the life of a bee to a close friend or family member. Please click the next arrows once you have finished writing.”

Reflect only task (no writing task): “First, we would like you to think back about a recent thing you did that was harmful for the environment - maybe something like choosing to drive instead of walk to some place nearby, throwing out things you know you should have recycled, or wasting resources like water or electricity. Take a few moments to recall an incident within the last two weeks where you were harmful to the environment and later regretted it. Once you have an incident in mind, really focus on and relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and importantly, think about how you felt during and afterward. Please reflect on this environmentally harmful behavior for at least two minutes.” After 60 seconds, participants read the following reminder to reflect: “** 1

MINUTE HAS PASSED ** Remember, really focus on and relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and how it made you feel. Please reflect on this environmentally harmful behavior for another minute. Once you have done so, please click the forward arrows to continue with the survey.”

Study 4

Reflection task: “First, we would like you to think back about recent behaviors you engaged in that were harmful for the environment, perhaps such as choosing to drive instead of walk to some place nearby, throwing out things you know you should have recycled, or wasting resources like water or electricity. Take a few moments to recall a recent incident when you were harmful to the environment. Once you have an incident in mind, really focus on it and try to relive the entire experience - think about what it was that you did, think about all of the details about the behavior, and importantly, think about how you felt during and afterward. Please reflect on your environmentally harmful behavior and once you have done so for at least a minute, please click the next arrow to continue.”

Confession task: “Now in this portion of this study, we would like you write a confession to a close friend or family member about the environmentally harmful behavior you reflected upon. Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. You can write a close friend or family member about what you did and how you felt about it. Please click the next arrows once you have finished writing.”

Confession + forgiveness task (italics indicates difference in stimuli, not italicized in original study): “Now in this portion of this study, we would like you write a confession to a close friend or family member about the environmentally harmful behavior you reflected upon. *When individuals feel regret about something they did, confessions are often used to help get things off their chests. Confessions allow individuals to safely divulge something they regret doing, thinking, or consuming in an effort to seek forgiveness and feel better.* Please take a minute to write, in detail, your confession to a close friend or family member about the environmentally harmful behaviors you reflected upon earlier. You can write a close friend or family member about what you did and how you felt about it. Please click the next arrows once you have finished writing.”

Study 5

Reflection task: “We would now like you to take some time to reflect on things that you have done that are bad for your health. Think back over the last month about a few things that you have done that were bad for your health... some examples might be eating high-fat or high-sugar foods, not exercising, not sticking to your diet, or

overeating. Think about some specific occurrences. While you are thinking about the things you have done, think about how those behaviors made you feel. Please think about your unhealthy behaviors for at least one minute before proceeding to the next question. You may close your eyes if it helps you focus and reflect. Really think about your behaviors and how they have made you feel. The continue button will appear after one minute has passed.”











Confession task: “We would now like you to make a private confession about the unhealthy behaviors that you thought about in the previous task. In the space provided below, please write down your health confession. Your confession is completely private and will only be seen by the researcher. The researcher has no way of connecting your private confession to your identity in any way, so your confession is completely private. Please click next once you have finished writing down your health confession. The continue button will appear after 1 minute.”

Neutral writing task: “Next, please take 1-2 minutes write a short essay to describe, in detail, what you imagine a typical day for a tree is like. Please write the short essay in the space provided below. The continue button will appear after 1 minute.”

APPENDIX B
WILLINGNESS-TO-PAY STIMULI

Study 1 Stimuli

Green vs. Conventional Products for Willingness-to-pay Measure

Green Item	Conventional Item
 <p>White, 100% Organic Cotton T-shirt, in your size Scale: \$0 - \$15</p>	 <p>White, Cotton / Polyester Blend T-shirt, in your size Scale: \$0 - \$15</p>
 <p>100% Biodegradable, Sulfate-free All-purpose Cleaner (32 oz), Scale: \$0 - \$15</p>	 <p>All-purpose Cleaner (32 oz) Scale: \$0 - \$15</p>
 <p>One pint of USDA-certified, 100% Organically grown Strawberries (30 count), Scale: \$0 - \$15</p>	 <p>One pint of Conventionally grown Strawberries (30 count), Scale: \$0 - \$15</p>
 <p>2013 Honda Civic Hybrid Sedan, 44 MPG Scale: \$0 - \$50,000</p>	 <p>2013 Honda Civic Si Sedan, 31 MPG Scale: \$0 - \$50,000</p>
 <p>8 oz. Sulfate-Free Moisturizing Shampoo with 100% Organically sourced Argan Oil Scale: \$0 - \$15</p>	 <p>8 oz. Moisturizing Shampoo with Argan Oil Scale: \$0 - \$15</p>
 <p>23 Watt Compact Fluorescent Lamp (CFL) bulb (equivalent to 100 Watt conventional bulb) Scale: \$0 - \$15</p>	 <p>Standard, 100 Watt Light Bulb Scale: \$0 - \$15</p>

Study 2 Stimuli



APPENDIX C
IRB APPROVAL FORMS

for

To: Naomi Mandel
BAC

From: Mark Roosa, Chair *SM*
Soc Beh IRB

Date: 03/18/2011

Committee Action: Exemption Granted

IRB Action Date: 03/18/2011

IRB Protocol #: 1103006193

Study Title: The Religiosity of the Green Movement: Identity Reparation and Compensatory Consumption

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

To: Naomi Mandel
BAC

From: Mark Roosa, Chair *MR*
Soc Beh IRB

Date: 09/05/2012

Committee Action: Exemption Granted

IRB Action Date: 09/05/2012

IRB Protocol #: 1208008186

Study Title: Green Confessions

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2).

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.