

LBS Research Online

[J Z Berman](#) and D A Small

Discipline and desire: on the relative importance of willpower and purity in signaling virtue

Article

This version is available in the LBS Research Online repository: <http://lbsresearch.london.edu/id/eprint/960/>

[Berman, J Z](#) and Small, D A

(2018)

Discipline and desire: on the relative importance of willpower and purity in signaling virtue.

Journal of Experimental Social Psychology, 76 (May). pp. 220-230. ISSN 0022-1031

DOI: <https://doi.org/10.1016/j.jesp.2018.02.007>

Elsevier

<https://www.sciencedirect.com/science/article/pii/...>

Users may download and/or print one copy of any article(s) in LBS Research Online for purposes of research and/or private study. Further distribution of the material, or use for any commercial gain, is not permitted.

Discipline and Desire:

On the Relative Importance of Willpower and Purity in Signaling Virtue

JONATHAN Z. BERMAN

DEBORAH A. SMALL

AUTHORS' NOTE

Jonathan Berman (jberman@london.edu) is an Assistant Professor of Marketing at the London Business School and Deborah Small (deborahs@wharton.upenn.edu) is the Laura and John J. Pomerantz Professor of Marketing and Psychology at the University of Pennsylvania. The authors would like to thank Yoel Inbar, Emma Levine, Geoff Goodwin, Barbara Mellers, Paul Rozin, Phil Tetlock, Gal Zauberaman, and members of the MoRL lab for their thoughtful comments on previous versions of this manuscript. Corresponding author: Jonathan Berman (jberman@london.edu).

ABSTRACT

What does it mean to act virtuously? We examine lay perceptions of virtue, and show that different psychological drivers of virtuous behavior are relevant for different types of actions. When evaluating non-moral virtuous behavior, such as choosing to skip dessert, attributions of virtue depend on perceived *willpower* (i.e., the extent to which someone overcomes temptation in service of acting virtuous). In contrast, when evaluating moral virtuous behavior, such as choosing to be faithful to a spouse, attributions of virtue depend on perceived *purity* (i.e., the extent to which someone lacks temptation to sin and thereby does not need to exert willpower in service of acting virtuously). Study 1 demonstrates that when people describe their own actions, they associate willpower with non-moral virtuous behavior, and purity with moral virtuous behavior. Studies 2 & 3 examine judgments of others and show that as behaviors become moralized, people elevate the importance of purity relative to willpower when ascribing virtue. Finally, Study 4 examines perceptions of those who are “reformed”—having eliminated their previous sinful desires such that they no longer feel tempted. For non-moral behaviors, reformed individuals are seen as strong-willed and thus highly virtuous. However, for moral behaviors, reformed individuals are still seen as somewhat impure, and are judged to be less virtuous than those have never felt tempted by a particular vice. These results underscore how construing behaviors in moral terms shifts what people consider to be virtuous.

Keywords: virtue; vice; moral character; temptation; willpower; purity

“In self-restrained and unrestrained people we approve their principle...since it urges them in the right way and exhorts them to the best course; but their nature seems also to contain another element besides that of rational principle, which combats and resists that principle.”

Aristotle, Nicomachean Ethics

What does it mean to be virtuous? Even though virtue is defined as the behaviors and character traits that foster moral excellence, people often ascribe virtue to situations bearing little moral consequences. For instance, people often talk about behaviors that benefit the future self (e.g., eating healthy and exercising) as being virtuous and their antitheses as being sinful, even though many of these behaviors would not be classified as being moral (Dhar & Wertenbroch, 2011; Khan & Dhar, 2006, 2007; Kivetz & Keinan, 2006; Milkman, Rogers & Bazerman, 2008, 2009; Read, Loewenstein, & Kalyanaraman, 1999; Wertenbroch, 1998). Additionally, the term “cheating” is used to describe both violating a commitment to the self (e.g., cheating on a diet) as well as violating a commitment to others (e.g., cheating on a spouse).

There are more than just linguistic similarities across a broad range of behaviors involving self-regulation. As individuals become depleted of mental resources, they become more likely to succumb to both non-moral (e.g., eating unhealthy food, Shiv & Fedorikhin, 1999) and immoral temptations (e.g., lying, Mead et al., 2009). Those who fail to exhibit self-control when making non-moral decisions often feel moral emotions such as guilt or shame for indulging (Giner-Sorolla, 2001; Kivetz & Keinan, 2006). Further, just as reducing psychological distance between the self and other increases moral behavior (Batson, Early & Salvarani, 1997; Batson et al., 2003; Loewenstein & Small, 2007; Small & Simonsohn, 2008), reducing psychological distance between the present- and future-self increases prudent behavior (Bartels & Rips, 2010; Bartels & Urminsky, 2011; Ersner-Hershfield, 2009; Hershfield et al., 2011).

In this paper, we examine lay perceptions of what it means to be virtuous, and show that despite the many similarities, different aspects of virtue are relevant across non-moral (e.g., eating healthy) and moral (e.g., being faithful to a spouse) behaviors. We find that when evaluating non-moral behavior, judgments of virtue are based on perceptions of *willpower*, or *self-discipline*: the more an actor exerts willpower in the face of temptation, the more virtuous an actor is seen. Thus, for non-moral behavior, individuals who use willpower to overcome temptation are seen as more virtuous than those who choose a virtuous option because they don't find the vice option appealing. In contrast, we find that when evaluating moral behavior, judgments of virtue are based on perceptions of *purity of character*, or the extent to which someone selects a virtuous option without feeling tempted by a corresponding vice option.¹ As a result, for moral behavior, individuals who overcome temptation are seen as *less* virtuous than those who do not feel tempted by a vice.

In the following sections, we differentiate between willpower and purity as distinct paths to virtuous behavior, and outline why we expect each path to carry differential signal value across non-moral and moral virtue.

WILLPOWER AND PURITY AS DISTINCT PATHS TO VIRTUE

What unites all types of virtues is that they represent higher-order values that serve to guide behavior. However, while being virtuous is a function of good behavior, the same behavior may result from different mental processes.

¹ We use the term purity as it pertains to judgments of an individual's character. A pure character is when a decision maker's inner-state is untainted by sinful desire. This definition is distinct from research on moral violations which uses the term "purity" to pertain to violations concerning divinity, sanctity, and degradation (e.g., Graham, Haidt & Nosek, 2009; Haidt & Joseph, 2004; Shweder, et al., 1997).

In some cases, behaving virtuous may inherently require willpower or self-discipline. When faced with a tempting alternative, individuals often feel internal conflict between a vice option that provides an immediate hedonic reward and a virtuous option that is in accordance with an individual's higher-order goals and values. Although individuals are often drawn by an immediate reward, they sometimes prefer not to be (Frankfurt, 1971; Jeffrey, 1974). In these cases, individuals may try to exert self-control to resist the allure of the vice option (Kotabe & Hofmann, 2015; Lian et al., 2017). Indeed, the importance of self-control in regulating behavior has been shown across a wide range of decisions that are not overtly moral, such as what food to eat or whether to purchase a luxury product (Baumeister et al., 1998; Hagger et al., 2010; Mischel, Shoda & Rodriguez, 1989; Muraven & Baumeister, 2000; Vohs & Faber, 2007; Vohs & Heatherton, 2000) to highly moral decisions such as whether to lie or cheat (Barnes et al., 2011; Gino et al., 2011; Kouchaki & Smith, 2014; Mead et al., 2009; see also Baumeister & Exline, 1999; Fishbach & Woolley, 2015; Monin, Pizarro & Beer, 2007).

Yet, not all virtuous actions require effort. Those who do not feel conflicted when they act virtuously are able to choose a virtuous option precisely because they are not tempted by a given vice. Whereas individuals who overcome temptation demonstrate willpower, those who are free from temptation and conflict are “pure” —their disinterest for a vice option makes it easy for them to choose a virtuous one.

Note that these two distinct routes to virtue, willpower and purity, are incompatible in any given decision. An individual who is pure and free from temptation does not need to exert self-control to choose a virtuous option. Moreover, someone who needs to exert self-control to act virtuously is not wholly pure: there is something inside of him or her that desires a vice option.

The distinction between willpower and purity dates back to Aristotle (trans. 2011) who argued that individuals who alter their internal desires such that they find it easy to act morally are more virtuous and praiseworthy (see also Foot, 1978). In contrast, Kant (1785/1998) implies that overcoming temptation to sin provides evidence of moral action, and that praise should not be accredited to those who find it easy to do good deeds.

Recent empirical research has examined signals of willpower (Righetti & Finkenauer, 2011; Stein & Nemeroff, 1995) and purity (Critcher, Inbar & Pizarro, 2012; Inbar, Pizarro & Cushman, 2011) separately, showing that both are important when assessing the virtue, or moral character, of others. However, this research has shown conflicting evidence for when purity and willpower are primary. While some research shows that when making a virtuous decision those who are pure are considered to have a stronger moral character (Critcher et al., 2012; Pizarro, Uhlmann, & Salovey, 2003), other research shows the reverse—that individuals who overcome temptation are seen as more moral than ones who do not feel tempted (Starmans & Bloom, 2016).

The present paper presents a simple, organizing principle for when displaying willpower is judged as superior to vs. inferior to displaying purity: willpower is deemed more praiseworthy for decisions when the tempting vice option has little moral relevance, but purity is more praiseworthy when the vice is considered immoral or otherwise anti-social. In the following section we describe the distinction between two classes of vices.

MORALITY AND VICE

We distinguish between non-moral and moral virtuous behavior, which are often considered one and the same (e.g., Milkman et al., 2009). We define *non-moral virtue/vice*

decisions as those in which the vice alternative is considered indulgent or imprudent but not necessarily immoral or anti-social. In the Western world common examples of such vices include eating junk food, watching television, or purchasing luxury goods. The consequences of indulging in a non-moral vice tend to be *intrapersonal* in nature and negatively affect an actor over time. For instance, the more desserts a person eats, the worse their future health will be, and the more someone spends in the present, the less they savings they will have in the future. As a result, knowing that someone desiring a vice of this sort often signals information about their personal tastes but not necessarily their values. For example, knowing a person likes the taste of cr me br l e may tell you that he enjoys rich desserts, but does not directly reveal if he is honest, benevolent, or just. Non-moral vices additionally tend to be more permissible in society, and more normal.

In contrast, we define *moral virtue/vice decisions* as ones in which the vice alternative is considered to be immoral or anti-social in addition to being imprudent. Examples include the desire to lie, cheat, steal, or harm someone's feelings. These vices thereby signal information regarding people's social values (rather than their personal tastes), and are *interpersonal* in nature. Knowing that someone is tempted to harm someone's feelings suggests that the actor puts himself ahead of others. Moreover, because these vices are considered immoral or anti-social they tend to be less permissible in society, and more abnormal.

Table 1 summarizes typical characteristics of vices that are considered non-moral or moral. The main distinction we highlight between them is whether or not the vice is considered immoral or anti-social in and of itself. In the sections below, we outline why we expect individuals assess virtue differently depending on the immorality of the vice alternative in a choice set.

Non-Moral Vices	Immoral Vices
Taste-based	Value-based
<i>Intrapersonal</i>	<i>Interpersonal</i>
Non-social	Anti-social
Permissible	Impermissible
Lacking Externalities	Negative Externalities
Normative	Non-normative/Abnormal

Table 1: Typical characteristics of non-moral and immoral vices.

When Vices are Non-Moral

Much research on self-regulation and choice examines how and when individuals avoid temptation in order to pursue their long-term goals (Loewenstein, Read & Baumeister, 2003). Individuals often succumb to temptation and select a vice option even when they know that the virtue option is in their best interest in the long run. Indeed, the ability to control one's impulses has been strongly linked to long-term positive life outcomes (Mischel et al., 1989), yet people around the world struggle with self-control, and consistently attribute it as being among their worst character traits (Park, Peterson & Seligman, 2006).

In addition to valuing willpower in themselves, individuals further use signals of willpower to assess the virtue of others. Those who delay gratification are seen as more trustworthy and moral than those who do not (Righetti & Finkenauer, 2011; Stein & Nemeroff, 1995). Thus we expect that individuals will accredit virtue to those who display willpower.

Moreover, we expect that people do not penalize others for lacking purity for being tempted by a vice option that is not considered immoral. Rather, tastes are considered to be subjective and are not upheld to the same moral scrutiny of values, which are considered to

represent an underlying objective truth (Goodwin & Darley, 2008; 2010). For instance, if an individual has a taste for a particular dessert, we do not condemn them for having that taste. However, we do applaud their ability to refrain from eating it. Thus we propose that for non-moral actions, willpower determines judgments of character such that those who resist temptation will be judged as more virtuous than those who do not feel tempted by a vice.

When Vices are Immoral

In contrast, the desire to engage in immoral behavior is diagnostic of character even if not acted upon. Research on moral judgment finds that individuals look beyond behavior—towards desires and intentions—when judging the character of others (Gray et al., 2012; Reeder, 2009; Pizarro & Tannenbaum, 2012). Holding actions constant, an agent's expressed willingness to help (Krull, Seger & Silvera, 2008), the emotions she shows alongside a given behavior (Ames & Johar, 2009), and the amount of deliberation that goes into making a decision (Critcher et al., 2013; Pizarro et al., 2003) are informative in evaluating the mindset of a decision-maker, which are used to determine how much praise or blame the agent should receive. These findings suggest that evaluations of moral character are inherently tied to beliefs about an actor's inner thoughts; the purer their cognitions are, the more positively they are seen. Even merely thinking about “wicked desires” reflects impurity and can be cause for blame (Inbar et al., 2012; Tetlock et al., 2000).

Further, the use of willpower implies the existence of a corrupting desire that needs to be controlled. Those who need to exert self-control in order to avoid an immoral vice will be seen as having an underlying proclivity to act immorally. However, those who do not feel tempted to commit immoral behavior will be seen as having an essence that is pure and good (Gelman,

2004; Medin & Ortony, 1999). In contrast to our prediction for non-moral virtue we expect that as behaviors becoming increasingly moral, the importance of purity will increase relative to willpower. Thus, for moral behaviors, we expect purity of character to be primary: those who overcome temptation will be seen as less virtuous than those who do not feel tempted by a vice.

The distinction we make suggests that it is the signal value that arises from feeling tempted that separates non-moral from moral virtuous behaviors. Whereas feeling tempted to select a vice deemed immoral signals impurity, feeling tempted to select a vice that is merely non-moral does not. This distinction is consistent with social-functionalist views that morality is meant to regulate the behaviors of others in a society in order to inhibit selfish or otherwise anti-social behavior (Haidt & Kesebir, 2010; Rai & Fiske, 2011). Individuals are not censured for having the desire to partake in behaviors that are tempting but not anti-social or immoral, such as eating a rich dessert or purchasing a luxury item. However, we expect that as preferences become moralized, individuals become increasingly faulted for having impure thoughts, reinforcing the concept that these behaviors are socially unwarranted (see Rozin, 1999). Not only is it not acceptable to engage in immoral behavior, those who simply feel tempted to engage in these behaviors will be seen as having inappropriate desires, causing them to be viewed as less moral than those who do not feel tempted.

VIRTUE AND REFORMATION

So far we have discussed the difference between an individual who feels tempted by a vice versus one who does not feel tempted by a vice. However, someone who does not feel tempted by a vice may either (a) display a natural distaste for the vice, or (b) have formerly

desired the vice, but since eliminated their unwanted urges through intentional pursuit of change. In the latter case, we refer to such individuals as *reformed* (see also, Klein & O'Brien, 2017).

The hypotheses we propose suggest that reformed individuals will be perceived differently across contexts. For non-moral virtuous behaviors—those for which we argue that willpower signals greater virtue—we expect that reformed individuals are perceived as having a strong will and thus highly virtuous. That is, ridding oneself of the temptation to indulge requires effort and self-discipline. Thus, for non-moral virtuous behavior, a reformed individual who no longer feels tempted by a vice will be viewed as more virtuous than someone who has never felt tempted.

For moral virtuous behaviors—those for which we argue that purity signals greater virtue—we expect that reformed individuals will not be considered wholly pure. Rather, it is possible that past desires can still taint an individual's purity in the eyes of others. While a reformed individual has managed to suppress his undesirable urges, his previous immoral thoughts may reflect an underlying proclivity to act immorally that is difficult to erase. Thus, we predict that for moral virtuous behavior, reformed individuals will be seen as less virtuous than someone who was never tempted by a given vice.

BELIEF IN THE SINFULNESS OF THOUGHTS

In addition to the hypotheses outlined above, we also investigate a key individual difference variable that should affect how individuals think about virtuous behavior. We propose that a large reason why evaluations of virtuous behavior vary as a function of morality is that simply feeling tempted by an immoral vice reflects poorly on one's character, whereas feeling tempted by a vice that is not immoral does not. However, individuals differ on the extent to

which they view immoral thoughts as being inherently sinful (Cohen & Rozin, 2001). We therefore predict that a person who believes that thoughts themselves can be immoral will be particularly prone to penalize someone who desires an immoral vice and praise those who do not feel tempted by an immoral vice. Further, someone who doesn't believe that thoughts can be immoral will see no reason to penalize someone for thinking about—but not acting on—the temptation to do wrong or praise someone for refraining from having impure thoughts. Thus, we do not expect that individual differences in beliefs about the morality of thoughts will affect how participants evaluate non-moral behaviors, because having a taste for a non-moral vice does not signal that an individual's character is corrupt.

OVERVIEW OF HYPOTHESES AND STUDIES

The studies herein investigate how signals of willpower and purity affect perceptions of virtue. Study 1 examines people's recollections of times that they have either felt tempted and used willpower or were not tempted and provides an initial demonstration that individuals associate willpower with virtuous behavior in non-moral contexts and purity with virtuous behavior in moral contexts. Next, we test our main hypothesis that for non-moral virtuous behaviors, those who overcome temptation will be considered more virtuous than those who do not feel tempted by a vice, whereas the reverse is true for moral virtuous behaviors. In Study 2, we test this hypothesis across a variety of scenarios that vary in their moral content, while Study 3 obtains additional control over these findings by holding the decision options constant, and manipulating an individual's intentions surrounding an action. In Study 4, we replicate previous findings, and further examine perceptions of individuals who have "turned a new leaf" and are reformed. We expect that for non-moral behaviors those who are reformed will be viewed as

showing a great degree of willpower and will be viewed as being highly virtuous as a result. For moral virtuous behavior, those who are reformed will still not be considered wholly pure and will therefore be considered less virtuous than those who have never felt tempted by an immoral vice.

In all studies our sample size was determined in advance and we report all measures assessed. No conditions or participants were dropped from any analyses performed. The sample size for Studies 1 & 2 was determined by having a minimum of number of participants to detect an effect size of $d = .3$. The sample size of Studies 3 & 4 was determined by the number of participants who signed up in advanced for the given lab session. Data can be accessed online at (https://osf.io/zhw2m/?view_only=63634563302b48bd8dba616ae1117515).

STUDY 1

This study examines what types of internal processes people consider to be most relevant for different types of virtuous behavior. Participants were asked to describe either a situation in which they utilized willpower in order to perform a good action, or one in which they performed a good action without feeling tempted by a vice option (the action was a result of purity). We hypothesized that participants would be more likely to recall a non-moral virtue when recalling a time they used willpower, and more likely to recall a moral virtue when considering purity as a driver.

Method

One hundred fifty-one participants (61% female; mean age = 37.2) were recruited via Mechanical Turk in exchange for payment. In the *Willpower* condition, participants were told to “think about a time you used willpower or self-discipline in order to do something good,” while

those in the *Purity* condition were told to “think about a time you did something good without feeling tempted to do something bad.”

Three coders, blind to condition and hypothesis, rated each deed on the following two dimensions. Specifically, they were asked to rate “To what extent is this a moral action?” (1 = not at all, 2 = somewhat, 3 = a great deal) and “To what extent is the person who is directly benefitting from the action the self or others?” (1 = primarily the self, 2 = a bit of both, 3 = primarily others). One participant provided an unintelligible response, and this response was not evaluated by coders. Coder evaluations were averaged for each measure, and achieved a high degree of reliability for both the morality ($\alpha = .84$) and self/other benefits measure ($\alpha = .92$). The two measures were highly correlated with each other ($r = .84, p < .001$).

Results

Consistent with our predictions, those who reflected on a purity-based decision were significantly more likely to think of a moral action ($M = 2.09, SD = .61$) than those who reflected on a willpower-based decision, ($M = 1.58, SD = .70$), $t(148) = 4.79, p < .001$; $d = .78$, 95% $CI_d = [.44, 1.11]$. Similarly, those who reflected on a purity-based decision were significantly more likely to think of actions that directly impacted others ($M = 2.50, SD = .69$) than those who reflected on a willpower-based decision ($M = 1.75, SD = .78$), $t(148) = 6.24, p < .001$; $d = 1.03$, 95% $CI_d = [.68, 1.36]$.

Discussion

Study 1 shows that people associate willpower with virtue in non-moral contexts, (when good deeds primarily benefits the future self). In contrast, they associate purity with virtue in

moral contexts (when good deeds benefit others). In the next study, we turn to a different methodology where participants judge others to further probe which processes are valued in different decision contexts.

STUDY 2

Study 2 examines whether the determinants of judged virtue differ as a function of the morality of the behavior. Participants read scenarios in which two individuals were independently faced with a decision between a virtue and a vice option. One individual was described as feeling tempted by the vice, whereas the other individual was described as not feeling tempted by the vice. Both individuals ultimately chose the virtuous option. We predict that for non-moral virtuous behaviors, the individual who resisted temptation would be considered more virtuous than the one who did not feel tempted by the vice. Alternatively, we expect that for moral virtuous behaviors, the individual who did not feel tempted would be considered most virtuous.

We further varied the severity of the temptation within each condition to ensure that it is perceived morality and not severity that is driving these results. Thus, we included one scenario in which the non-moral vice had severe consequences (eating chocolate cake if you have diabetes) and one scenario in which the immoral vice had minor consequences (stealing office supplies).

Method

We recruited 154 participants (30% female; mean age = 27.4) from the United States to participate in a study via Mechanical Turk. Participants were randomly assigned to either a non-

moral or a moral condition. All participants read three scenarios. Each scenario concerned two individuals who independently were faced with a choice between a virtue and a vice. The only difference between the individuals was whether they were described as desiring the vice.

Whereas one individual felt tempted by the vice option, the other individual did not feel tempted by the vice option. Both individuals ultimately selected the virtuous option. The order of scenarios was randomized within each condition, and the presentation order of the two individuals within each scenario was counterbalanced across participants.

In the non-moral condition, participants read scenarios in which the vice option was not considered immoral. For instance, in the chocolate cake scenario, participants read about Linda and Susan who were both overweight and were recently diagnosed with type 2 diabetes. They were given the option to order dessert or pass and not order dessert. Participants then read:

Linda feels very conflicted about this decision. She feels a strong desire for chocolate cake, and she is very tempted to order it now. However, even though she is tempted to order the chocolate cake, she decides to pass and not order dessert.

Susan does not feel conflicted about this decision. She does not desire chocolate cake, and she is not at all tempted to order it now. She decides to pass and not order dessert.

In the term paper scenario, participants read about Mike and David, two students who could either slack off and watch TV or write an important paper for class. In the gym scenario, participants read about Brian and Kevin, two men who could either eat pizza and socialize with friends or go to the gym and work out.

Participants in the moral condition read scenarios in which the vice option was considered immoral. In the office supplies scenario, participants read about Linda and Susan, two administrative assistants who had the opportunity to steal a pair of scissors from the office. In the adultery scenario, participants read about Mike and David, two married men who were each propositioned by a prostitute. Finally, in the kidney donation scenario, participants read about

Brian and Kevin, two individuals who could either donate or not donate a kidney to a sibling in need (See supporting materials for scenario wording).

After reading each scenario, participants were asked which of the two individuals was more virtuous, honorable, and respectable on a nine-point scale (e.g., -4 = “Linda is much more virtuous”; 0 = “Linda and Susan are equally virtuous”; and +4 “Susan is much more virtuous”)². These items were averaged to create a relative virtue scale. The chocolate cake, gym, office supplies, and kidney donation scenarios reached sufficiently high reliability ($\alpha > .71$) and the schoolwork scenario was moderately reliable ($\alpha = .66$).

At the end of the survey, participants were presented with descriptions of all six scenarios, regardless of condition. This was done to ensure that the manipulation checks represented a fair comparison across the range of scenarios and the results were not driven by differential use of scales across conditions. As a manipulation check of morality, participants were asked to rate the extent to which moral considerations played a role in each decision (1 = “Not at all”, 9 = “An extreme amount”). As a manipulation check on severity, participants were asked to rate the extent of negative consequences caused by the vice option (1 = “No negative consequences”, 9 = “Extreme negative consequences”).

Finally, in this and all subsequent studies, participants were asked to indicate their religion and to rate their religiosity (0 = “not at all religious”; 10 = “extremely religious”) and their political orientation (0 = “extremely liberal; 5 = “moderate”; and 10 = “extremely conservative”). Our results for this and subsequent studies hold once controlling for these variables. See supporting materials for details.

² These items were chosen because they represent global moral character traits that do not directly presume either personal or social behavior. Specifically, we sought to avoid traits such as fairness and justice that are much more relevant to social rather than personal decisions.

Results

Manipulation Check: Consistent with a pre-test reported in the supporting materials, the manipulation check found that the non-moral scenarios (each $M < 3.68$, $SD < 2.45$) were judged to be less moral than the moral scenarios (each $M > 5.92$, $SD < 2.30$, $ps < .001$). Further, not all of the non-moral scenarios were rated as less severe than the moral scenarios. In particular, stealing office supplies was considered less severe ($M = 4.22$, $SD = 2.16$) than both the chocolate cake scenario ($M = 6.13$, $SD = 1.82$), $t(153) = -9.13$, $p < .001$, and the schoolwork scenario ($M = 4.75$, $SD = 1.94$), $t(153) = -2.73$, $p = .007$.

Relative Virtue: For our main analysis, we first averaged ratings of relative virtue for the three non-moral ($M = 0.38$, $SD = 1.09$) and the three moral ($M = -0.86$, $SD = 1.25$) scenarios. Positive values indicate that overcoming temptation is considered more virtuous than not feeling tempted by a vice, whereas negative values indicate the opposite. A one-way ANOVA showed a significant effect of morality on relative virtue, $F(1, 152) = 43.04$, $p < .001$, $d = 1.06$, 95% $CI_d = [.71, 1.40]$.

Each individual scenario was then analyzed separately using a one-sample t-test against the null hypothesis that the two individuals were considered to be equally virtuous ($M = 0$). For the non-moral scenarios, participants rated the individual who overcame temptation as *more* virtuous than the individual who did not feel tempted by the vice ($ts > 2.33$, $ps < .023$). However, for the moral scenarios, participants rated the individual who overcame temptation to be *less* virtuous than the individual who did not feel tempted by the vice ($ts < -4.99$, $ps < .001$). Figure 1 displays the results.

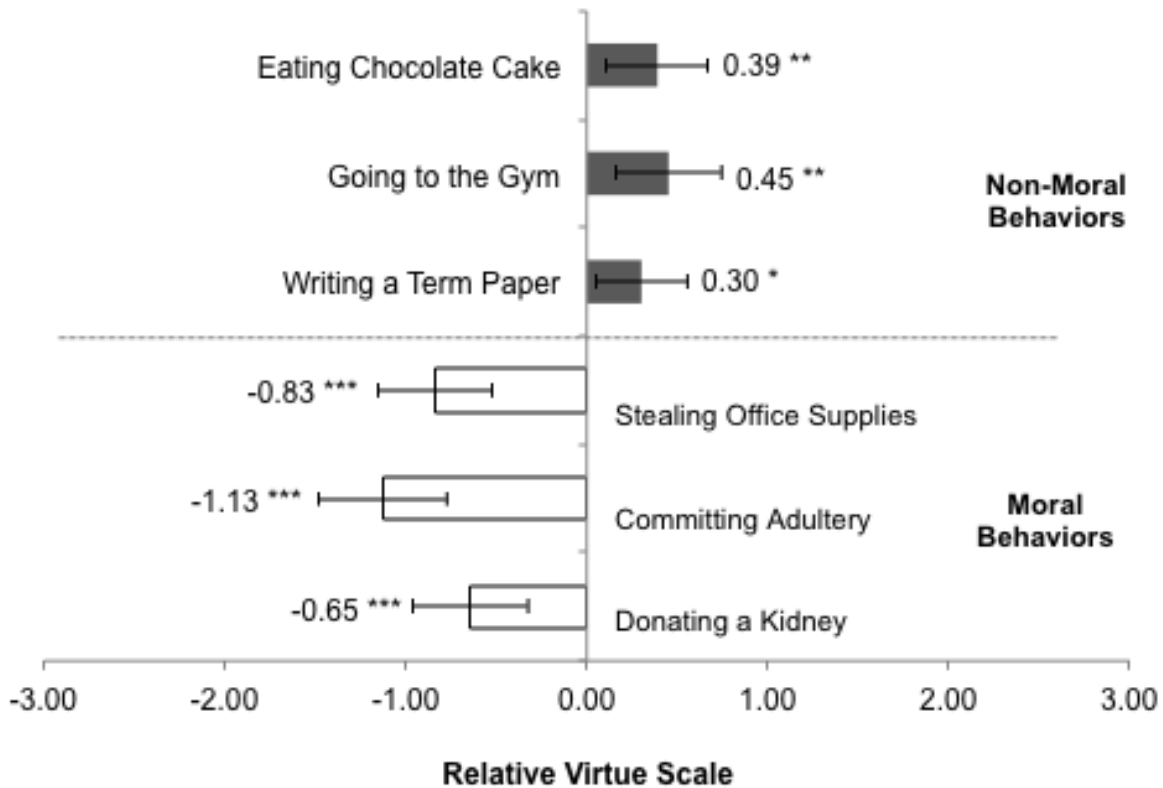


Figure 1: Judgments of relative virtue in Study 1 by behavior morality. Positive values indicate that overcoming temptation is considered more virtuous than not feeling tempted by a vice, and negative values indicate that not feeling tempted by a vice is considered more virtuous than overcoming temptation. Error bars represent 95% CI. * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

The present study shows that overcoming temptation can have either a positive or a negative effect on judged virtue, depending on the morality of the vice. The scenarios were designed to cover a variety of contexts to assess the robustness of the effect. First, we varied the stakes by including a non-moral behavior with severe consequences and a moral behavior with minor consequences. We also varied whether the actor chose between two actions (e.g., schoolwork vs. TV) or between action/omission (e.g., eating dessert or not).

In the moral condition we also included behaviors that are common (stealing office supplies) and rare (kidney donation). While most have likely not been asked to donate a kidney, multiple surveys report that more than half of employees admit to stealing office supplies (Villano, 2006). Nonetheless, in supporting materials (Study S1) we directly manipulated temptation commonness as well as vice immorality. Results show that vice immorality predicts virtue judgments ($\beta = .19, SE = .078, p = .018$), whereas temptation commonness does not ($\beta = -.07, SE = .081, p = .37$).

Finally, it is possible that these results are not due to morality of the vice, but instead to idiosyncratic factors that are particular to the given choice sets of each scenario. To obtain additional control, the next study holds concrete features of each behavior constant, and manipulates the extent to which an individual is considering the behavior in moral terms.

STUDY 3

The purpose of Study 3 was to replicate the previous results controlling for the choice set of a given context. Participants evaluated a scenario in which a single individual is faced with a decision to engage in “sinful” or “virtuous” behavior. As in the previous study, we manipulated whether the individual feels tempted by the vice before choosing the virtuous option. However, we also directly manipulated the extent to which an individual’s thoughts reflect moral considerations. We expect that when an individual’s thoughts pertain to morality, participants will elevate the importance of purity relative to willpower in judging character. However, when an individual’s thoughts are less related to morality, the importance of purity will be diminished, and participants will look towards evidence of willpower when judging virtue.

Method

We recruited 227 individuals (50% female; mean age = 27.7) to participate in a laboratory session at a northeastern university. Participants were randomly assigned to one of four conditions in a 2 (Vice Morality: Non-Moral Vice, Immoral Vice) X 2 (Temptation: Tempted, Not Tempted) between-subjects design.

In all conditions, participants first read the following scenario whereby a partygoer was faced with the decision whether or not to eat the last slice of pizza:

Michael is at a Super Bowl party and getting food from a buffet. Standing behind Michael is George, who is recovering from a minor illness that has made him weak. George tells everyone that he is particularly excited to try the pizza. Although there is plenty of other food, there is only one piece of pizza left on the table. Michael can either take the last piece of pizza for himself, or he can leave it for George.

Participants then were given insight into Michael's thoughts. In the non-moral vice condition, Michael was described as being either tempted or not tempted to eat the slice of pizza, with no reference to George. Specifically, participants read (not tempted condition in brackets): "Michael feels [does not feel] a strong desire to eat a slice of pizza right now, and as a result, he is extremely tempted [not at all tempted] to take the last slice." In the immoral vice condition, Michael was described as either being tempted or not tempted to prevent George from eating pizza. Specifically, participants read (not tempted condition in brackets): "Michael feels [does not feel] a strong desire to prevent George from eating eat a slice of pizza right now, and as a result, he is extremely tempted [not at all tempted] to take the last slice." At the end of the scenario, all participants read that Michael chose not to take the last slice of pizza.

Participants then rated how virtuous, honorable, and respectable Michael is on nine-point scales (e.g., 1 = "Not at all virtuous", 9 = "Extremely virtuous"), which were averaged to create a three-item perceived virtue measure ($\alpha = .92$). Participants also responded to two manipulation

checks that asked: (1) “How conflicted did Michael feel about his decision?” and (2) “To what extent is it immoral to feel tempted to eat a slice of pizza [prevent George from eating a slice of pizza]?” on nine-point scales, ranging from 1 = “Not at all” to 9 = “An extreme amount”.

Results

Manipulation Checks: Consistent with the intent of the manipulation, Michael felt greater conflict when he was tempted to eat the last slice ($M = 6.34$, $SD = 1.57$) than when he was not tempted to eat the last slice ($M = 1.83$, $SD = 1.60$), $t(225) = 21.39$, $p < .001$. In addition, participants reported that it is more immoral for Michael to feel tempted to prevent George from eating a slice of pizza ($M = 4.80$, $SD = 2.25$) than it is for him to feel tempted to eat the last slice of pizza ($M = 2.52$, $SD = 1.86$), $t(225) = 8.34$, $p < .001$.

Perceived Virtue: Consistent with our hypotheses, a two-way ANOVA showed a significant vice morality x temptation interaction on perceived virtue, $F(1, 223) = 11.74$, $p < .001$, $\eta^2 = .05$. In the non-moral vice condition, participants felt that Michael was more virtuous when he exerted willpower and overcame his temptation to eat a slice of pizza ($M = 6.64$, $SD = 1.56$) than when he was pure and did not desire pizza at all ($M = 5.46$, $SD = 1.72$), $t(110) = 3.81$, $p < .001$, $d = .72$, 95% $CI_d = [.33, 1.11]$. However, in the immoral vice condition, this difference disappeared. Participants rated Michael slightly, but not significantly, less virtuous when he exerted willpower to overcome his temptation to prevent George from eating a slice ($M = 6.03$, $SD = 1.70$) than when he was pure and did not feel tempted to prevent George from eating a slice ($M = 6.38$, $SD = 1.72$), $t(113) = -1.08$, $p = .28$, $d = -.21$, 95% $CI_d = [-.58, .17]$. Figure 2 displays these results.

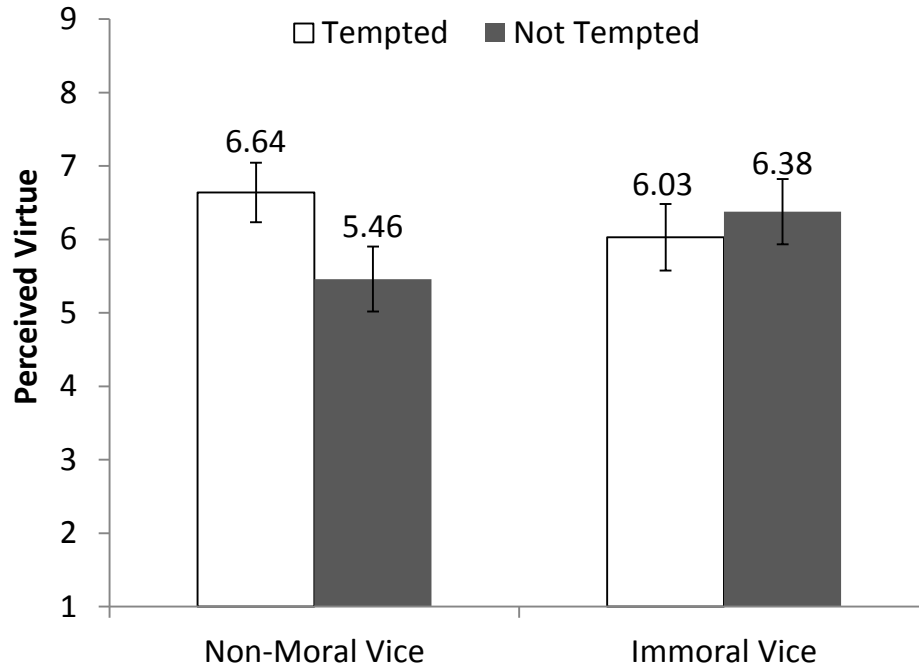


Figure 2: Perceived virtue as a function of vice morality and felt temptation in Study 2. Error bars represent 95% CI.

Discussion

The results of Study 3 show that the less a decision is conceptualized in moral terms, the more people value willpower relative to purity when assessing virtue. In other words, individuals are not penalized for having “sinful” desires that do not reflect immoral or anti-social thoughts, and instead are applauded for overcoming temptation in non-moral domains. In this study, which contained a subtle manipulation of morality, we did not find a complete reversal in judgments: those in the immoral vice condition only directionally favored Michael when he was pure relative to when he displayed willpower. Nonetheless, the very same action was judged different depending on whether the temptation was described in more or less moral terms. In the following study, we examine additional predictions derived from our theorizing, and further examine the mechanism driving these effects.

STUDY 4

In Study 4 we make several revisions to the previous study design to further test our hypothesis that willpower is the primary signal of non-moral virtuous behavior and purity is the primary signal of moral virtuous behavior. These changes are outlined in detail below.

First, we differentiate between those who have never felt tempted by a vice from those who used to feel tempted but have since reformed and no longer feel tempted. We expect that for non-moral virtuous behavior, individuals who are reformed will be viewed as strong willed, and therefore highly virtuous. For moral virtuous behaviors, we expect individuals who are reformed will be seen as less pure than those who have never felt tempted.

Second, we further investigate the mechanism driving these results by directly measuring perceptions of willpower and purity. We expect that for non-moral virtuous behaviors, perceptions of willpower predict perceived virtue, whereas for moral virtuous behaviors, perceptions of purity predict perceived virtue.

Third, we probe the effects of relevant individual differences that may affect how individuals evaluate virtuous behavior. Specifically, we measure the individual beliefs in the morality of thoughts (e.g., “A feature of sinful people is that they are tempted to do sinful things.” Cohen & Rozin, 2001). We expect that a strong belief in the morality of thoughts will cause people to more strongly penalize individuals who feel tempted to engage in immoral behavior, even if they choose not to do it. However, this individual difference will have no effect on how individuals evaluate non-moral virtuous behaviors.

Finally, we measure perceptions of future behavior. We expect that individuals who are considered virtuous will also be perceived as being more likely to achieve their higher-order goals. That is, for non-moral virtuous behaviors, individuals who resist temptation or are

reformed will be viewed as being strong willed and able to stick to their goals in the future. However, for moral virtuous behaviors, individuals who do not feel tempted will be considered pure and thus highly likely to uphold their future goals, whereas those who resist or are reformed will be considered impure and the most likely to violate their goals.

Method

We recruited 217 students from a northeastern university (62% female; mean age = 21.6) to participate in a lab session in exchange for payment. We conducted a 2 (Behavior Type: Non-Moral, Moral) x 3 (Temptation Level: Tempted, Not Tempted, Reformed) between-subjects study.

Participants read a single scenario involving Kevin, a man who was presented with the possibility of choosing a vice option. In the non-moral condition, Kevin has sworn off desserts in order to lose weight. One evening, he is presented with the option of eating an unhealthy dessert. In the moral condition, Kevin is a husband who is trying to improve his marriage. One evening, he is propositioned by his wife's sister.

We then manipulated the extent to which Kevin felt tempted by the vice. In the tempted condition, Kevin has always been tempted by the vice, and currently finds it to be very enticing. In the not tempted condition, Kevin has never been tempted by the vice, having always found it to be unappealing. In the reformed condition, Kevin was formerly tempted by the vice, has since taken control of his urges, and now finds the temptation to be unappealing. In all cases, Kevin chooses the virtuous option. See supporting materials for the full scenario.

Participants evaluated Kevin using the same three-item perceived virtue measure used in the previous study ($\alpha = .89$). Participants then rated "How strong is Kevin's willpower?", "How

weak is Kevin's willpower?" (reverse coded), and "How disciplined is Kevin?", which were averaged to create a three-item willpower measure ($\alpha = .84$). Participants also rated: "How pure is Kevin's moral character?", "How tainted is Kevin's moral character?" (reverse coded), and "How corrupted is Kevin's moral character?" (reverse coded), which were averaged to create a three-item purity measure ($\alpha = .79$)³. Participants also rated the extent to which Kevin was likely to succumb to temptation in the future. Specifically, participants were asked "How likely is Kevin to cheat on his diet [wife] in the future?" All items employed a nine-point scale. At the end of the survey, participants then rated their belief in the morality of thoughts ($M = 5.02$, $SD = 1.36$; see Appendix).⁴

Results

Main Analysis: Figure 3 displays the main results. Consistent with our prediction, a two-way ANOVA revealed a significant Behavior Type x Temptation interaction, $F(2, 211) = 13.18$, $p < .001$, $\eta^2 = .11$. Follow up analyses of our main DVs examine the non-moral and moral conditions separately.

Non-Moral Behavior: Replicating our previous findings, participants in the tempted condition ($M = 6.61$, $SD = 1.23$) rated Kevin to be more virtuous than those in the not tempted condition ($M = 5.11$, $SD = 1.16$), $t(71) = 5.37$, $p < .001$, $d = 1.27$, 95% $CI_d = [.73, 1.78]$. Further,

³ Across all participants, the virtue measure was significantly correlated with both the willpower ($r = .54$, $p < .001$) and the purity measures ($r = .55$, $p < .001$). The willpower and purity measure were also correlated with each other ($r = .45$, $p < .001$).

⁴ We first examined if our main manipulation affected the morality of thoughts scale. A two-way ANOVA with decision type and temptation level revealed an unexpected main effect of decision type, such that those in the moral condition ($M = 5.25$, $SD = 1.50$) were more likely to indicate that thoughts were sinful than those in the non-moral condition ($M = 4.80$, $SD = 1.17$), $F(1, 211) = 6.15$, $p = .014$. There were no other significant effects $ps > .10$. While we find a main effect of decision type on the morality of thoughts scale, our main predictions involve an interaction between morality of thoughts, temptation and decision type, and therefore this effect is unlikely to explain our results. Additionally, a replicate of the current study in the supporting materials (Study S2) confirms the findings of this study and shows no evidence that the manipulation impacted the morality of thoughts scale.

participants in the reformed condition ($M = 6.21$, $SD = 1.50$) rated Kevin to be more virtuous than did those in the not tempted condition, $t(70) = 3.49$, $p < .001$, $d = 0.82$, 95% $CI_d = [.32, 1.32]$. Perceived virtue did not significantly differ between the tempted condition and the reformed condition, $t(69) = 1.24$, $p = .22$, $d = .31$, 95% $CI_d = [-.18, .78]$.

We predict that for non-moral behaviors, the effect of the condition on perceived virtue will be determined by willpower and not by purity. We conducted a multiple mediation analysis using the bootstrap method with 5,000 samples to test whether willpower or purity is driving these results (Hayes & Preacher, 2014). We tested the mediation model using three independent variables (tempted, not-tempted, reformed) and two mediator variables (willpower, purity). The model is significant if the confidence interval for the indirect effect does not include zero. Consistent with our predictions, we find a significant indirect effect for willpower (Indirect Effect = 0.10, $SE = 0.066$; 95% C.I. = [0.01, 0.25]), but not for purity (Indirect Effect = 0.004, $SE = 0.011$; 95% C.I. = [-0.01, 0.04]).

Moral Behaviors: Replicating our previous findings, participants in the not-tempted condition ($M = 6.68$, $SD = 1.66$) rated Kevin to be more virtuous than did those in the tempted condition ($M = 5.62$, $SD = 1.94$), $t(70) = 2.47$, $p = .016$, $d = .60$, 95% $CI_d = [.10, 1.07]$. Further, participants in the not-tempted condition rated Kevin to be more virtuous than those in the reformed condition ($M = 5.76$, $SD = 1.81$), $t(70) = -2.24$, $p = .028$, $d = .54$, 95% $CI_d = [.05, 1.01]$. Perceived virtue did not significantly differ between the tempted condition and the reformed condition, $t(72) = 0.31$, $p = .76$, $d = -.08$, 95% $CI_d = [-.55, .40]$.

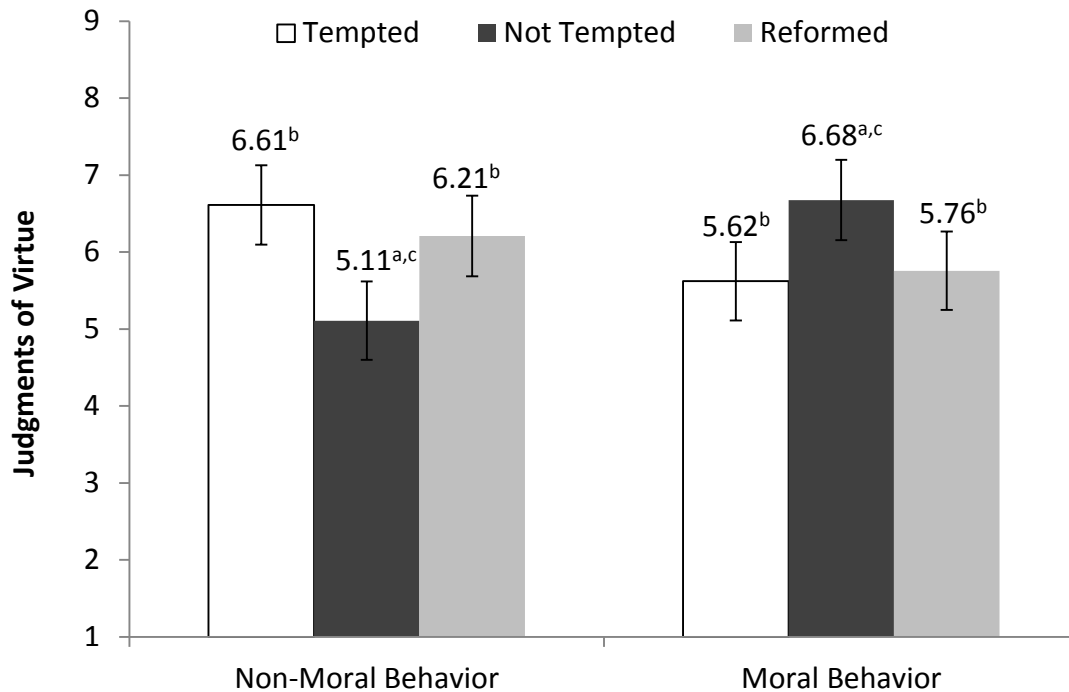


Figure 3: Perceived virtue for non-moral and moral behaviors in Study 4. Error bars represent 95% CI. Notes: a = Significantly different from tempted condition; b = Significantly different from the not tempted condition; c = Significantly different from the reformed condition.

We predict that for moral behaviors, the effect of condition on perceived virtue will be determined by purity of character and not by willpower. We tested the same mediation model used in the non-moral condition. Consistent with our predictions, we find a significant indirect effect for purity (Indirect Effect = 0.10, $SE = 0.04$; 95% C.I. = [0.04, 0.21]), but not for willpower (Indirect Effect = -0.006, $SE = 0.01$; 95% C.I. = [-0.01, 0.04]).

Likelihood Measure: A two-way analysis of variance revealed a significant Behavior Type x Temptation interaction, $F(2, 211) = 20.19$, $p < .001$, $\eta^2 = .16$. The results show a similar pattern to the findings for perceived virtue. For the non-moral scenario, participants in the tempted condition ($M = 3.75$, $SD = 1.78$) rated Kevin to be less likely to cheat on his diet in the future than those in the not-tempted condition ($M = 4.70$, $SD = 1.37$), $t(71) = -2.57$, $p = .012$, $d =$

-.60, 95% $CI_d = [-1.08, -.11]$. Participants in the reformed condition ($M = 2.89$, $SD = 1.35$) also rated Kevin to be less likely to cheat on his diet in the future than did those in the not tempted condition, $t(70) = -5.67$, $p < .001$, $d = -1.35$, 95% $CI_d = [-1.86, -.80]$. Finally, those in the reformed condition rated Kevin to be less likely to cheat on his diet than those in the tempted condition, $t(72) = -2.30$, $p = .024$, $d = -.55$, 95% $CI_d = [-1.03, -.06]$.

For the moral scenario, participants in the not-tempted condition ($M = 3.20$, $SD = 1.68$) rated Kevin to be less likely to cheat on his wife in the future than those in the tempted condition ($M = 5.46$, $SD = 2.23$), $t(70) = -4.84$, $p < .001$, $d = -1.16$, 95% $CI_d = [-1.66, -.63]$, or the reformed condition ($M = 4.73$, $SD = 2.12$), $t(70) = -3.39$, $p = .001$, $d = -.81$, 95% $CI_d = [-1.29, -.30]$. Further, those in the reformed condition, rated Kevin to be slightly, but not significantly, less likely to cheat on his wife than those in the tempted condition, $t(72) = -1.44$, $p = .15$, $d = -.34$, 95% $CI_d = [-.81, .14]$.

Morality of Thoughts: A three-way analysis of covariance revealed a significant Behavior Type x Temptation x Morality of Thoughts interaction, $F(2, 205) = 8.61$, $p = .001$, $\eta^2 = .08$, consistent with our prediction.

A spotlight analysis was conducted to probe the simple effects of the morality of thoughts measure on judgments of virtue (Aiken & West, 1991). To do so, we mean centered the morality of thoughts measure and ran a series of regressions that varied the dummy coding of the independent variables (Spiller et al., 2013).

In the moral/tempted condition, participants who scored high on the morality of thoughts scale rated Kevin as being significantly less virtuous than those who scored low on the morality of thoughts scale ($\beta = -0.55$, $SE = 0.19$; $t(205) = -2.84$, $p = .005$). In other words, the more participants believed that thoughts themselves can be immoral, the harsher they were on Kevin

for feeling tempted to cheat on his spouse, despite the fact that he chose not to do it. Similarly, in the moral/reformed condition, participants who scored high on the morality of thoughts scale rated Kevin as being significantly less virtuous than those who scored low on the morality of thoughts scale ($\beta = -0.36$, $SE = 0.17$; $t(205) = -2.06$, $p = .038$). Again, the more participants believed that thoughts are immoral, the harsher they were on Kevin for having felt tempted to cheat on his spouse in the past. Further, these results flipped for the moral/not-tempted condition ($\beta = 0.56$, $SE = 0.23$; $t(205) = 2.48$, $p = .014$). In this case, participants who score high on the morality of thought scale felt that Kevin was highly virtuous for not feeling tempted to cheat on his spouse. These contrasts were not seen under any of the non-moral conditions ($ts < 1.76$). Figure 4 displays these results.

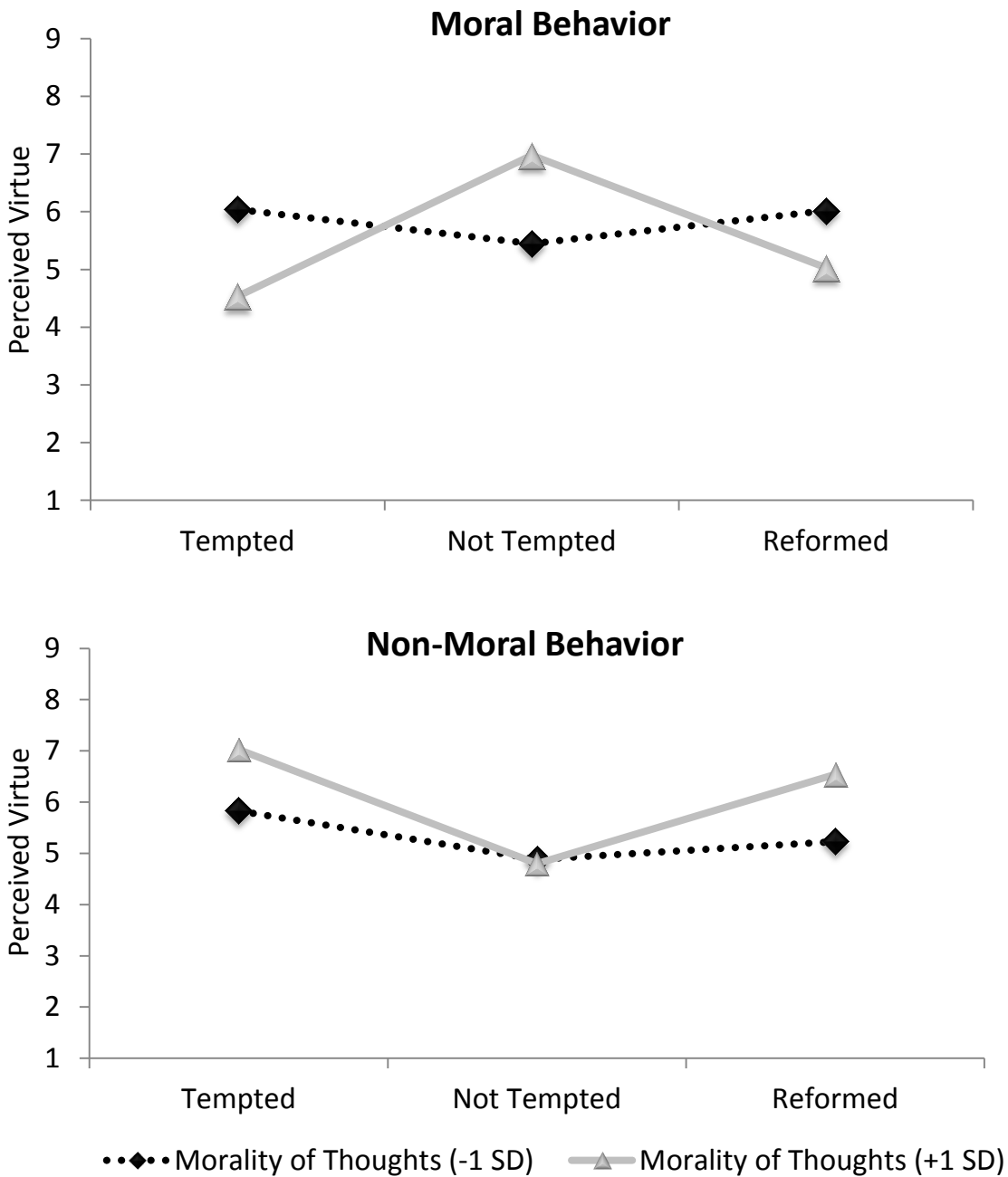


Figure 4: Judgments of virtues at varying levels of the morality of thoughts scale. The top panel represents virtue judgments for the moral condition (cheating on a spouse). The bottom panel represents virtue judgments for the non-moral condition (cheating on a diet). For display purposes, morality of thoughts is graphed at ± 1 standard deviation from the mean.

Discussion

Study 4 shows that for non-moral virtuous behaviors, willpower determines perceived virtue, whereas for moral virtuous behaviors, purity of character determines perceived virtue. It also builds on our previous findings by showing that reformed individuals, or those that have changed their inner-state such that they no longer feel tempted, are viewed differently according to the morality of a decision. For non-moral behaviors, reformation signals willpower, and as a result, reformed individuals are seen as highly virtuous. For moral behaviors, reformation signals impurity, and as a result, reformed individuals are seen as less virtuous than those who do not feel tempted to sin. Finally, we show how individual differences in the belief regarding the morality of thoughts moderate these results. Participants who believe that sinful thoughts are as bad as actions were harsher on Kevin when he resisted an immoral vice, whereas belief in the sinfulness of thoughts was not related to non-moral behaviors.

This study further shows that individuals who perceived as highly virtuous were also perceived to be more likely to accomplish their higher-order goals. For non-moral behaviors, overcoming the temptation—through resisting or reforming—made Kevin seem more likely to stick to his diet than some who did not feel tempted to sin. However, for moral behaviors, Kevin was seen as most likely to remain faithful to his wife if he never felt tempted to cheat and less likely to remain faithful to his wife if he needed to resist or was reformed.

Note that our main prediction for the moral/reformed condition was that despite having “turned a new leaf”, a reformed individual would be seen as less pure and less virtuous than someone who never felt tempted. However, one may also expect that for moral virtuous behavior, a reformed individual would appear to have a more enduring commitment to good behavior than a tempted individual, and would appear more virtuous as a result. In the present

study, we found that for moral virtuous behavior, Kevin was seen as directionally more virtuous and less likely to cheat on his wife in the future when he was reformed than when he simply felt tempted, however, these differences were not significant.

It is possible that feeling tempted to cheat on one's wife with her sister is such a severe violation of trust, that even becoming reformed would not cause participants to look past Kevin's former immoral desires. In a slightly modified version of the present study, we tested a scenario that involved a weaker violation of trust (see supporting materials, Study S2). Instead of being tempted by his wife's sister, Kevin was propositioned by a prostitute, and turned down the offer. We replicate all main results from the present study, and further find that when Kevin was reformed of his urges to sleep with another woman, he was viewed more favorably than when he felt tempted (perceived virtue, $p = .06$; likelihood to cheat, $p < .001$) but less favorably than when he did not feel tempted (perceived virtue, $p = .04$; likelihood to cheat, $p < .001$). Thus in the alternate version, the reformed condition falls between the tempted and not tempted conditions, suggesting that for moral behaviors, reformation signals moderate purity.

GENERAL DISCUSSION

Individuals and researchers alike often assign moral significance to decisions involving temptation, regardless if these decisions have direct moral consequences. In the present research, we investigate how laypeople think about virtuous behavior across moral and non-moral decisions and find a critical distinction. For non-moral virtuous behavior, people focus on willpower when judging character. Therefore, they judge individuals who resist temptations or are reformed as being more virtuous than those who do not feel tempted and thus do not display willpower. However, for moral virtuous behavior, purity is primary. Therefore, people judge

individuals who resist temptations and those who are reformed as being less virtuous than those not tempted, because feeling tempted (even in the past) signals impurity.

In this paper, we utilize a Western subject pool to test our hypotheses, and examine and contexts in traditional correspondence with a Western view of morality. However, categorizations of morality vary across cultures and can also change within a culture over time. For instance, in some cultures actions that affect the self can take on moral meaning when they pertain to standards of divinity and sanctity (Graham, et al., 2009; Haidt, Koller & Dias, 1993; Shweder et al., 1997). Moreover, within a culture, over time, non-moral preferences can become morally charged, as has been the case with cigarette smoking in the United States (Rozin, 1999; Rozin & Singh, 1999; Rozin et al., 1997). Nonetheless, we expect that the primacy of purity and willpower change as an action becomes more or less morally charged, even if the categorization of moral vs. non-moral actions differs across people or time.

This paper focuses on situations whereby individuals either do or do not feel tempted by a vice. As a result, we hold higher-order values constant across conditions, and manipulate whether an individual feels tempted by a corresponding vice. However, individuals are also sensitive to cues that signal whether an agent has poorly intentioned values (Piazza et al., 2014; Pizzaro et al., 2003), which additionally affects judged virtue. Future research can examine how virtue is judged when higher-order values differ between people. Consider a student who chooses not to study because he does not care about the consequences. It is likely that he would be judged as less virtuous than a student who cares but is merely weak-willed. Thus, higher-order values likely affect the relationships between purity and virtue even for non-moral actions.

Although we have ruled out a number of alternative explanations in our studies, it is important to note that morality is not a simple construct, but is multi-faceted and complex. As a

result, any manipulation that affects how immoral an action is perceived will also affect a range of underlying factors that are intimately tied with moral beliefs. For instance, consider the cases of smoking, drinking alcohol, or recreational drug use, whereby people may differ greatly on the degree to which they believe it is immoral to engage in these behaviors. Those who believe that these activities are immoral are likely to believe that it is more consequential, impermissible, deviant, and disgusting than someone who does not believe that these are immoral. While each of these factors contribute to perceptions of morality, future research can examine which subset of factors are particularly central to perception of virtue.

In our studies, we rely primarily on hypothetical scenarios to convey the internal thoughts of actors. In the real world, people often do not have direct access to people's thoughts. Instead, they must rely on external cues, such as decision speed (Critcher et al., 2012) or facial expressions (Ames & Johar, 2009) to assess an actor's internal desires. Nonetheless, our results suggest that merely verbally expressing a desire to act immorally reflects poorly on an actor, even if the actor does not engage in immoral behavior. In other words, people likely face reputational disincentives for admitting to feeling tempted by immoral action. Thus, those who have chronic desires to act immorally (e.g., kleptomaniacs) may find it difficult to discuss their urges with others for fear of being judged negatively, and these repercussions could limit their likelihood of seeking help. For immoral desires that are more common, this reputational disincentive may lead to pluralistic ignorance, whereby many people may feel common desires to act immorally, but are hesitant to admit as much, and may therefore underestimate the number of others who feel similarly. Future research should examine people's predictions about others' temptations and behaviors to examine if they are more likely to underestimate certain types of temptations more than others.

Irrespective of the morality of an action, it has been proposed that an excess of any virtuous character trait may have damaging consequences for one's well being (Aristotle, trans 2011; Grant & Schwartz, 2011; but see Park, et al., 2004). For instance, individuals who are extremely far-sighted often regret their overly prudent past self (Kivetz & Keinan, 2006). For these far-sighted individuals, it may require effortful action in order to “let go” and enjoy hedonically pleasing options. Thus it is possible that those who have an extreme preference for prudence may be seen as highly virtuous if they occasionally utilize effort in order to override their intrinsic prudent desires.

Furthermore, while we examine individuals who utilize willpower to regulate their behavior, there are other ways in which people self-regulate their actions. For instance, individuals often pre-commit to an option by limiting their freedom to over- or under-indulge (Kivetz & Simonson, 2002; Wertenbroch, 1998). People can pre-commit to non-moral virtues such as preparing healthy meals in advance of the workweek or to moral virtues such as setting up an automatic monthly payment to charitable organizations. Moreover, those who pre-commit may do so because they are pure (i.e., they are highly enthusiastic about a virtue option) or because they lack willpower (i.e., they need to pre-commit because they cannot control himself in the moment). An individual who pre-commits because he lacks willpower nonetheless displays self-awareness, a trait that may be seen as highly virtuous to others. Thus, it would be of interest to examine the conditions under which pre-commitment does and does not signal virtue.

Finally, while we focus our research on cases of purity and willpower, additional research can also identify how individuals evaluate other determinants of virtuous behavior, such as those requiring courage or wisdom. Just as individuals can differ in their need to overcome temptation when faced with a hedonically pleasing option, individuals also differ in the extent to which they

need to overcome fear in order to act courageously. Further, an individual can act courageously in both non-moral (e.g., overcoming a fear of swimming) and moral contexts (e.g., saving a person from drowning). Yet, it remains unclear whether someone who overcomes fear in order to act courageously is considered more or less virtuous than someone who finds it easy to engage in courageous behavior.

In sum, although there are many similarities across a wide range of virtuous behaviors, we show how the lay meaning of virtue differs across moral and non-moral behaviors. For non-moral behaviors, individuals look towards willpower to evaluate virtue, but for moral behaviors, individuals look towards purity.

REFERENCES

- Aiken, L. S. & West, S.G. (1991). *Multiple Regression*, Newbury Park, CA: Sage.
- Ames, D. R., & Johar, G. V. (2009). I'll know what you're like when I see how you feel: How and when affective displays influence behavior-based impressions. *Psychological Science*, 20, 586–593.
- Aristotle (2011), *Nicomachean ethics* (R.C. Bartlett and S. D. Collins, trans.) Chicago: University of Chicago Press.
- Barnes, C. M., Schaubroeck, J., Huth, M. & Ghumman, S. (2011). Lack of Sleep and Unethical Conduct. *Organizational Behavior and Human Decision Processes*, 115 (2), 169-80.
- Bartels, D. M. & Rips, L.J. (2010). Psychological Connectedness and Intertemporal Choice. *Journal of Experimental Psychology: General*, 139 (1), 49–69.
- Bartels, D. M & Urminsky, O. (2011). On Intertemporal Selfishness: The Perceived Instability of Identity Underlies Impatient Consumption. *Journal of Consumer Research*, 38 (1), 182–98.
- Batson, C.D., Early, S., & Salvarani, G. (1997). Perspective Taking: Imagining How Another Feels versus Imagining How You Would Feel. *Personality and Social Psychology Bulletin*, 23 (7), 751–58.
- Batson, C.D., Lishner, D.A., Carpenter, A., Dulin, L. Harjusola-Webb, S., Stocks, E. L., Gale, S., Hassan, O., & Samput, B. (2003). “. . . As You Would Have Them Do Unto You”: Does Imagining Yourself in the Other’s Place Stimulate Moral Action? *Personality and Social Psychology Bulletin*, 29 (4), 1190–1201.
- Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D.M. (1998). Ego Depletion: Is the Active Self a Limited Resource? *Journal of Personality and Social Psychology*, 74 (5), 1252–65.
- Baumeister, R. F., & Exline, J. J. (1999). Virtue, personality, and social relations: Self-control as the moral muscle. *Journal of Personality*, 67, 1165–1194.
- Cohen, A. B., & Rozin, P. (2001). Religion and the morality of mentality. *Journal of Personality and Social Psychology*, 81, 697-710.

- Critcher, C. R., Inbar, Y., & Pizarro, D. A. (2012). How quick decisions illuminate moral character. *Social Psychological and Personality Science*, 4(3) 308-15.
- Dhar, R. & Wertenbroch, K. (2011). Self-Signaling and the costs and benefits of temptation in consumer choice. *Journal of Marketing Research*, 49 (1), 15-25.
- Ersner-Hershfield, H., Garton, M.T., Ballard, K., Samanez-Larkin, G.R., & Knutson, B. (2009). Don't stop thinking about tomorrow: Individual differences in future self-continuity account for saving. *Judgment and Decision Making*, 4 (4), 280–86.
- Fishbach, A., & Woolley, K. (2015). Avoiding ethical temptations. *Current Opinion in Psychology*, 6, 36-40.
- Foot, P. (1978). *Virtues and vices and other essays in moral philosophy*. Berkeley: University of California Press.
- Frankfurt, H. G. (1971), Freedom of the will and the concept of a person. *The Journal of Philosophy*, 68, 5-20.
- Gelman, S.A. (2004). Psychological essentialism in children. *Trends in Cognitive Sciences*, 8 (9), 404-409.
- Giner-Sorolla, R. (2001). Guilty pleasures and grim necessities: Affective attitudes in dilemmas of self-control. *Journal of Personality and Social Psychology*, 80 (February), 206–221.
- Gino, F., Schweitzer, M.E., Mead, N.L., & Ariely, D. (2011). Unable to resist temptation: How self-control depletion promotes unethical behavior. *Organizational Behavior and Human Decision Processes*, 115, 191-203.
- Goodwin, G.P. & Darley, J.M. (2008). The psychology of meta-ethics: Exploring objectivism. *Cognition*, 106, 1339-1366.
- (2010), The perceived objectivity of ethical beliefs: Psychological findings and implications for public policy,” *Review of Philosophy and Psychology*, 1 (2), 161-188.
- Graham, J., Haidt, J., & Nosek, B.A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96, 1029–1046.
- Grant, A.M. & Schwartz, B. (2011). Too much of a good thing: The challenge and opportunity of the inverted U. *Perspectives on Psychological Science*, 6 (1), 61-76.

- Gray, K., Waytz, A. & Young, L., (2012). The Moral Dyad: A Fundamental Template Unifying Moral Judgment, *Psychological Inquiry*, 23, 206-215.
- Haidt, J., & Kesebir, S. (2010). Morality. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., pp. 797–832). Hoboken, NJ: Wiley.
- Haidt, J., Koller, S., & Dias, M. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, 65, 613-628.
- Hagger, M.S., Wood, C., Stiff, C. & Chatzisarantis, N.L.D (2010) Ego depletion and the strength model of self-control: A meta-analysis. *Psychological Bulletin*, 136 (4), 495-525.
- Hayes, A. F., & Preacher, K.J. (2014). Statistical mediation analysis with a multicategorical independent variable. *British Journal of Mathematical and Statistical Psychology*, 67, 451-470.
- Hershfield, H.E., Goldstein, D.G., Sharpe, W.F., Fox, J. Yeykelis, L, Carstensen, L.L. & Bailenson, J.N. (2011). Increasing saving behavior through age-progressed renderings of the future self." *Journal of Marketing Research*, 48, S23-37.
- Inbar, Y., Pizarro, D. A., & Cushman, F. (2012). Benefiting from misfortune: When harmless actions are judged to be morally blameworthy. *Personality and Social Psychology Bulletin*, 38, 52-62
- Jeffrey, R. C. (1974). Preference among preferences. *Journal of Philosophy*, 71, 377-91.
- Kant, I. (1998). *The groundwork for the metaphysics of morals* (M. J. Gregor, Trans.). Cambridge, England: Cambridge University Press. (Original work published 1785)
- Khan, U. & Dhar, R. (2006). Licensing Effect in Consumer Choice. *Journal of Marketing Research*, 43, 359-266.
- & ——— (2007). Where there is a will, is there a way? The effect of future choices on self-control. *Journal of Experimental Psychology*, 136 (2), 277–288.
- Klein, N., & O'Brien, E. (2017). The power and limits of personal change: When a bad past does (and does not) inspire in the present. *Journal of Personality and Social Psychology*, 113(2).

- Kivetz, R., & Keinan, A. (2006). Repenting hyperopia: An analysis of self-control regrets. *Journal of Consumer Research*, 33, 273–282.
- Kivetz, R., & Simonson, I. (2002). Earning the right to indulge: Effort as a determinant of customer preferences toward frequency program rewards. *Journal of Marketing Research*, 39(2), 155-170.
- Kotabe, H. P., & Hofmann, W. (2015). On integrating the components of self-control. *Perspectives on Psychological Science*, 10(5), 618-638.
- Kouchaki, M., & Smith, I. H. (2014). The morning morality effect: The influence of time of day on unethical behavior. *Psychological Science*, 25(1), 95-102.
- Krull, D. S., Seger, C. R., & Silvera, D. H. (2008). Smile when you say that: Effects of willingness on dispositional inferences. *Journal of Experimental Social Psychology*, 44, 735-742.
- Lian, H., Yam, K. C., Ferris, D. L., & Brown, D. (2017). Self-control at work. *Academy of Management Annals*, annals-2015.
- Loewenstein, G., Read, D., & Baumeister, R. (2003). *Time and Decision: Economic and Psychological Perspectives on Intertemporal Choice*, New York: Russell Sage Foundation.
- Loewenstein, G. & Small, D.A. (2007). The scarecrow and the tin man: The vicissitudes of human sympathy and caring. *Review of General Psychology*, 11 (2), 112–126.
- Muraven, M. & Baumeister, R.F. (2000). Self-regulation and depletion of limited resources: Does self-control resemble a muscle?" *Psychological Bulletin*, 126 (2), 247-259.
- Mead, N. L., Baumeister, R. F., Gino, F., Schweitzer, M. E., & Ariely, D. (2009). Too tired to tell the truth: Self-control resource depletion and dishonesty. *Journal of Experimental Social Psychology*, 45(3), 594-597.
- Medin, D. L., & Ortony, A. (1989). Psychological essentialism. *Similarity and Analogical Reasoning*, 179-195.
- Milkman, K.L., Rogers, T. & Bazerman, M.H. (2008). Harnessing our inner angels and demons: What we have learned about want/should conflicts and how that knowledge can help us

- reduce short-sighted decision making. *Perspectives on Psychological Science*, 3, 324-338.
- (2009). Highbrow films gather dust: Time-inconsistent preferences and online DVD rentals,” *Management Science*, 55 (6), 1047–59.
- Mischel W., Shoda Y., & Rodriguez, M.I. (1989). Delay of gratification in children. *Science*, 244, 933–938.
- Monin, B., Pizarro, D. A., & Beer, J. S. (2007). Deciding versus reacting: Conceptions of moral judgment and the reason-affect debate. *Review of General Psychology*, 11(2), 99.
- Park, N., Peterson, C., & Seligman, M. E. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, 23(5), 603-619.
- (2006). Character strengths in fifty-four nations and the fifty US states. *The Journal of Positive Psychology*, 1(3), 118-129.
- Piazza, J., Goodwin, G. P., Rozin, P., & Royzman, E. B. (2014). When a virtue is not a virtue: Conditional virtues in moral evaluation. *Social Cognition*, 32(6), 528-558.
- Pizarro, D., Uhlmann, E., & Salovey, P. (2003). Asymmetry in judgments of moral blame and praise: The role of perceived metadesires. *Psychological Science*, 14, 267–272.
- Pizarro, D. A., & Tannenbaum, D. (2012). Bringing character back: How the motivation to evaluate character influences judgments of moral blame. In M. Mikulincer & P. R. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil* (pp. 91–108). Washington, DC: American Psychological Association.
- Rai, T. S., & Fiske, A. P. (2011). Moral psychology is relationship regulation: moral motives for unity, hierarchy, equality, and proportionality. *Psychological Review*, 118(1), 57-75.
- Read, D., Loewenstein, G.F., & Kalyanaraman, S. (1999). Mixing virtue and vice: Combining the immediacy effect and the diversification heuristic. *Journal of Behavioral Decision Making*, 12 (December), 257–273.
- Reeder, G. D. (2009), Mindreading: Judgments about intentionality and motives in dispositional inference. *Psychological Inquiry*, 20, 1-18.

- Righetti, F. & Finkenauer, C. (2011). If you are able to control yourself, I will trust you: The role of perceived self-control in interpersonal trust. *Journal of Personality and Social Psychology*, 100 (5), 874-86.
- Rozin, P. (1999). The process of moralization. *Psychological Science*, 10, 218-221.
- Rozin, P., Markwith, M., & Stoess, C. (1997). Moralization and becoming a vegetarian: The transformation of preferences into values and the recruitment of disgust. *Psychological Science*, 8, 67-73.
- Rozin, P. & Singh, L. (1999). The moralization of cigarette smoking in the United States. *Journal of Consumer Psychology*, 8 (3), 321-37.
- Shweder, R. A., Much, N. C., Mahapatra, M., & Park, L. (1997). The “big three” of morality (autonomy, community, and divinity), and the “big three” explanations of suffering. In A. Brandt & P. Rozin (Eds.), (pp. 119–169). New York: Routledge.
- Small, D. A. & Simonsohn, U. (2008). Friends of victims: Personal experience and prosocial behavior. *Journal of Consumer Research*, 35 (October), 532–42.
- Spiller, S.A., Fitzsimons, G.J., Lynch, J.G., & McClelland, G.H. (2013). Spotlights, Floodlights, and the Magic Number Zero: Simple Effects Tests in Moderated Regression. *Journal of Marketing Research*, 50, 277-88.
- Starmans, C., & Bloom, P. (2016). When the spirit is willing, but the flesh is weak: Developmental differences in judgments about inner moral conflict. *Psychological Science*,
- Stein, R., & Nemeroff, C. J. (1995). Moral overtones of food: Judgments of others based on what they eat. *Personality and Social Psychology Bulletin*, 21, 480-490.
- Tetlock, P. E., Kristel, O. V., Elson, S. B., Green, M. C., & Lerner, J. S. (2000). The psychology of the unthinkable: Taboo trade-offs, forbidden base rates, and heretical counterfactuals. *Journal of Personality and Social Psychology*, 78, 853-870.
- Villano, M. (2006). Stick Fingers in the Supply Closet. *New York Times* (April 30). Retrieved from www.nytimes.com.

Vohs, K. D. & Faber, R.J. (2007). Spent resources: Self-regulatory resource availability affects impulse buying. *Journal of Consumer Research*, 33 (March), 537-47.

Vohs, K. D., & Heatherton, T. F. (2000). Self-regulatory failure: A resource-depletion approach. *Psychological Science*, 11(3), 249-254.

Werthenbroch, K. (1998). Consumption self-control by rationing purchase quantities of virtue and vice. *Marketing Science*, 17, 317–337.

APPENDIX**MORALITY OF THOUGHTS SCALE**

1. A feature of sinful people is that they are tempted to do sinful things.
2. Being a moral person is more a matter of what is in your heart rather than what you do.
3. The thoughts that a person consciously entertains are an important part of a person's character.
4. Feeling tempted to do something sinful is as bad as doing it.

Note: All items were rated on a nine-point scale ranging anchored by 1 = “Strongly disagree”; 5 = “Neither agree nor disagree”; and 9 = “Strongly agree”.