FlashReport

Cleanliness and godliness: Mutual association between two kinds of personal purity ☆

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ABSTRACT

Purity rituals (such as baptism, mikvah, and ablution) are an important component of many religious practices. These practices not only help protect the faithful from physical contaminants, but also bestow symbolic purity and maintain the sanctity of sacred objects. The present work examines the association between religion and cleanliness, as two representations of personal purity. Religious primes were found to activate cleanliness concepts in a word-stem completion task (Study 1), and increased the subjective value of cleaning products (Study 2). In a final study, cleaning primes increased ratings of religious value. These studies suggest a mutual association between religiousness and cleanliness, and that each may activate the other as goals for personal purity.

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Introduction

In all faiths and cultures, religious doctrines include various rules that instruct the proper actions of its devotees. An important subset of religious rules is purity laws that describe specific circumstances that render one "unclean" and specific actions that may officially restore personal purity. For instance, in Judaism, a woman is considered impure for one week after menstruation, and anyone who touches her is also impure until nightfall. Islamic toilet etiquette requires that one cleanse the orifice with water after defecation, and cannot use one's right hand to do so. In Zoroastrianism, corpse bearers must undergo a ritual bath (Bareshnum) to restore their personal purity after contact with the dead. The prevalence of such purity rituals across different faiths suggests a deeply rooted connection between religion and cleanliness. The present research investigates this association between religion and cleanliness as two kinds of personal purity.

The sacred and the profane

Recently there has been renewed interest in the psychological literature in *disgust* as moral emotion. Rozin, Haidt, and McCauley (2000) distinguish between *core disgust*, elicited by rotting food or poisonous substances, *animal nature disgust*, elicited by poor hygiene and body functions, and *socio-moral disgust*, elicited by violations of moral rules. Socio-moral disgust is argued to be an evolutionary extension of primary disgust, but remains closely connected to feelings of physical disgust. Physical disgust (e.g., from a bad taste or smell) also elicits harsher judgments of moral transgressions (Eskine, Kacinik, & Prinz, 2011; Horberg,

Oveis, Keltner, & Cohen, 2009; Schnall, Haidt, Clore, & Jordan, 2008). On the other hand, feelings of physical *purity* seem to embody personal morality and integrity (Lee & Schwarz, 2010; Liljenquist, Zhong, & Galinsky, 2010). For instance, the mere act of washing one's hands after committing an immoral action appears to alleviate guilt and other negative feelings (Zhong & Liljenquist, 2006), literally washing away one's sins. Feelings of disgust and purity are experienced as more than a physical state of relative cleanliness, but also embody feelings of relative morality.

Similar associations may be observed in religious purity laws (Douglas, 2003; Haidt, 2006). Some religious rituals seem designed to restore literal purity by protecting the individual from potential pathogens, such as washing after contact with bodily fluids, human waste, or dead bodies. However, ritual washing is also often used to bestow symbolic purity, (e.g., baptism, mikvah, ablution), and commonly practiced in preparation for contact with sacred objects or activities (e.g., before prayer or entering a temple). Indeed, the strict separation between the sacred and the profane is an important feature in most religions, where the *sacred* refers to godlike/holy elements, (such as gods or religious artifacts), and the *profane* refers to the earthly and mundane elements (Durkheim, 1915). Reverence for the sacred requires maintaining its separation and sanctity, lest it be tainted by the profane and lose its sacred value.

Religion and spirituality are therefore closely bound up in concerns for purity. Religious doctrines not only prescribe cleaning behaviors that foster physical hygiene, but the act of religious devotion is itself represented as a motivation for spiritual purity. This connection between religion and purity is so deep-seated it frequently has been taken for granted. Religious purity rituals are often cited to support the case for the embodiment of morality (Graham & Haidt, 2010; Looy, 2004; Zhong & Liljenquist, 2006), and socio-moral disgust has been characterized as a response to violations of "divinity" (Rozin, Lowery, Imada, & Haidt, 1999). Some correlational evidence shows

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that religiosity is associated with greater obsessiveness (Lewis, 1998), and distaste for "sick" humor (Saroglou & Anciaux, 2004), and other research has shown that exposure to rejected religious beliefs can elicit disgust (Ritter & Preston, 2011). But to date, no empirical work has directly investigated the conceptual or motivational association between religion and cleanliness. The present research aimed to do just that, in three studies.

The present research

Three studies examined the association between religion and cleaning. Study 1 examined whether activation of religious concepts would also increase accessibility of cleaning concepts, measured by the generation of cleaning-related words in a word-stem task. Study 2 examined whether religious primes could enhance the value of cleanliness, as measured by relative desirability of cleaning products (e.g. soap). Finally, Study 3 examined the association in the opposite direction, by observing the effect of cleaning primes on self-reported value of religious belief.

Study 1: godliness primes cleanliness

Study 1 tested the hypothesis that priming religious concepts would also increase accessibility of cleaning concepts. Participants were primed with neutral or religious concepts in a scrambled sentence paradigm, then engaged in a word-stem completion task in which some items could be solved with words related to cleanliness (e.g., "wash"). We expected that more cleaning-related words would be generated for participants primed with religious concepts, compared to a control condition.

Method

Participants

Eighty-eight participants (26 women, 62 men, $M_{age} = 31.9$ years) were recruited to participate in a brief study through Amazon's Mechanical Turk (M-Turk).

Stimuli and procedure

Participants were randomly assigned to a religion prime or control prime condition. All participants began with a scrambled sentence task, in which subjects had to create a meaningful sentence from five English words, by removing one word and rearranging the remaining four. In the religion prime condition, three of the six target scrambled sentences contained religious concepts, (e.g., "Faith is a virtue"). In the control condition, all sentences had neutral content. Following the scrambled sentence task, all participants were given a word-stem completion task, in which they converted six word fragments into meaningful words (Zhong & Liljenquist, 2006). Three of the word fragments (W _ _ H; SH _ _ ER; S _ _ P) could be completed as cleaning-related words (wash, shower, soap) or as unrelated words (e.g., wish, shaker, step).

Other measures

Participants reported their religious affiliation in an open-response item, and political ideology on a five-point Likert scale (endpoints: 1 = strongly Liberal, 5 = strongly Conservative). Next, participants reported their belief in God and religiosity on a six-item scale (e.g., "my personal religious beliefs are very important to me"). Responses on each item were measured on a 5-point scale, (endpoints: 1 = strongly disagree; 5 = strongly agree). Finally, participants also rated the frequency of attendance at religious services on a five-point scale (1 = never/rarely; 5 = more than once a week).

Results and discussion

The sum of cleaning-related word stems generated in each condition was computed and analyzed by one-way analysis of variance (ANOVA). As predicted, the effect of condition was significant, $F(1, 86) = 4.72$, $p < .05$. Participants in the religious prime condition generated more cleaning words ($M = .92$, $SD = .84$), relative to the control condition ($M = .53$, $SD = .84$), suggesting that religious primes increased activation of cleaning-related concepts. Follow-up analyses were conducted on measures of religiosity and political ideology. Reliability of the 6-item religiosity scale was strong, Cronbach's $\alpha = .95$. No effects of condition were observed on political ideology, nor religiosity ($Fs < 1$), and when entered as covariates in the ANOVA, neither ideology nor religiosity had a significant effect on completion of cleaning word-stems.

Study 2: godliness motivates cleanliness

Consistent with the hypothesis, Study 1 found that religion primes increased the accessibility of cleaning concepts. Study 2 extended these findings to examine whether religious cognition would activate cleanliness goals. Following a priming manipulation, participants rated the desirability of various consumer products, some of which were cleaning-related (e.g., soap). We predicted that religion primes would increase the desirability of cleaning-related items, but not control items, suggesting an increased motivation for physical cleanliness.

Method

Participants

One hundred forty-six pedestrians ($M_{age} = 27$ years) in the Chicago area volunteered to participate in a brief study. Three participants did not complete the dependent measures and were omitted from the analyses, leaving one hundred forty-three participants (72 women, 71 men).

Stimuli and procedure

As in Study 1, participants were randomly assigned to a religion prime or control prime condition. Participants were primed using a scrambled sentence paradigm (Shariff & Norenzayan, 2007), a common manipulation of religious cognition. Next, participants rated the desirability of twelve consumer products (adapted from Zhong & Liljenquist, 2006). Products were rated on separate 7-point scales (endpoints: 1 = extremely undesirable; 7 = extremely desirable). Six of the products were cleaning-related (soap, sanitizer, hand-wipes, stain remover, mouthwash, floss), and six were neutral products (batteries, post-it notes, pens, keychain, notebook, box of paperclips). After consumer ratings, participants reported demographic information on religious affiliation, nationality, and ethnicity. Belief in God and religiosity were measured on respective five-point scales (1 = not at all; 5 = very strongly), as was political ideology (1 = strongly Liberal; 5 = strongly Conservative).

Results and discussion

Mean ratings of product desirability were calculated for cleaning products and control products, respectively. As predicted, the one-way ANOVA on cleaning products was significant between conditions, $F(1, 141) = 5.83$, $p < .05$. Participants in the religion prime condition rated cleaning products as more desirable than those in the control condition (see means in Table 1), suggesting an increased motivation for cleanliness. However, there was no difference between conditions on ratings of the control products, $F(1, 141) = 2.48$, $p = .12$. A one-way ANOVA on condition found no effect on self-reported religiosity, political ideology, ($Fs < 1$), or belief in God, $F(1, 140) = 2.25$, $p = .14$. When entered as a covariate into the ANOVA, the effect of religiosity was significant on cleaning products, $\beta = .19$, $F(1, 140) = 8.41$, $p < .01$, but