

# Does Deciding Among Morally Relevant Options Feel Like Making a Choice? How Morality Constrains People's Sense of Choice

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We demonstrate that a difference exists between *objectively having* and *psychologically perceiving* multiple-choice options of a given decision, showing that morality serves as a constraint on people's perceptions of choice. Across 8 studies ( $N = 2,217$ ), using both experimental and correlational methods, we find that people deciding among options they view as moral in nature experience a lower sense of choice than people deciding among the same options but who do not view them as morally relevant. Moreover, this lower sense of choice is evident in people's attentional patterns. When deciding among morally relevant options displayed on a computer screen, people devote less visual attention to the option that they ultimately reject, suggesting that when they perceive that there is a morally correct option, they are less likely to even consider immoral options as viable alternatives in their decision-making process. Furthermore, we find that experiencing a lower sense of choice because of moral considerations can have downstream behavioral consequences: after deciding among moral (but not nonmoral) options, people (in Western cultures) tend to choose more variety in an unrelated task, likely because choosing more variety helps them reassert their sense of choice. Taken together, our findings suggest that morality is an important factor that constrains people's perceptions of choice, creating a disjunction between objectively having a choice and subjectively perceiving that one has a choice.

*Keywords:* morality, choice, moral conviction, variety seeking, process tracing

Objectively, people make choices whenever they select an option from two or more alternatives, and this is the definition of choice enshrined in neoclassical economics (Neumann & Morgenstern, 1944). However, psychologically, what constitutes a choice? There are certainly times when people pick one of multiple options but do not necessarily feel like they are making a choice at all (Savani, Markus, Naidu, Kumar, & Berlia, 2010). Consider Muhammed Chohan, who was sitting in his car when he witnessed a thief smash the passenger window of the car in front him, slap a woman sitting in the driver's seat, grab her bag, and then start running away. Chohan suddenly had a decision to make. Would he

go about his business as if nothing had happened, or would he try to intervene on the victim's behalf? Chohan did the latter. He jumped out of his own car and chased the thief. The thief ultimately escaped, but Chohan was able to retrieve some of the woman's possessions that the thief had dropped during the pursuit.

Chohan was hailed as a hero by the media and praised for his bravery. It is reasonable to expect that Chohan might view his decision to help as a deliberate personal choice—one reflective of his upstanding character—granting him personal and public credit for making a morally praiseworthy decision. In a subsequent interview, however, Chohan remarked, "When I noticed a young lady in need, I had no choice but to help." (Mkamba, 2013). Although Chohan was faced with an objective choice between staying put or chasing the thief, his comments do not reflect a strong sense of choice in the matter. In the present research, we investigate whether morality is a factor that constrains people's perceptions of choice, creating a disjunction between objectively having a choice and psychologically perceiving that one has a choice, and examine a downstream behavioral consequence of this disjunction (i.e., variety seeking).

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## Moral Choices

Philosophers, psychologists, and lay people have long been concerned with perceptions of choice. In general, people value their ability to choose to such an extent that many psychologists consider *autonomy* to be a fundamental psychological need (Ryan

& Deci, 2000). This drive for autonomy is so strong that people often subjectively perceive that they have made a choice even when they have not (Bear & Bloom, 2016). People also tend to have an illusion of control, believing that they can unduly influence chance or near-chance events (Langer, 1975). This sense of personal choice can be functional and adaptive, contributing to better mental health (Taylor & Brown, 1988) and even longevity (Langer & Rodin, 1976; Schulz, 1976).

While a wealth of research has shown that people are motivated to perceive that they have choices, some initial research has demonstrated that there are variations in people's choice perceptions. For example, a cross-cultural study found that Indians are less likely than Americans to view mundane actions, such as picking which of two cubicles to sit in, as choices (Savani et al., 2010). However, even within the U.S. sample, there was substantial variation in people's tendency to perceive the act of picking one of multiple options as a choice (Savani et al., 2010). Aside from cultural influences, however, there is little empirical research on factors that shape or constrain whether people perceive an act of selecting one of multiple options as a choice. We ask whether morality is one such factor.

Morality involves appraisals of right and wrong, as reflected in the definition provided by the American Psychological Association's *Dictionary of Psychology* (Morality, 2018): morality is "a system of beliefs or set of values relating to right conduct, against which behavior is judged to be acceptable or unacceptable." According to this definition, morality prescribes what people think they *should* do, not what they feel forced to do. For centuries, philosophers have acknowledged important connections between people's morality and their decisions, arguing that a sense of choice and free will are prerequisite for holding people morally responsible for their actions (Kant, 1788/1997). Some even claim that in the absence of free will, there does not seem to be much place for ethics at all (Lemmon, 1962). In the present research, we ask whether morality influences people's perceptions of choice when they are making a decision. Two lines of research in moral psychology make contrasting predictions.

Given that autonomy is highly valued in many cultures (Ryan & Deci, 2000), and that people can maintain a sense of autonomy by believing that they are freely making choices, one might expect that people would perceive the act of picking one of multiple morally relevant options as a choice. Indeed, a person's sense of choice might even be amplified by morality, because moral decisions are typically more personally important than nonmoral decisions (Skitka, 2010; Turiel, 2002). As people strive to main positive self-views, and positive *moral* self-views in particular (Mazar, Amir, & Ariely, 2008), they might be more likely to view their moral decisions as *choices* because doing so could allow them to claim moral credits for having freely chosen the morally right option—credits that researchers have shown people sometimes use to excuse subsequent immoral behavior (Monin & Miller, 2001).

Yet, there exists an alternative possibility: that perceptions of morality constrain people's psychological sense of choice, such that moral decisions feel less like choices than decisions that are not moral in nature. In contrast to preferences or desires, which reflect people's likes and dislikes (Zajonc, 1980), people often view moral beliefs and attitudes in terms of oughts and ideals—duties to be upheld and virtues to be developed—that reflect their

evaluations of what is right and wrong (Cornwell & Higgins, 2015). Whereas people find it acceptable that different people have different preferences—at least in Western cultures—people tend to view their own moral beliefs as universally true and more objective (Skitka, Bauman, & Sargis, 2005). Thus, when people make a choice between morally relevant options, they may consciously or unconsciously rule out morally wrong alternatives, leaving them with a single acceptable option (Tetlock, 2003). In such cases, the person might be less likely to experience a sense of choice (the subjective perception of whether multiple choice options exist) even when they actually made a choice (between the objectively available options). Thus, morality might be an important factor that constrains people's perceptions of choice—an argument that we elaborate below.

By empirically examining the effect of morality on people's perceptions of choice, we help extend the scope of moral psychology research from examining individuals' moral judgments and decision-making to how individuals psychologically experience morally relevant decisions. While people's moral views form and inform their evaluations of what is right and wrong in a given situation, it is unclear how such moral evaluations psychologically influence their sense of choice in the moment. Moral beliefs help people decide what they *should* do, but people still have a choice as to what they *actually* do. Do such objective choices actually feel like choices?

## Morality and Choice

Morality can serve an important function in individual decision making by reducing ambiguity around appropriate behavioral conduct—as implied by the metaphor of a *moral compass*, which helps guide travelers on their uncertain moral journeys, ruling out options that lead down paths of immorality. In fact, Darwin (1871/1981, p. 70) stated,

I fully subscribe to the judgment of those writers who maintain that of all the differences between man and the lower animals, the moral sense or conscience is by far the most important. This sense . . . is summed up by that short but imperious word *ought*, so full of high significance. It is the most noble of all the attributes of man, leading him without a moment's hesitation to risk his life for that of a fellow-creature; or after due deliberation, impelled simply by the deep feeling of right or duty, to sacrifice it in some great cause.

As Darwin intimates, the "moral sense" that makes us human helps dictate what we "ought" to do, "impelling" us toward certain behaviors, almost as though we have no choice. At the societal level, this perspective is consistent with the functionalist view of morality as a set of values, norms, and practices that "work together to suppress or regulate selfishness and make cooperative social life possible" (Haidt & Kesebir, 2010, p. 800)—constraining individual behavior in a way that allows groups, communities, and even nations, to thrive (e.g., Graham & Haidt, 2010; Smith, Aquino, Koleva, & Graham, 2014). This perspective suggests that when people make decisions based on moral values, they may not subjectively experience as high a sense of choice as when they make decisions in which moral values are not brought to bear.

Research on *moralization*—"the process through which preferences are converted into values, both in individual lives and at the level of culture" (Rozin, 1999, p. 218)—also suggests that morality

might pull decision alternatives from the domain of free choice into the domain of oughts. For example, for much of the 20th century, smoking was considered a nonmoral choice in the United States, but as evidence of the negative health effects of second-hand smoke surfaced, smoking gradually became a morally tinged choice (Rozin & Singh, 1999). In other words, a previously neutral preference or activity can begin to fall under the purview of a functioning moral principle that people internalize. And “preferences that become internalized are more durable, require less attention to maintain, and are more resistant to temptation” (Rozin, 1999, p. 218). Perhaps it is these deep internalizations that Colby and Damon (1992) observed in their study of moral exemplars: “time and again we found our moral exemplars acting spontaneously, out of great certainty, with little fear, doubt, or agonized reflection. They performed their moral actions spontaneously, as if they had no choice in the matter. In fact, the sense that they lacked a choice is precisely what many of the exemplars reported” (p. 303). Such statements suggest that the constraining effect of morality on people’s behavior may similarly constrain their sense of choice.

Moreover, work on sacred values—“any value that a moral community implicitly or explicitly treats as possessing infinite or transcendental significance that precludes comparisons, trade-offs, or indeed any other mingling with bounded or secular values” (Tetlock, Kristel, Elson, Green, & Lerner, 2000, p. 853; see also Baron & Spranca, 1997)—has also shown that when morally sacred values are in play, people often refuse to even consider any alternatives that would violate the value; even suggesting a trade-off between sacred values and tangible gains can invite moral outrage. Indeed, people seem to view immoral options in much the way they view irrational ones: as unrealistic possibilities (Phillips & Cushman, 2017). We suggest that the oughts and ideals prescribed by moral values and beliefs can lead people to psychologically eliminate potentially immoral options from a given choice set, as they quickly discount the immoral alternatives and focus attention on the moral option(s). Therefore, we predict that people will experience a restricted sense of choice in moral matters—even when objectively, they could choose one of multiple options.

### Downstream Consequences

If our prediction is accurate, however, do people actually experience a lower sense of choice while making a morally relevant decision, or do they simply report (post hoc) that they had less choice? And even if people do experience a decreased sense of choice when deciding among morally relevant options, why would it matter?

If people value autonomy, then a sense of constraint upon making moral choices might challenge their views of themselves as agentic and autonomous beings who are actively making choices. Psychological reactance theory argues that when people’s sense of freedom is threatened, they seek to reassert their autonomy in some way (Brehm, 1966; Wicklund, 1974). One way they can do this is through variety seeking (Levav & Zhu, 2009). In Western cultures, making unique choices is viewed as a way to express one’s freedom (Kim & Drolet, 2003). Research has shown that even when feeling *physically* confined or constrained, people strive to regain a sense of freedom in ways as trivial as selecting more varied and unique candy bars. For example, Levav and Zhu

(2009) showed that participants sitting in narrow aisles chose a greater variety of candy bars of any kind, in any combination they pleased, than people sitting in wider aisles. If people feel more psychologically constrained after making moral choices, we predict that they might try to reassert their freedom by subsequently seeking variety, given the opportunity. Therefore, we tested whether a decreased sense of choice following morally laden decisions is powerful enough to lead people to try to reassert their freedom by subsequently choosing more variety in an unrelated, nonmoral task.

### Overview of Studies

We tested our predictions in eight studies. In Studies 1a and 1b, we use correlational designs with samples from both the United States and India to test our primary prediction that people deciding among options they consider morally relevant will experience a lower psychological sense of choice than those who consider the options morally irrelevant. In Study 2, we experimentally manipulate the morality of options in a lab study to test whether people experience a lower sense of choice when the same options are framed as being moral rather than nonmoral in nature. In Studies 3a and 3b, we examine variety seeking as a potential downstream behavioral consequence of the lower sense of choice that people experience after deciding among morally relevant options. In Studies 4a and 4b, we test whether people experience a particularly lower sense of choice when their options are constrained by morality, compared with when their options are constrained by other factors, such as social influence or health-related issues. Finally, in Study 5, we test whether a sense of morality actually alters people’s decision-making process; that is, when deciding among morally relevant options, do people pay less attention to their ultimately nonchosen option, particularly as they approach the stage of making a choice.

We report all participants recruited, all experimental conditions, and all measures in each of the studies. We targeted a sample size of 100 participants per cell at the outset, which would provide 97% power to detect a medium effect size ( $f = .25$ ). In all studies, data were collected until the target sample size was reached.

### Study 1a

In our first study, we examined whether people who make decisions about issues they perceive as being moral in nature report a lower sense of choice than those facing the same decisions but who do not perceive them as being moral in nature. We presented participants with four scenarios (related to abortion, smoking marijuana, gun control, and recycling) and asked them to make decisions and report their felt sense of choice. We also measured whether participants perceived each of the four issues as being moral or nonmoral in nature. We adapted these issues from past work on moral convictions (Skitka, 2010, 2014).

### Method

Sample size was determined before data collection began at 200. There were 200 individuals (88 women, 112 men;  $M_{\text{age}} = 33.8$  years,  $SD = 10.2$ ) residing in the United States who were recruited through Amazon Mechanical Turk, receiving \$0.50 for their par-

participation. Participants were presented with four hypothetical scenarios in random order (see Appendix for the scenarios).

To measure participants' perceptions of the morality of the issues, we asked them to respond to the following question on a 5-point scale (1 = *not at all*, 5 = *very much*) before reading each scenario: "Do you consider abortion (or smoking marijuana, or gun control, or recycling) to be a moral issue?" They were then presented with the respective scenario, indicated their decision, and then reported their sense-of-choice related to that decision.

We presented participants with four scenarios in which they had to make a choice between two options whose morality is debated in American society. That is, for each option, we predicted that many Americans think that at least one of the two options are moral in nature, whereas others think that both options are non-moral in nature. Participants were asked to imagine that a friend had asked them whether she should abort her unwanted child (abortion scenario), that a friend offered them some marijuana to smoke (marijuana scenario), that their homeowner association asked them to vote to ban firearms (gun control scenario), and that after a long trip they could dump a stack of junk mail in the trash or take the junk mail down to the recycling bin at the basement of their building (recycling scenario). Participants were asked to indicate the advice that they would offer their friend about the abortion (have vs. do not have an abortion), whether they would accept their friend's offer to smoke marijuana (smoke vs. decline), whether they would vote to ban firearms (ban vs. no ban), and whether they would recycle (recycle vs. not recycle).

Right after participants made a choice for each scenario, their decision was displayed on the screen and they were asked to indicate their agreement with a statement measuring their feelings of constraint related to that decision: for example, "I had to tell her she should (or should not) have an abortion; I didn't have a choice" on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). These items, reverse-coded, served as our measures of *sense of choice*.

## Results

Table 1 reports the means and *SDs* of all variables measured,

Table 1  
*Descriptive Statistics and Correlations in Study 1a*

Variable	Mean	(SD)	1	2	3	4	5	6	7	8	9	10	11
1. Morality of smoking marijuana	1.74	1.10											
2. % Smoked marijuana	41.0%	—	-.19**										
3. Smoking marijuana sense-of-choice	6.15	1.49	-.25***	.25***									
4. Morality of abortion	3.20	1.36	.38***	-.097	-.18**								
5. % Advised abortion	56.0%	—	-.25***	.19**	.19**	-.49***							
6. Abortion sense-of-choice	5.16	1.96	-.19**	.16*	.41***	-.25***	.26***						
7. Morality of gun control	2.84	1.33	.33***	-.06	-.14	.19**	.018	-.13					
8. % Voted to ban gun	35.0%	—	-.12	.03	.040	-.20**	.27***	.063	.27***				
9. Gun ban vote sense-of-choice	5.58	1.78	-.18*	.13	.41***	-.11	.086	.53***	-.22**	-.07			
10. Morality of recycling	2.82	1.28	.14*	.01	-.003	.078	.057	.030	.30***	.13	-.07		
11. % Decided to recycle	80.5%	—	-.11	0	-.001	-.078	.15*	.11	.033	.044	-.06	.25***	
12. Recycling sense-of-choice	5.47	1.79	-.12	.079	.37***	.024	.073	.45***	-.12	-.056	.49***	-.17*	-.119

Note. Should have an abortion is coded as: (0 No, 1 Yes). Vote to ban firearms is coded as: (0 No, 1 Yes). Decided to smoke is coded as: (0 No, 1 Yes). Decided to recycle is coded as: (0 No, 1 Yes).

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

along with their intercorrelations. In all studies with multiple scenarios, we analyzed the data using hierarchical linear models (HLM; Raudenbush & Bryk, 2002), as the morality of the options, participants' decisions, and their sense of choice are likely to vary across scenarios. We ran an HLM with sense of choice as the scenario-level dependent variable. The extent to which participants perceived the decision as being moral in nature (grand mean centered) was a scenario-level predictor, and participants' actual decisions in each scenario were a scenario-level covariate (coded as follows: Should have an abortion [0 = No, 1 = Yes]; Vote to ban firearms [0 = No, 1 = Yes]; Decided to smoke [0 = No, 1 = Yes]; Decided to Recycle [0 = No, 1 = Yes]). All scenario-level slopes were treated as randomly varying at the level of participants, and all variance and covariance parameters were unstructured. As hypothesized, we found a negative effect of the moral nature of the decision,  $B = -0.34$ , 95% CI (confidence interval)  $[-.43, -.26]$ ,  $SE = 0.04$ ,  $z = 7.89$ ,  $p < .001$ , indicating that participants who perceived the decision as moral in nature perceived a lower sense of choice regarding the decision they had made. See Figure 1.

## Discussion

Study 1a found that when people made choices among issues that they considered to be more moral in nature, they experienced a lower sense of choice. These findings do not support the idea that people perceive moral decisions as choices so that they can claim moral credit and enhance their self-views or public image. Instead, they suggest that when faced with moral decisions, people feel as if the only viable option is the moral alternative and, thus, the decision feels less like a choice.

### Study 1b

The goal of Study 1b was to assess the cultural generalizability of Study 1a's findings. As past research has shown that Indians and Americans differ in their perceptions of choice (Savani et al., 2010), we examined whether deciding among morally relevant options would reduce people's sense of choice even in a culture in

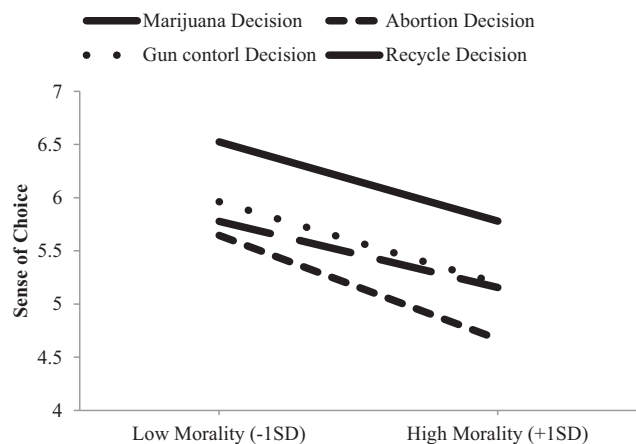


Figure 1. Results of the simple-slopes analyses in Study 1a. Estimated level of sense of choice is graphed as a function of the strength of morality of the issue. High and low refer to scores 1 *SD* above and below the mean on the morality of the issue.

which people have lower perceptions of choice in general. Specifically, even if Indians experience an overall lower sense of choice than Westerners, we examined whether they similarly experience a lower sense of choice when deciding among morally relevant rather than nonmoral options.

We chose a culturally relevant issue—eating beef—whose moral relevance is debated in India. Many vegetarian Indians and Hindus may consider eating beef a moral issue, given that it is prohibited in many Hindu traditions. However, many non-Hindus and even many Hindus may consider eating beef a nonmoral issue, as beef is similar to and often a substitute for other types of meat, such as mutton and chicken. Therefore, beef eating provided a culturally relevant context for examining our research question. We investigated whether Indians making a choice about eating beef were more likely to feel a constrained sense of choice when they viewed eating beef to be a moral issue.

## Method

The sample size was determined before data collection began at 200. There were 200 Indian residents (74 women, 126 men;  $M_{\text{age}} = 32.6$  years,  $SD = 8.5$ ) who were recruited through Amazon Mechanical Turk, receiving \$0.25 for their participation.

Participants were presented with one hypothetical scenario (see Appendix). Participants were first asked: “Do you consider eating beef to be a moral issue?” (Yes, No). Afterward, they were asked to imagine that they were sitting on a park bench with a friend when their friend pulls out a bag of beef samosas and grabs one. This friend then offers them a beef samosa. Participants were then asked to indicate whether they would accept their friend’s offer (eat vs. decline). Afterward, their decision was displayed on the screen and they were asked to indicate their agreement with a statement measuring their feelings of constraint related to that decision: “I had to eat the beef samosa (or decline the beef samosa); I didn’t have a choice” on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). This item, reverse-coded, served as our measure of *sense of choice*.

## Results

Eighty-nine Indian participants reported that there was a morally right choice to the decision, and 111 reported that there was not a morally right choice. We created a binary variable (nonmoral = 0, moral = 1) to reflect whether they viewed the decision in terms of a moral imperative.

Table 2 reports the means and *SDs* of all variables measured, along with their intercorrelations. We ran an analysis of covariance (ANCOVA) with participants’ sense of choice as the dependent measure, their actual decision as a covariate, and whether they considered eating beef a moral issue as the predictor. The main effect of morality was significant,  $F(1, 197) = 5.19$ ,  $p = .024$ ,  $\eta_p^2 = .03$ . Indians who considered eating beef a moral issue reported a lower sense of choice ( $M = 2.74$ , 95% CI [2.30, 3.18],  $SD = 1.93$ ) than those who considered it a nonmoral issue ( $M = 3.77$ , 95% CI [3.38, 4.17],  $SD = 2.25$ ). Thus, regardless of the decision participants made, Indians who viewed the options as being moral in nature reported a lower sense of choice after deciding between the two options.

## Discussion

Study 1b replicated the key finding of Study 1a with a different cultural sample and using a different culturally relevant moral issue. We found that Indians who consider the consumption of beef to be a moral issue, compared with those who do not, perceived a lower sense of choice when deciding whether or not to eat beef.

## Study 2

Study 2 sought to address two limitations of Studies 1a and 1b. First, Studies 1a and 1b used a correlational design, so it is not clear whether the morality of the options exerts a causal effect on people’s perceptions of choice. Second, in Studies 1a and 1b, we directly asked participants whether they considered the issue at hand to be moral in nature. Thus, it is possible that participants interpreted this question as asking whether they thought that they *must* select a given option. If so, it would be possible that our findings were merely an artifact of our study design, such that people who say that they must select the only moral option

Table 2  
Descriptive Statistics and Correlations in Study 1b

Variable	Mean	(SD)	1	2
All participants				
1. %Decided to eat beef	40.0%	—		
2. Sense-of-choice	3.32	2.17	.33***	
3. Morality of eating beef	.45	.50	-.28***	-.24***
Moral				
1. %Decided to eat beef	24.7%	—		
2. Sense-of-choice	2.74	1.93	.15	
Nonmoral				
1. %Decided to eat beef	52.3%	—		
2. Sense-of-choice	3.77	2.25	.36***	

Note. Morality of eating beef is coded as: (0 nonmoral, 1 moral). Decided to eat beef is coded as: (0 No, 1 Yes).

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

available also report a reduced sense of choice. The goal of Study 2 was to address these limitations by experimentally manipulating the morality of choice options in a laboratory setting. While doing so, we were careful to only suggest that one option is the more morally correct option without implying that participants must choose that option.

## Method

The target sample size for this study was 200, subject to the availability of student participants at a university in the midwestern United States. Before conducting the study, we planned to stop data collection after the scheduled sessions were over, hoping to recruit 100 students for each of the two conditions. In total, 212 university students (119 women, 93 men;  $M_{\text{age}} = 20.17$  years,  $SD = 2.11$ ) who completed the study for a \$12 payment.

Participants first completed an unrelated study for 20 min. We then informed them that to thank them for participating in our research, we were giving away some chocolate. At this point, participants were randomly assigned to one of two conditions (moral framing vs. taste framing). Participants were presented with two chocolates bars (“Hershey’s Milk Chocolate Snack Size Bar” and “Chuao Chocolatier Mini Chocolate Bar”) on a computer screen and asked to select one of them to receive on their way out of the lab.

In the taste-framing condition, on the same computer screen on which the chocolates were presented, participants were informed: “You may want to consider that more than 90% of participants in our last study preferred the Chuao Chocolate because of its taste. It is produced with cocoa that gives it a rich, smooth flavor that people enjoy.” In the moral-framing condition, participants were informed: “You may want to consider that more than 90% of participants in our last study preferred the Chuao Fair Trade Chocolate because it is ethically sourced. It is produced with cocoa from low-income farmers in developing countries who are treated fairly and not exploited.” Thus, in both conditions, participants were encouraged to choose the Chuao Chocolate bar; but in one condition the encouragement was morality-based, while in the other condition it was taste-based.

After participants submitted their choice of chocolate bar into the computer, on the next screen they were asked to respond to a question about their decision: “I had to pick the Hershey’s Chocolate Bar/Chuao Chocolate Bar (depending on their choice); I didn’t have a choice” on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). This item, reverse-coded, served as our measure of *sense of choice*. Thereafter, participants were given their chosen option.

## Results

The experimental manipulation did not influence participants’ choice of chocolate. In fact, 72.0% of those in the taste-framing condition chose the Chuao Chocolate Bar compared with 72.4% of those in the moral-framing condition,  $\chi^2(1, 212) = .005, p = .95$  (Table 3).

We ran an ANCOVA on participants’ sense of choice with participants’ actual decision as a covariate and experimental condition as the predictor. The main effect of condition was significant,  $F(1, 209) = 5.12, p = .025, \eta_p^2 = .03$ . Those in the

Table 3  
*Descriptive Statistics and Correlations in Study 2*

Variable	Mean	(SD)	1
Moral condition			
1. % Chose Chuao Chocolate	72.4%	—	
2. Sense-of-choice	5.83	1.53	-.11
Control condition			
1. % Chose Chuao Chocolate	72.0%	—	
2. Sense-of-choice	6.25	1.17	-.043

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

moral-framing condition reported a lower sense of choice ( $M = 5.83, 95\% \text{ CI } [5.57, 6.09], SD = 1.53$ ) than those in the taste-framing condition ( $M = 6.25, 95\% \text{ CI } [5.99, 6.51], SD = 1.17$ ).

## Discussion

Study 2 replicated the key finding of Studies 1a and 1b using both an experimental design, in which we manipulated the morality of choice options, and a behavioral decision, in which participants actually received their chosen option. As expected, we found that participants who selected among chocolate bars in which one option was morally relevant (i.e., ethically sourced) felt a lower sense of choice after making their decision than participants who selected among chocolate bars that were not morally relevant. This finding held irrespective of participants’ actual choice.

Further, the findings indicate that we manipulated the moral nature of the options without conveying that participants’ *must* choose the moral option. If in the moral condition, participants perceived that they should or must choose the moral option, then we would have expected more participants to choose the target option in the moral condition than in the nonmoral condition. However, a very similar proportion of participants chose the Chuao Chocolate Bar across the moral condition (72.4%) and the nonmoral condition (72.0%). Thus, we found that the morality of the options influenced participants’ perceptions of choice without unduly influencing their actual choices, compared with those in the taste-framing condition.

## Study 3a

Our next study tested two possibilities about the underlying decision-making process. One possibility is that the lower sense of choice that people report after deciding among morally relevant options is epiphenomenal, such that after making their decision, people simply report that they had less choice even though they did not actually experience a lower sense of choice while making the decision. If this is the case, then people would report a lower sense of choice only after they have made a decision, but not before. Another possibility is that the lower sense of choice is real, such that even when contemplating morally relevant options, people actually feel as if they do not have multiple options to choose from. If this is the case, then people would report a lower sense of choice even before they have made a decision. To test between these two possibilities, we varied whether participants made a decision be-

fore or after reporting their sense of choice. Based on our theorizing, we expected the morality of the options to reduce participants' sense of choice even *before* they made a decision. Such a finding would suggest that the decreased sense of choice is a real psychological experience, not just an afterthought after participants actively made a decision.

In addition, we expect that a decreased sense of choice following a morally laden decision will lead people to try to reassert their freedom in an unrelated, subsequent task. Relying on reactance theory (Brehm, 1966), we predicted that if a person's morality psychologically constrains the perceived options from which they can choose, then they would be motivated to restore their sense of autonomy. One way to do so is by seeking variety in some other aspect of one's life, which has been shown to increase people's sense of freedom (Levav & Zhu, 2009). Thus, we predicted that the reduced sense of choice because of deciding between morally relevant options will increase participants' subsequent variety seeking, because variety seeking provides individuals with an opportunity to reassert their freedom.

## Method

The sample size was determined before data collection began at 400. There were 404 individuals (205 women, 199 men;  $M_{\text{age}} = 35.0$  years,  $SD = 6.7$ ) located in the United States who were recruited through *Instantly*, an online panel, and received \$5 for their participation. They were presented with the smoking marijuana scenario used in the previous studies. They first were asked whether they considered smoking marijuana to be a moral issue (Yes, No). Then, participants were randomly assigned to one of two conditions: decision first versus decision last. In the *decision first* condition, the procedures were identical to those used for participants in Study 1a. That is, participants first made a decision of whether to smoke or not, and then indicated their sense of choice about the decision. In the *decision last* condition, participants first reported their sense of choice and then indicated their decision as to whether to smoke or not. We then presented all participants with a hypothetical chocolate-selection task to measure variety seeking. For the variety seeking task, participants were asked to select seven pieces of chocolate presented to them from a set of seven different available flavors. Similar to past literature (Levav & Zhu, 2009), the number of different chocolate flavors that participants chose served as a measure of variety seeking.

## Results

There were 177 participants reported that there was a morally right choice to the marijuana decision, and 227 reported that there was not a morally right choice. We created a binary variable (nonmoral = 0, moral = 1) to reflect whether they viewed the decision in terms of a moral imperative.

Table 4 reports the means and *SDs* of all variables measured, along with their intercorrelations. We first ran an ANCOVA on participants' sense of choice for the marijuana decision as the dependent variable, morality as the predictor, and with participants' actual decision and decision order as covariates. As predicted, the main effect of morality was significant,  $F(1, 400) = 26.65$ ,  $p < .001$ ,  $\eta_p^2 = .06$ . Regardless of whether participants first indicated their decision or were in the process of contemplating

Table 4  
*Descriptive Statistics and Correlations in Study 3a*

Variable	Mean	(SD)	1	2	3	4
All participants						
1. % Smoked marijuana	29.2%	—				
2. Sense-of-choice	4.53	2.25	-.29***			
3. Variety seeking	4.06	2.04	.27***	-.33***		
4. Order decision	.51	.50	.023	.15**	.07	
5. Morality of smoking marijuana	.44	.50	.22***	-.28***	.19***	.07
Moral						
1. % Smoked marijuana	40.2%	—				
2. Sense-of-choice	3.81	2.21	-.45***			
3. Variety seeking	4.50	2.10	.42	-.37***		
4. Order decision	.55	.50	-.011	.15	.04	
Nonmoral						
1. % Smoked marijuana	20.3%	—				
2. Sense-of-choice	5.10	2.11	-.05			
3. Variety seeking	3.72	1.93	.05	-.23***		
4. Order decision	.48	.50	.02	.21**	.07	

*Note.* Morality of smoking marijuana is coded as: (0 nonmoral, 1 moral). Decided to smoke marijuana coded as: (0 No, 1 Yes). Order decision is coded as: (0 decision first, 1 decision last).

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

their decision, those who viewed this decision as being moral in nature reported a lower sense of choice ( $M = 3.81$ , 95% CI [3.47, 4.10],  $SD = 2.21$ ) than those who viewed it as nonmoral ( $M = 5.10$ , 95% CI [4.84, 5.40],  $SD = 2.11$ ),  $t(402) = 5.94$ ,  $p < .001$ ,  $d = .60$ .

The main effect of order was also significant,  $F(1, 400) = 14.84$ ,  $p < .001$ ,  $\eta_p^2 = .04$ . Participants who indicated their decision first reported a lower sense of choice ( $M = 4.19$ , 95% CI [3.86, 4.49],  $SD = 2.22$ ) than those who simply contemplated about their decision ( $M = 4.87$ , 95% CI [4.57, 5.17],  $SD = 2.23$ ),  $t(402) = 3.11$ ,  $p = .002$ ,  $d = .31$ . Although we did not predict a main effect for the order variable, it makes sense that people would report having a lower sense of choice after having first made a decision (compared with before), because they no longer are able to choose a different option.

We then ran a 2 (decision first vs. decision second)  $\times$  2 (moral vs. not moral) ANCOVA with participants' sense of choice for the marijuana decision as the dependent variable, and with participants' actual decision as a covariate. While, we found significant main effects of morality  $F(1, 399) = 26.33$ ,  $p < .001$ ,  $\eta_p^2 = .06$  and decision order  $F(1, 399) = 13.91$ ,  $p < .001$ ,  $\eta_p^2 = .03$ . The interaction of Decision Order  $\times$  Morality was not statistically significant,  $F(1, 399) = .49$ ,  $p = .48$ . In summary, regardless of whether participants first indicated their decision or were in the process of contemplating their decision, we found that the perceived morality of the issue influenced participants' perceptions of choice. Indeed, the effect of morality was significant in both conditions for those who indicated their decision ( $B = -0.99$ , 95% CI [-1.54, -0.45],  $SE = 0.276$ ,  $p < .001$ ) and those who simply contemplated making a decision ( $B = -1.25$ , 95% CI [-1.86, -0.57],  $SE = 0.33$ ,  $p < .001$ ).

Next, we examined the effects of morality on variety seeking using Poisson regression, because the variety seeking measure was

a count variable (the number of different types of chocolates chosen). The independent variables in this analysis included the moral nature of decision (no =  $-.5$ , yes =  $.5$ ), the order of decision (before choice rating =  $-.5$ , after choice rating =  $.5$ ), and participants' actual decision (decline to smoke =  $-.5$ , decided to smoke =  $.5$ ). As predicted, the more moral participants found the decision, the more variety they chose,  $B = 0.13$ , 95% CI [0.04, 0.23],  $SE = .051$ , *incidence rate ratio* = 1.14,  $z = 2.65$ ,  $p = .008$ . There was no significant effect of decision order,  $B = 0.05$ , 95% CI [ $-0.04$ , 0.15],  $SE = .050$ , *incidence rate ratio* = 1.06,  $z = 1.09$ ,  $p = .28$ . We then added a Morality  $\times$  Order interaction term to the model, which was nonsignificant,  $B = -0.03$ , 95% CI [ $-0.22$ , 0.17],  $SE = .099$ , *incidence rate ratio* = .97,  $z = .29$ ,  $p = .77$ .

To test whether a reduced sense of choice mediated the relationship between the moral nature of the issue and greater variety seeking, we entered participants' sense of choice as a predictor in the first Poisson regression (without the interaction term). The effect of morality now became nonsignificant,  $B = 0.066$ , 95% CI [ $-0.04$ , 0.17],  $SE = .053$ , *incidence rate ratio* = 1.07,  $z = 1.24$ ,  $p = .22$ , whereas the effect of sense of choice was highly significant,  $B = -.061$ , 95% CI [ $-0.85$ ,  $-0.04$ ],  $SE = .012$ , *incidence rate ratio* = .94,  $z = 5.07$ ,  $p < .001$ . Note that we could not use Preacher and Hayes's (2004) PROCESS macro to assess indirect effects because the dependent measure was a count variable.

## Discussion

Study 3a extended the findings of the previous studies in multiple ways. First, this study found that people do not need to have made a decision to experience a lower sense of choice—merely being presented with options that are moral in nature reduces people's sense of choice, even if their decision has not yet been made. Second, this study provides further evidence that the lower sense of choice that people report after deciding among morally relevant options is likely real, in that it influenced subsequent variety seeking—presumably to increase their sense of freedom.

### Study 3b

In Study 3a, we first asked participants to decide among morally relevant versus morally irrelevant options, then measured their sense of choice, and then measured their extent of variety seeking. However, one limitation to this study design is that by measuring participants' sense of choice, we induced an experimenter demand effect, such that participants who reported a lower sense of choice felt obliged to choose more variety in the next task because they had reported a lower sense of choice. Thus, Study 3b tested whether deciding among morally relevant options leads people to choose more variety in a subsequent task even when they have not yet reported their sense of choice. As such, we varied the order of whether participants reported their sense of choice before or after the variety seeking task.

## Method

We decided on a target sample size of 400 participants before beginning data collection. There were 399 individuals (179 women, 220 men;  $M_{\text{age}} = 34.40$  years,  $SD = 11.21$ ) located in the

United States who were recruited through Amazon Mechanical Turk and paid \$0.50 for their participation. They were presented with the recycling scenario used in Study 1a.

Before reading the scenario, participants responded to the following question on a 5-point scale (1 = *not at all*, 5 = *very much*): "Do you consider recycling to be a moral issue?" Then, participants were randomly assigned to one of two conditions: reporting sense of choice first versus reporting sense of choice last. In the *reporting sense of choice first* condition, the procedures were identical to those used for participants in Study 1a. That is, participants first made a decision about whether to recycle or not, then indicated their sense of choice about the decision, and finished by completing the variety-seeking task (the same chocolate-selection task used in Study 3a). In the *reporting sense of choice last* condition, participants first made a decision about whether to recycle or not, then completed the variety-seeking task (chocolate-selection task), and finished by reporting their sense of choice regarding their recycling decision.

## Results

Table 5 reports the means and *SDs* of all variables measured, along with their intercorrelations. Using linear regression analysis, we first regressed sense of choice on perceived morality of recycling (mean centered), and experimental condition (variety-seeking task first =  $-.5$ , variety-seeking task last =  $.5$ ), while controlling for participants' actual decision (put in trash =  $-.5$ , decided to recycle =  $.5$ ). We found a main effect of morality of recycling,  $B = -0.43$ , 95% CI [ $-0.58$ ,  $-0.29$ ],  $SE = 0.08$ ,  $p < .001$ , indicating that participants who perceived the decision as moral in nature perceived less choice when they were making the decision. The main effect of order was marginally significant,  $B = 0.33$ , 95% CI [ $-0.011$ , 0.66],  $SE = 0.17$ ,  $p = .058$ . We then added the interaction between morality of recycling and experimental condition to the above regression, which was not significant,  $B = 0.17$ , 95% CI [ $-0.10$ ,  $-0.44$ ],  $SE = 0.14$ ,  $p = .22$ .

Next, we counted the number of different chocolate bars that participants chose as an indicator of variety seeking. As this was a count variable, we again analyzed it using a Poisson regression. The predictor variables were participants' perceived morality of recycling (mean centered), and experimental condition (variety-seeking task first =  $-.5$ , variety-seeking task last =  $.5$ ), while controlling for participants' actual decision (put in trash =  $-.5$ ,

Table 5  
*Descriptive Statistics and Correlations in Study 3b*

Variable	Mean (SD)	1	2	3	4
1. Morality of recycling	2.92 1.23				
2. % Recycled	70.7% —	.39***			
3. Recycling sense-of-choice	5.27 1.84	-.33***	-.23***		
4. Variety seeking	3.61 1.72	.19***	.08	-.20***	
5. Order variety seeking task	.50 .50	.04	-.04	.08	-.01

*Note.* Decided to recycle coded as: (0 No, 1 Yes). Order variety seeking task is coded as: (0 variety-seeking task second, 1 variety-seeking task first).

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).



decided to recycle = .5). As predicted, the more moral participants found the decision, the more variety they chose,  $B = 0.073$ , 95% CI [0.027, 0.119],  $SE = .023$ , *incidence rate ratio* = 1.08,  $z = 3.14$ ,  $p = .002$ . There was no significant effect of decision order,  $B = -0.01$ , 95% CI [-0.12, 0.09],  $SE = .053$ , *incidence rate ratio* = .99,  $z = .25$ ,  $p = .80$ . We then added the interaction term of Morality  $\times$  Order variety-seeking task, which was nonsignificant,  $B = 0.004$ , 95% CI [-0.12, 0.13],  $SE = .064$ , *incidence rate ratio* = 1.004,  $z = .09$ ,  $p = .93$ .

To test whether a reduced sense of choice mediated the relationship between a higher moral conviction and greater variety seeking, we entered participants' sense of choice as a predictor in the above Poisson regression (without the interaction term). The effect of morality now became weaker,  $B = 0.055$ , 95% CI [0.008, 0.103],  $SE = .024$ , *incidence rate ratio* = 1.06,  $z = 2.28$ ,  $p = .023$ , whereas the effect of sense of choice was significant,  $B = -.039$ , 95% CI [-0.069, -0.010],  $SE = .015$ , *incidence rate ratio* = .96,  $z = 2.61$ ,  $p = .009$ . Note that we could not use Preacher and Hayes's (2004) PROCESS macro to assess indirect effects because the dependent measure was a count variable.

## Discussion

Study 3b conceptually replicated the findings of Study 3a and documented that even when participants have not yet explicitly indicated their sense of choice, those who decided among morally relevant options chose more variety on a subsequent, unrelated task than those who decided among morally irrelevant options. Thus, Study 3b further indicated that the lower sense of choice that people experience when deciding among morally laden options is psychologically constraining and can influence their behavior in unrelated tasks.

### Study 4a

Studies 1–3 demonstrated a robust link between the perceived morality of a decision and a reduced sense of choice; however, it is not clear whether the proposed phenomenon is unique to the moral domain or a more general phenomenon. For example, does making a decision that involves nonmoral values or strong personal preferences make people feel as if they do not have a choice to the same extent as making a decision among morally relevant options? Earlier, we argued that moral decisions are unique in that moral values and attitudes lead individuals to be less likely to even consider morally questionable alternatives as viable options in the first place; thus, resulting in a constrained sense of choice. In this study, we explored the constraining effect of moral values compared to that of nonmoral values and preferences.

## Method

The sample size was determined before data collection began at 400. There were 402 individuals (171 women, 233 men;  $M_{\text{age}} = 33.71$  years,  $SD = 9.90$ ) residing in the United States who were recruited through Amazon Mechanical Turk and paid \$0.50 for their participation.

We instructed participants to read about a situation and put themselves in the position of the person described. In all conditions, participants were asked to imagine they were in a grocery

store buying chocolate bars and were deciding between two options: Brand A for \$3 (Brand A's chocolate was sourced from the Ivory Coast in Africa) and Brand B for \$4.50 (Brand B's chocolate was sourced from Hawaii).

Participants were randomly assigned to one of four conditions (control, moral, superior taste, and locally grown). In the *control condition*, participants were asked to indicate which chocolate bar they would buy. In the *moral condition*,<sup>1</sup> they were asked to imagine the same chocolate bar decision as in the control condition but also read,

You remember that you recently watched a documentary called "The dark side of chocolate: child trafficking and child labor in the cocoa industry." The documentary showed that thousands of African children (many in the Ivory Coast, specifically) are trafficked to farm cocoa for American chocolate companies so that they can sell cheap chocolate.

Additionally, we designed two conditions to allow us to examine the role of other values and social preferences. Similar to Study 2, we included a *superior taste condition*, in which, before making a decision, participants read, "You remember that you recently read an article about Brand B; in a blind taste test, more than 75% of people preferred its taste to any other chocolate bar." And lastly, in a *locally grown condition*, participants read, "You remember that you recently watched a documentary called, 'Why it is important to buy products homegrown in the United States.' The documentary showed that buying foods grown in the US can create more income and taxes for local communities." All participants were then asked to report which chocolate bar they would purchase.

After making a choice, they were presented with a statement similar to previous studies: "I had to buy Brand A (or Brand B); I didn't have a choice" on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). This item, reverse-coded, served as our measure of *sense of choice*.

## Results

Table 6 reports the means and *SDs* of all variables measured, along with their intercorrelations. Participants' choices of chocolate differed by condition,  $\chi^2(3, 402) = 51.41$ ,  $p < .001$ . In the control condition, 26% (26/100) chose the more expensive chocolate sourced from Hawaii compared with the cheaper chocolate from the Ivory Coast, whereas the chocolate from Hawaii was selected by 73.5% (75/102) of those in the moral condition, 64% (64/100) of those in the superior taste condition, and 52% (52/100) of those in the locally grown condition. All conditions were significantly different from each other (all  $ps < .05$ ), except the moral and superior taste conditions,  $p = .144$ .

<sup>1</sup> In a pilot study conducted on Mturk, we asked 100 participants to indicate the degree to which they considered "child trafficking and child labor" and "buying locally grown products" to be moral issues (5-point scale from "not at all" to "very much") in random order. Even though buying local might be viewed by some as moral, a repeated measure showed a significant difference between the two issues in terms of morality, such that "child trafficking and child labor" was seen as significantly more moral of an issue ( $M = 4.61$ ,  $SD = .89$ ) compared with buying locally grown products ( $M = 2.32$ ,  $SD = 1.25$ ),  $t(99) = 14.88$ ,  $p < .001$ .

Table 6  
Descriptive Statistics and Correlations in Study 4a

Variable	Mean	SD	1
Moral condition			
1. % Chose Hawaii chocolate	73.5%	—	
2. Chocolate sense-of-choice	5.07	1.93	-.18 <sup>†</sup>
Control condition			
1. % Chose Hawaii chocolate	26.0%	—	
2. Chocolate sense-of-choice	6.09	1.22	.11
Superior taste condition			
1. % Chose Hawaii chocolate	64.0%	—	
2. Chocolate sense-of-choice	6.16	1.19	-.06
Locally grown condition			
1. % Chose Hawaii chocolate	52.0%	—	
2. Chocolate sense-of-choice	5.84	1.32	.01

<sup>†</sup> Correlation is significant at the .10 level (two-tailed). \* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

We ran an ANCOVA on participants' sense of choice with participants' actual decision as a covariate. The main effect of condition was significant,  $F(3, 397) = 10.81, p < .001, \eta_p^2 = .08$ . Those in the moral condition reported a lower sense of choice ( $M = 5.07, 95\% \text{ CI } [4.79, 5.35], SD = 1.93$ ) than the other three conditions (control condition:  $M_{\text{control}} = 6.09, 95\% \text{ CI } [5.81, 6.37], SD = 1.22, p < .001$ ; superior taste:  $M_{\text{taste}} = 6.16, 95\% \text{ CI } [5.88, 6.44], SD = 1.19, p < .001$ ; locally grown:  $M_{\text{locally grown}} = 5.84, 95\% \text{ CI } [5.56, 6.12], SD = 1.32, p < .001$ ). The other three conditions were not significantly different from each other, all  $ps > 0.10$ . In sum, regardless of what chocolate participants chose, those in the moral condition reported a lower sense of choice than those in conditions that were less morally relevant.

## Discussion

Study 4a shows that moral values are experienced differently from social influence (such as superior taste) or other personal preferences (such as buying local products). Once again, we demonstrate a link between the perceived morality of a decision and a reduced sense of choice; however, the phenomenon seems to be somewhat unique to (or at least more pronounced in) the moral domain.

### Study 4b

To provide further evidence that morality uniquely constrains people's perceptions of choice, we designed Study 4b to directly compare moral concerns against another important personal value (i.e., health concerns). For instance, people might refuse to smoke marijuana when offered because they see it as a moral issue, or maybe they simply do not want to smoke because they find it unhealthy. In both cases they may refuse the offer to smoke, but we predicted that the moral nature of the decision would constrain individuals' sense of choice more than other highly important values, such as health concerns.

In addition, in our previous studies, we measured the morality of an issue in the beginning of the study, which could have primed participants with notions of morality before they made their deci-

sions. Thus, to avoid priming, in this study, we asked participants to report the extent to which they view the issue to be moral at the end of the study.

## Method

The sample size was determined before data collection began at 200. There were 206 individuals (106 women, 100 men;  $M_{\text{age}} = 34.50$  years,  $SD = 10.34$ ) residing in the United States who were recruited through Amazon Mechanical Turk and paid \$0.50 for their participation.

We instructed participants to read about a situation and put themselves in the position of the person described. Participants were asked to imagine that a friend offered them some marijuana to smoke (marijuana scenario) and then asked to indicate whether they would accept their friend's offer (smoke vs. decline). They then reported their sense-of-choice related to their decision, as in previous studies. Afterward, participants responded to two questions in random order: "Do you consider smoking marijuana to be a moral issue?" and "Do you consider smoking marijuana to be a health issue?" (5-point scale from "not at all" to "very much").

## Results

Table 7 reports the means and  $SD$ s of all variables measured, along with their intercorrelations. We conducted regression analysis with sense of choice as the dependent measure; perceived morality of recycling (mean centered), perceived health (mean centered) as predictors; with participants' actual decision as a covariate (decline to smoke =  $-.5$ , decided to smoke =  $.5$ ). There was a significant effect for morality,  $B = -0.40, 95\% \text{ CI } [-0.62, -0.18], SE = 0.11, p < .001$ , but no significant effect of health,  $B = -0.14, 95\% \text{ CI } [-0.34, 0.07], SE = 0.11, p = .20$ . We then conducted the same regression analysis adding the interaction between perceived morality of recycling and perceived health. The Health  $\times$  Morality interaction was nonsignificant,  $B = 0.04, 95\% \text{ CI } [-0.09, 0.17], SE = 0.07, p = .55$ .

## Discussion

Our results again demonstrate the constraining effect of moral values on people's sense of choice. These findings further suggest that there is something unique about morality and moral values, compared with other nonmoral values and preferences, which

Table 7  
Descriptive Statistics and Correlations in Study 4b

Variable	Mean	(SD)	1	2	3
1. Morality of smoking marijuana	1.81	1.19			
2. Health concern for smoking marijuana	2.21	1.25	.55***		
3. % Smoked marijuana	35.4%	—	-.36***	-.30***	
4. Sense-of-choice	5.76	1.70	-.38***	-.29***	.27***

Note. Decided to Smoke coded as: (0 No, 1 Yes).

\* Correlation is significant at the .05 level (two-tailed). \*\* Correlation is significant at the .01 level (two-tailed). \*\*\* Correlation is significant at the .001 level (two-tailed).

strongly influence the psychological experience of making a decision.

### Study 5

The goal of this study was to provide a further test of the underlying decision-making process by which the morality of decision options reduces people's sense of choice. One possibility is that the actual decision-making process does not differ based on whether people consider the options to be moral or nonmoral in nature—that is, it is only after they have made a decision that people who considered the options to be more moral in nature realize and declare that they experienced a lower sense of choice. Another possibility is that the perceived morality of the options actually alters the decision-making process—that is, people for whom the options were moral in nature (vs. those for whom they were not) actually pay less attention to their ultimately nonchosen option, more quickly disqualifying it as a viable option.

We tested these two competing mechanisms in the present study using MouseLabWeb, a process tracing tool that allows us to capture dynamic changes in participants' attention to different choice options (Willemsen & Johnson, 2011). This process tracing tool also allowed us to test changes in participants' locus of attention as they moved from the initial stage of exploring the options to the later stage of deciding on one of the two options. Specifically, we hypothesized that when deciding among options that are moral in nature, participants would be less likely to pay attention to the ultimately nonchosen option than the ultimately chosen option, and that this tendency would increase as participants move from the initial exploratory phase (in which they need to find out what options are available) to the decision phase (in which they need to pick one of the options).

### Method

The sample size was determined before data collection began at 200. There were 194 individuals (94 women, 97 men, 3 unreported;  $M_{\text{age}} = 37.55$  years,  $SD = 11.35$  years) located in the United States who were recruited through Amazon Mechanical Turk receiving \$0.50 for their participation.

The procedure was nearly identical to that in Study 1a. Participants were presented with the same four hypothetical scenarios. Before reading each scenario, participants were asked: "Do you consider abortion (or smoking marijuana, or gun control, or recycling) to be a moral issue?" (5-point scale from "not at all" to "very much").

Thereafter, participants were presented with the respective scenario and asked to make a decision. The only difference from Study 1a was that when participants made the decision, the response options (e.g., "smoke the marijuana," "decline the marijuana") were hidden in opaque boxes. Moving the mouse over either box would reveal the option contained within the box. Participants could view the information revealed for as long as they wished, but when they moved the mouse away from the box, the information would be hidden again. Participants could view the two boxes as many times as they wanted before selecting an option. To select an option, participants had to click on the box containing either option, and then click a "Continue" button.

Finally, after making each decision, participants indicated their sense of choice while making the decision using the same measure

as in Study 1a, and then proceeded to the next scenario. These items, reverse-coded, served as our measures of *sense of choice*.

### Results

Table 8 presents the descriptive statistics.

**Preliminary results.** First, we reverse-scored the *sense of choice* variable for each scenario such that higher numbers indicated more choice. We ran an HLM with sense of choice as the scenario-level dependent variable, the extent to which participants perceived a decision as being moral in nature as a scenario-level predictor, and participants' actual decision (e.g., whether or not to smoke) as a scenario-level covariate. As expected, we found a main effect of the moral nature of the decision,  $B = -0.28$ , 95% CI  $[-.36, -.21]$ ,  $SE = 0.04$ ,  $z = 7.07$ ,  $p < .001$ , indicating that participants who perceived a decision as moral in nature perceived less choice when they were making that decision. Thus, this finding serves as a replication of Study 1a.

**Analyses.** Next, we assessed whether the moral nature of the options predicted participants' pattern of attention to either the chosen option or the nonchosen option as they moved from the phase of exploring the options to the phase of making a decision. Specifically, we analyzed the pattern of participants' attention to the two response option boxes (e.g., "smoke the marijuana," "decline the marijuana"). We included in the analysis each time participants opened either of the two boxes before making a final decision. However, as is standard practice while analyzing MouseLab data (Willemsen & Johnson, 2011), we excluded box views that were opened for less than 200 ms (less than 1% of total observations)—the contents of these boxes were unlikely to be perceived by the participant, and these views are most likely the result of the participant moving through the box to look at the other box. On average, participants viewed response-option boxes 3.69 times ( $SD = 3.90$ , range 1 to 43). This means that we have 1 to 43 box views per decision. That is, before deciding on one of the two options, some participants opened only one box, whereas others opened the two boxes a total of 43 times.

The key dependent variable was what box were participants looking at each time that they opened a box—the one containing the option that they ultimately chose, or the one containing the option that they did not ultimately choose. We also tested whether the type of box that participants opened changed as participants moved from the initial exploratory stage toward making a decision, and changed based on the extent to which participants found the current options morally relevant. Our key hypotheses are that the more moral a decision, the less likely participants would be to open a box containing their ultimately nonchosen option compared with their ultimately chosen option; and this tendency would magnify as participants open more and more boxes and, thus, move from the initial exploration phase to the final decision phase.

We ran a three-level hierarchical logistic model with box views nested within scenarios nested within participants, using the *xtmelogit* command in STATA with adaptive Gaussian quadrature and seven integration points (Raudenbush & Bryk, 2002). Each box view (i.e., every instance in which a participant hovered their mouse pointer over a decision option to view it) was coded in two ways. First, as the box-view-level dependent measure, each box view was assigned a code of "1" if it contained the option that participants ultimately did not choose, or a code of "0" if it

Table 8  
Descriptive Statistics and Correlations in Study 5

Variable	Mean (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Morality of smoking marijuana	1.95	1.22														
2. % Smoked marijuana	23%	-.20**														
3. Smoking marijuana sense-of-choice	5.74	1.72	-.27***													
4. Total box views for smoking marijuana	2.66	3.42	.004	.20**												
5. Morality of abortion	3.30	1.42	.44***	-.06	.10											
6. % Advised abortion	52%	-.31***	-.15*	-.12	-.03	-.46***										
7. Abortion sense-of-choice	5.15	1.99	-.22	.10	.43***	-.25***	.31***									
8. Total box views for abortion	2.83	2.11	-.06	.04	.67***	-.031	.06	.15*								
9. Morality of gun control	2.72	1.42	.11	.08	-.005	-.12	.14*	-.0002	-.03							
10. % Voted to ban gun	37%	-.12	-.03	.06	.07	-.14	.19**	.002	.06	.32***						
11. Gun ban vote sense-of-choice	5.40	1.91	-.10	.03	.46***	-.09	.13	.62***	.16*	-.08	-.08					
12. Total box views for gun ban vote	2.69	2.35	.03	-.003	.08	.67***	.01	.03	.06	.75***	-.05	.04	.15*			
13. Morality of recycling	2.66	1.44	-.02	.06	.003	-.08	-.05	.23**	-.02	-.01	.37***	-.13	-.09	-.03		
14. % Decided to recycle	79%	-.15*	-.10	.19**	.07	-.11	.14	.19*	.14	.06	.13	.15*	.13	.23**		
15. Recycling sense-of-choice	5.39	1.86	-.04	-.06	.32***	.07	.08	.40***	.13	-.02	-.07	.53***	.09	-.30***	-.10	
16. Total box views for recycling	2.50	2.42	.01	-.01	.10	-.05	.05	.12	.74***	-.01	.12	.13	.67***	-.02	.02	.13

Note. Should have an abortion is coded as: (0 No, 1 Yes). Vote to ban firearms is coded as: (0 No, 1 Yes). Decided to smoke is coded as: (0 No, 1 Yes). Decided to Recycle is coded as: (0 No, 1 Yes).

\* Correlation is significant at the .05 level (two-tailed).

\*\* Correlation is significant at the .01 level (two-tailed).

\*\*\* Correlation is significant at the .001 level (two-tailed).

contained the option that they ultimately did choose. Second, as a box-view-level predictor variable, a counter variable was created for each box view, indicating the order of the box view (e.g., whether this was the very first time that participants opened a box, the second time, the third time, and so on; this variable ranged from the first box view to the last box view until participants made the decision; for a given scenario, the maximum value of this variable ranged from 1 to 43 depending on the total number of boxes that participants opened before making a decision). The scenario-level predictor variable was the extent to which participants found the decision to be moral in nature (grand centered). We included a cross-level interaction between the box-view-order variable and participants' sense of morality. We included two scenario-level covariates—the order of the scenario (range 1 to 4), and the location of the option that participants chose (first option = 0, second option = 1). All lower level slopes were treated as fixed at all higher levels because allowing the effect of the box-view-level predictor (order of the box view) to vary at the level of scenarios and participants led to a nonconverging model.

**Primary results.** We found an effect of the location of the option,  $B = 0.26$ , 95% CI [.063, .46],  $SE = 0.10$ ,  $OR$  (odds ratio) = 1.30,  $z = 2.59$ ,  $p = .010$ , indicating that participants were more likely to view the ultimately nonchosen box if the box viewed was the second of the two response-option boxes. The effect of the order of the scenario was nonsignificant,  $B = 0.017$ , 95% CI [-.070, .10],  $SE = 0.045$ ,  $OR = 1.02$ ,  $z = .38$ ,  $p = .70$ . There was a main effect of morality,  $B = -.11$ , 95% CI [-.17, -.037],  $SE = 0.035$ ,  $OR = 0.90$ ,  $z = 3.01$ ,  $p = .003$ , indicating that the more moral participants considered the decision, the less likely they were to open a box containing their ultimately nonchosen option. The effect of the box-view-order variable indicates participants' likelihood of opening a box containing the nonchosen option as they open one additional box before making a decision. This effect was significant,  $B = -.088$ , 95% CI [-.12, -.053],  $SE = 0.018$ ,  $OR = 0.92$ ,  $z = 4.95$ ,  $p < .001$ , indicating that participants were less likely to view the ultimately nonchosen box as they opened more and more boxes and, thus, progressed from the option exploration phase to the option selection phase of the decision-making process. More important, there was also a Morality  $\times$  Box-View-Order interaction,  $B = -.050$ , 95% CI [-.080, -.020],  $SE = 0.015$ ,  $OR = 0.95$ ,  $z = 3.25$ ,  $p = .001$ . The negative coefficient of the interaction effect indicates that as participants moved toward making a decision, those who found the decision to be more moral in nature were even less likely to view the ultimately nonchosen option as opposed to the ultimately chosen option. In other words, participants devoted less visual attention to the ultimately nonchosen option when they perceived the decision to be a moral decision.

**Additional results—viewing time.** We next analyzed the amount of time that participants spent viewing each box once they opened it. If morality constrains people's sense of choice, then we would hypothesize that participants deciding among more morally relevant options would spend less time viewing the ultimately nonchosen option compared with the ultimately chosen option. One way to test this hypothesis is to run a three-level hierarchical linear regression (HLM) on box views nested within scenarios nested within participants, with the amount of time participants spend viewing each box as the dependent measure.

As viewing time data can be quite noisy, particularly for a study conducted online rather than in the lab, we first eliminated seven extreme outliers—viewing times that were over 10 seconds. Next, we computed the mean and *SD* of the remaining viewing time data and eliminated 56 responses (2.8% of the responses) that were more than 3 *SDs* beyond the mean. To reduce rightward skew, we log-transformed this data (Ratcliff, 1993). The resulting data were bimodally distributed, however, so we were unable to analyze the individual box views (Raudenbush & Bryk, 2002). Therefore, we computed the total time participants spent viewing the ultimately chosen option and the ultimately nonchosen option for each scenario (after excluding the exclusions mentioned above). For each scenario, we then computed the proportion of the time that participants spent viewing the ultimately nonchosen option compared to the total time they spent viewing both the ultimately chosen option and the ultimately nonchosen option, which served as the scenario-level dependent measure. We submitted this measure to a two-level HLM with scenarios nested within participants. The scenario-level predictor variable was the extent to which participants found the decision to be moral in nature (grand centered), along with the covariates used previously—the order of the scenario (range 1 to 4), and the location of the option that participants chose (first option = 0, second option = 1). The slope of morality was allowed to vary across participants; however, the covariance between the intercept and the slope could not be estimated and, thus, was dropped from the model.

We found an effect of the location of the option,  $B = 0.095$ , 95% CI [.062, .13],  $SE = 0.017$ ,  $z = 5.60$ ,  $p < .001$ , indicating that participants spent a larger proportion of time viewing the ultimately nonchosen option if this option was the second of the two response-option boxes. The effect of the order of the scenario was also significant,  $B = 0.029$ , 95% CI [.014, .043],  $SE = 0.0076$ ,  $z = 3.77$ ,  $p < .001$ , indicating that as participants responded to more and more scenarios, they spent a greater proportion of time viewing the ultimately nonchosen option. More important, the effect of morality was significant,  $B = -.017$ , 95% CI [-.028, -.0062],  $SE = 0.0055$ ,  $z = 3.09$ ,  $p = .002$ , indicating that the more moral participants considered the decision, the smaller proportion of time they spent viewing their ultimately nonchosen option.

Finally, we ran an analogous HLM with the total of amount of time that participants spent viewing both the ultimately chosen and the ultimately nonchosen options as the dependent variable (in milliseconds). However, the effect of morality was nonsignificant,  $B = 29.09$ , 95% CI [-47.62, 105.81],  $SE = 39.14$ ,  $z = .74$ ,  $p = .46$ , indicating that it was not the case that participants were overall slower or faster when making decisions that were more moral in nature.

## Discussion

The results from this attention-tracking study indicated that moral concerns led participants to selectively focus more attention on the ultimately chosen option than the ultimately nonchosen option. We found this pattern of results in two types of analysis, one examining *which option* participants were focusing on, and another examining *how long* participants viewed an option once they opened it. Specifically, we found that participants who found the decision to be more moral in nature were even less likely to view the ultimately chosen option as opposed to the ultimately

nonchosen option, and this effect was magnified as participants moved from the initial option-exploration phase to the option-selection phase. Further, we found that participants who found the decision to be more moral in nature spent a smaller proportion of their time viewing the ultimately nonchosen option as opposed to the ultimately chosen option. These findings help rule out the possibility that people who consider the options to be moral in nature consider both options equally while making a decision, but only upon subsequent reflection, state that they did not have a choice. Instead, the findings support the alternative mechanism that participants who consider the options to be more moral in nature focus less attention on the nonselected option, and this tendency is magnified as they move toward making a decision.

## General Discussion

In eight studies we investigated the link between the morality of choice options and people's psychological sense of choice. We tested two competing hypotheses: on one hand, people might be *more* likely to feel that they have made a choice when deciding among moral options rather than nonmoral options so that they can give themselves credit for intentionally choosing to make the right decisions; on the other hand, people might be *less* likely to feel that they made a choice when deciding among morally relevant options, because the immoral options are simply not considered viable options. Study 1a found that when deciding among options whose morality is debated in American society (such as abortion and gun control), participants deciding among options that they considered moral in nature experienced a lower sense of choice compared with participants who did not consider the options to be moral in nature. Study 1b replicated this pattern among Indian participants using an issue whose morality is debated in Indian society—eating beef. Study 2 experimentally manipulated the morality of options and showed that participants in the moral condition perceived less of a choice when making a decision. Studies 3a and 3b replicated the relationship between viewing an issue as moral and a decreased psychological sense of choice and provided empirical evidence for a downstream behavioral consequence: participants presented with morally relevant options experienced a lower sense of choice and, therefore, chose more variety in an unrelated task, presumably as a means for enhancing their sense of freedom and autonomy.

Studies 4a and 4b examined whether our proposed phenomenon is unique to the moral domain, or whether it is more general. We found that moral values compared to that of nonmoral values and preferences result in a more constrained sense of choice. Finally, in Study 5, we directly examined whether the perceived morality of the options actually alters the decision-making process, such that people for whom the options were moral in nature actually paid less attention to their nonchosen option, more quickly disqualifying it as a viable alternative.

More important, we tested our predications with different samples, such as Americans recruited through online platforms (Mturk) and panels (Instantly), as well as U.S. college students. Additionally, we assessed the cultural generalizability of our main prediction with a sample from India. Even though past research has shown that Indians and Americans differ in their perceptions of choice (Savani et al., 2010), we found that our basic prediction holds in India, a culture in which people have lower perceptions of

choice than Americans in general. Specifically, even if Indians experience an overall lower sense of choice than Westerners, they similarly experience a lower sense of choice when faced with morally relevant options rather than nonmoral options.

### Theoretical Implications

As mentioned above, past research and theorizing in moral psychology hints at two possible but opposing predictions about the relationship between the morality of options and people's sense of choice. On the one hand, given people's self-enhancement motives and the importance of morality to individuals' self-views, people could strive to accrue moral credits by *choosing* to engage in virtuous behavior. On the other hand, moral beliefs, as opposed to preferences or desires, are often viewed as universally true and objective and, thus, may constrain people's perceptions of choice. We found robust evidence in support of the latter.

Our findings contribute to the literature on choice by demonstrating that selecting one of multiple alternatives does not always constitute a choice, psychologically. Even when multiple options are objectively available, people's perceptions of choice are based on whether the options are psychologically available—that is, whether a person perceives multiple viable alternatives. Moreover, Studies 3a and 3b demonstrate that the lower sense of choice that people experience when deciding between options that are moral in nature is not just of academic interest but has behavioral consequences: it can lead people to choose more variety in subsequent unrelated tasks. We find that the psychological constraints of morality on one's sense of choice has similar consequences as physical constraints (Levav & Zhu, 2009). This finding is quite surprising because the moral constraints are subjective rather than actual—people had multiple options available to them. Thus, the powerful sense of constraint imposed by moral choices has the potential to alter a wide range of psychological and behavioral outcomes. Future research might explore whether other downstream effects of choice, such as increased motivation (Patall, Cooper, & Robinson, 2008), are also contingent on the number of options that are psychologically—rather than just objectively—available.

Our results also contribute to existing research in moral psychology. While morality is perhaps intended, in part, to constrain people's behavior (Cushman, 2015), we find that it also constrains people's psychological sense of choice. Although people are motivated to perceive ordinary actions as free choices, they perceive moral actions as nonchoices. Thus, it appears that individuals often seem to psychologically experience morality in terms of duties, oughts, shoulds, and obligations, rather than in terms of free choices, and from an individual actor's perspective, these features might be a defining characteristic of morality. Whether this constraining effect of morality is good or bad depends on one's judgment of the content of a particular set of moral beliefs. If the moral beliefs are viewed as good, a constraining effect is quite functional—in a moral sense—in that it would increase the likelihood of people making decisions that are consistent with their morals. If the moral beliefs are viewed as bad, a constraining effect could be quite dysfunctional, in that people would feel compelled to behave in ways that threaten their autonomy and that potentially have negative outcomes.

Overall, our research documents one of the consequences of the process of moralization, by which human behavior is regulated. Indeed, morality serves an important function in individual decision making by reducing ambiguity around appropriate behavioral conduct. Our findings show that individuals seem to focus their attention primarily on what they perceive to be morally acceptable options, psychologically eliminating potentially immoral options from a given choice set. Thus, morality seems to not only constrain people's behavior, but their sense of choice itself.

Finally, we help broaden the scope of moral psychology research from moral judgment and decision-making to how individuals' psychologically experience moral situations. Whereas the empirical literature focuses primarily on examining people's morally relevant judgments, decisions, and behaviors, our findings provide unique insights into human psychological states and moral experiences, and we begin to shed light on some of the amoral outcomes that are affected by moments of moral contemplation.

### Limitations and Future Research

Our work is limited in several ways, which future work might address. Study 1b replicated our key prediction—that people experience a lower sense of choice when deciding among morally relevant options—with Indian participants. However, our subsequent prediction—that this lower sense of choice would lead people to choose more variety in an unrelated task—was only tested with American participants. To the extent that variety seeking does not give people a sense of freedom in Indian contexts, as it does in North America (Levav & Zhu, 2009), the same downstream consequence might not generalize to all populations.

Another limitation of the current studies is that we manipulated the morality of the options in only two of the studies, and both these studies used a chocolate choice paradigm. We used the issue of child trafficking and labor in these studies because we believed it to be viewed as morally abhorrent for most people in our sample population. Future research can provide additional causal evidence for the current findings by manipulating people's perceptions of morality across a more diverse range of issues. Moreover, although two of our studies demonstrated variety seeking as a downstream behavioral consequence of a lower sense of choice induced by morally relevant options, both studies used a hypothetical scenario measure of variety seeking. Future research needs to replicate this finding with a behavioral measure in which participants choose among actual rather than hypothetical products.

An important boundary condition of the effects that we observed is the nature of the moral decisions we examined in the current studies. Relying on the literatures on moralization and moral convictions (Rozin, 1999; Skitka, 2010), we focused on widely moralized issues (e.g., abortion) about which many people are likely to develop a strong sense of what is right and what is wrong. However, not all moral decisions are created equal. In many decisions, people might not have a strong sense of what is right and what is wrong. Lemmon (1962), for example, discussed a number of different types of moral decisions: *should versus want* (when what we should do is not what we want to do); *right versus more right* (when we should do both options but must choose between them); and *maybe right versus maybe right* (when there are ambiguous moral reasons for selecting either option), to name a few. In general, we would expect morality to constrain people's sense

of choice to the extent that their moral beliefs help them identify morally superior options. However, our conclusions should not, without further empirical evidence, be generalized to all types of moral decisions—especially to moral dilemmas that have no clear, morally right answer.

Further, future research should investigate additional boundary conditions that likely moderate the influence of morality on sense of choice and variety seeking. For example, people with a strong need for autonomy would most likely react even more strongly to the constraining effects of choice, perhaps leading to stronger reactance, or maybe even greater variety seeking. We would also likely expect the type of morality reflected in the decision to matter—that is, whether the decision represented proscriptive (not doing bad) versus prescriptive (doing good) morality (Janoff-Bulman, Sheikh, & Hepp, 2009). It is possible that the constraining effect of morality is stronger for issues related to proscriptive morality, because proscriptive morality has been shown to be viewed as less volitional and more blameworthy.

Moreover, in our studies, we controlled for the actual choices individuals made. We assumed that, in general, people chose what they thought was the “right” option, particularly when they viewed it in moral terms (they had no notable incentive for doing otherwise). However, we acknowledge that there are many situations in which people choose to behave in ways that violate their own moral standards, sometimes even receiving specific requests or directives from others to do so. Such instances might still lead to lower perceptions of choice, although the underlying mechanism of such an effect would likely be different from what we examined here. Future research should explore such possibilities, which would help us better understand the relationship between morality and choice even further.

Finally, we relied on a functional perspective of moral values and practices, in which the very purpose of morality is often seen as to constrain individual behavior. It is possible that individuals use moral values as a precommitment device to strategically remove choice when it comes to their moral decisions. That is, by adopting a certain moral code or set of moral values, people may intentionally constrain themselves in certain situations by deciding in advance to act in a way that is consistent with their values; thus, avoiding dilemmas every time they encounter a tempting situation. Thus, although people may not experience a strong sense of choice in the moment of making a moral decision, perhaps they do experience a strong psychological sense of choice related to their superordinate decision to adopt and ascribe to a given set of moral values, worldview, or even religion. Future research might fruitfully explore the psychological sense of choice associated with such precommitment decisions.

## Conclusion

We found evidence that morality is an important factor that constrains people’s perceptions of choice, highlighting the difference between objectively having a choice and psychologically sensing a choice. This finding contributes to the literatures on choice in social and cross-cultural psychology, as well as moral psychology and economics. Our results challenge the assumption in many fields that choice is the same as the availability of options, and instead suggest that there is a contrast between the objective availability of choice options (that are always present) and the

subjective perception of whether those choice options exist—a difference that can vary as function of perceived morality.

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(Appendix follows)



## Appendix

### Studies' Scenarios

#### Marijuana Scenario

Imagine that you are sitting on a park bench with a friend. Your friend pulls out a bag from their pocket and a cigarette lighter, and begins to smoke some marijuana. This friend then offers you some.

What do you do?

Smoke the marijuana

Decline the marijuana

#### Abortion Scenario

Imagine that one of your close friends recently found out that she was pregnant. She does not want to be a mother, and she is not in a financial position to take care of the baby. She asks you whether or not she should have an abortion.

What do you tell her?

She should have an abortion

She should not have an abortion

#### Gun Control Scenario

Imagine that you just moved into a new neighborhood and your new home is part of a homeowner association (HOA). The HOA is currently deciding on whether to ban guns on any of its residents' premises. The HOA board has decided to let the residents vote on the issue.

What do you do?

Vote to ban firearms

Vote to not ban firearms

#### Recycling Scenario

Imagine that you returned home after a 2-week vacation, very tired after the long trip. You opened your home mailbox and carried a big stack of mail to your apartment. Most of it was useless junk mail. You can either dump the junk mail in your trash, or take the junk mail down to the recycling bin at the basement of your building.

What do you do?

Take the mail down to the recycling bin

Put the mail in the trash can

#### Eating Beef Scenario

Imagine that you are sitting on a park bench with a friend. Your friend pulls out a bag of beef samosas and picks one up. This friend then offers you a beef samosa.

What do you do?

Eat the beef samosa

Decline the beef samosa

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